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1. ABSTRACT

In this paper we introduce Verso, a decentralised marketplace for financial products. Verso solves an industry-wide distribution challenge that has been preventing innovative microfinance and decentralised financial products from reaching retail customers across markets.

Verso is built for the regulated financial service industry and community-governed by its participants, which comprises financial service providers and regulated financial institutions. It uses proprietary smart contracts to facilitate the distribution and product-specific money flow between service providers, financial institutions and their customers. As a result, there is reduced reliance on intermediaries, significantly lower distribution cost, and higher efficiency.

We are building Verso so that financial products can conveniently be offered to people across the world and within the existing relationships they have with their e-wallets or their bank.
2. INTRODUCTION

An increasing number of companies and ecosystems are embedding financial service products, such as bank accounts or wallets, insurance, savings, and lending products into their user journey, appealing to customers with convenience and usability, while adding new revenue lines to non-financial companies and increasing stickiness at the same time.

Venture Capitalists, Angela Strange at Andreessen Horowitz and Matt Harris at Bain Capital Ventures, have for years encouraged their companies to consider embedded finance as a key monetisation lever, “making every company a fintech company”.[1]

Embedded finance is still a nascent industry sector and over the last 3 years, we have seen different types of participants emerging:

1. Ecosystem builders: non-financial companies looking to leverage their users and reach to generate additional value from added financial services to their products.
2. Connectors: companies focusing on the connectivity part, such as open-banking APIs.
3. Infrastructure providers: bank-like technology companies looking to embed financial processes natively into other companies.

Banks and e-wallets play a crucial role in this as many financial products require an underlying personal financial account. A direct link between product and account is paramount to reduce friction and cost associated with the distribution and settlement of financial products. This is particularly true for microfinance. For example, a $100 microloan should be linked to a specific financial account to streamline disbursement and repayments. Similarly for a 3-day travel insurance, a direct link to a financial account significantly reduces cost for premium collection and claim disbursements. The rise of decentralised finance (DeFi), a rapidly growing sector, solves many of the challenges when connecting financial products (e.g. loans) with financial accounts (e.g. e-wallet), but retail adoption within broader ecosystems is still far away.

Embedded finance is a subject of much debate and requires gradual steps while taking all ecosystem participants into consideration: from governments and regulators to regulated entities such as: banks, e-wallets, consumer businesses and apps.

Verso is a decentralised marketplace for the regulated financial service industry. It bridges the gap between traditional finance (CeFi) and DeFi by standardising how financial products get distributed and connected to consumers via regulated e-wallets and bank accounts. Verso
enables existing regulated financial service providers, such as lenders or insurance providers, to distribute microfinance products at scale while at the same time providing DeFi products an on-ramp into the retail space. Banks, e-wallets and other participants can connect to Verso and dynamically retrieve financial products personalised to their users, all without complex integrations and counterparty risks. Verso is community-governed by its ecosystem participants and uses its own token (Verso token) to incentivise behaviour that shapes the Verso ecosystem in the long-term while protecting its reputation as a trusted distribution network for the regulated financial service industry.

Verso is based in Switzerland with a distributed team across America, Europe and Asia. Together with Wallet Engine, a founding member of the Verso network, strategic partners, and reputed advisors, Verso is set to accelerate the distribution of inclusive financial products to retail consumers across geographies.
3. VERSO FINANCE

Verso is a decentralised marketplace standardising how financial products are created, distributed and settled. It addresses fundamental distribution challenges which have been inhibiting the mass-adoption of meaningful financial products by retail consumers. This mainly revolves around microfinance products and innovative decentralised financial products. The underlying challenges needs to be addressed taking each of the following ecosystem participants into consideration:

- Financial Service providers
- Financial Institutions and wallet providers
- Decentralised financial products

The sections below elaborate on each of these in more detail.

Verso has been designed for traditional and decentralised finance (DeFi) alike while taking into account the difference in regulatory requirements across jurisdictions. Ecosystem participants require the Verso token (VSO) to access network services and to contribute towards the continuous improvement via community governance.

3.1 Financial Product Distribution

3.1.1 Financial Service Providers

Traditional financial institutions are challenged with distributing microfinance products in a cost-efficient manner. Microfinance is a vast market opportunity, but the cost to acquire customers and to settle potential claims often exceeds the margin of these products. As a result, financial institutions that want to offer microfinance products need to use third-parties and leverage their sales channels to “upsell” a microfinance product.

As an example, an insurance company may offer a 3-day travel insurance through a third-party remittance company that services migrant workers, with the product being offered as an add-on option every time these migrant workers send money back home. This is a risky business strategy as it depends on third parties, other industries and the competitive edge and longevity of those partners.
A better way to distribute microfinance products is to offer them directly, either inside an e-wallet or as part of a mobile banking experience. Leveraging either of these options removes the settlement complexity, such as premium payment and claim disbursements in the case of an insurance product, or as a disbursement and repayment account, in the case of a short-term loan. However, in most cases this is not a viable strategy either as it requires multiple individual agreements and integrations between financial service providers and different e-wallet and digital banks. In summary, financial service providers are facing the following challenges:

Problems:
- Cost of user acquisition is greater than product margin
- Overhead associated with complex settlement process
- Different integration standards across partners
- Complexity of the landscape

Verso improves the unit economics for microfinance by standardising how financial products are distributed and through the use of distributed ledger technology and smart contracts to remove intermediaries and the necessity for various counterparty agreements, giving users new opportunities without upfront investment.

3.1.2 Financial Institutions & Wallet Providers

Custodial wallet providers and banks need to meet regulatory requirements and are often restricted in terms of data they can share with third parties and face limitations when opening up their technology for third-party integrations. While “open-banking” alleviates some of these challenges when it comes to making payments or accessing balance information through third-parties, there is no standard for the direct integration of other financial services, such as insurance products.

As financial services continue to be unbundled and offered as part of non-financial user experiences, financial institutions and wallet providers need to rethink how they can increase their range of services relevant to the customers. This is particularly relevant for newly emerging DeFi products for microfinance in emerging markets.

Problems:
- Integration complexity given the security standards and regulatory nature
- Inability to provide adjacent financial products from other financial service providers

Verso addresses both of these issues through a single integration approach connecting to various third-parties with complete trust using audited smart contracts for financial service distribution.
and settlement. In addition, all products on Verso are validated by community-appointed participants and categorised so that banks and wallet providers can selectively retrieve products according to various criteria.

As a result, Verso enables banks and wallet providers to unlock new revenue streams through a suite of constantly evolving add-on products which can dynamically be displayed to their customers. It also allows them to participate in the rapidly changing world of DeFi at a level and pace they are comfortable with.

### 3.1.3 Decentralised Finance (DeFi)

Decentralized finance is a blockchain-based form of finance that does not rely on central financial intermediaries and instead utilises smart contracts on blockchains. DeFi products, such as peer-to-peer lending and borrowing or yield generating products, are transformative as they remove counterparty risks while maximising flexibility.

However, despite many advantages, it requires a significant amount of knowledge around blockchains and cryptocurrencies in order to safely access these products. As a result, promising innovations remain out of reach for millions of people who could benefit from them. The main challenges standing in the way of wider adoption of DeFi are the following:

**Problems:**
- Access to DeFi products is too complex for most people
- Initial barrier due to perception and lack of trust

Verso helps to remove these barriers of adoption by enabling DeFi products within wallet and banking experiences consumers are already familiar with. The ability to purchase additional financial products from within an app that people are used to creates a seamless user experience. Additionally, there is an established trust relationship between the e-wallet/bank and the consumer, providing a significant advantage in terms of new product acceptance.

DeFi services can benefit from having parametric triggers embedded in the product smart contract which automate the product itself. In the case of a flight insurance agreement, an oracle can reference both the scheduled and actual take off times for the smart contract, in real time. If the flight is delayed the smart contract can automatically settle a claim before seatbelts are fastened, with little or no effort by the consumer or the insurer. This efficiency enables further development of microproducts that were traditionally too expensive to service.
The following is an illustration of a sample app retrieving a predefined set of financial products from Verso and displaying them to their app users as part of an existing user experience:
The Verso ecosystem serves as a market layer connecting licensed financial institutions offering regulated financial products (CeFi), decentralised financial products (DeFi), and consumers who interact with digital wallets or digital banks.
Financial institutions want to offer new world products to an ever growing pool of consumers online but depending on the kind of licenses they hold, and the jurisdiction they hold them in, they may be restricted in terms of what kind of products they can provide and to whom they can actually provide the products. Traditional broadcast marketing channels are ineffective when only certain categories of consumers within them are eligible.

Wallet providers are in the advantageous position of having ongoing relationships with consumers, the regulatory principles that they operate under dictate a continuous KYC relationship, and the stickiness of wallets provided through apps result in longer term relationships. The consumer insight enjoyed through this relationship puts wallet providers in the perfect position to offer tailored product offerings, while ensuring focused marketing with no efforts wasted interacting with non-eligible consumers. In addition, they can conveniently offer DeFi products, which might otherwise be too complicated for their users to access. Consumers enjoy the results of product marketing that is tailored to their circumstance, and the stickiness with their digital wallet increases further.

Verso is a new decentralised platform that allows tailored product offerings to consumers with digital wallets of any kind, in a targeted, compliant and responsible manner. Verso provides financial service providers with access to previously inaccessible consumers, and allows those consumers access to exciting new product offerings through whichever wallet they already happen to use.

The Verso Token (VSO) is used for granting access to the platform, and is also used for the marketing, placement, and conversion of products. The products themselves are based on legal regulatory relationships between the financial service providers directly with the consumers, so they are settled in USDC to allow for stability over the period of the product contract.

Validators ensure that compliant products are made available, and that those products are only displayed to appropriate consumers. They will also set up the related product smart contracts, and power any required transaction signing. They may also have a role in generating new VSO in the future.

Consider a licensed insurance provider in Ireland offering basic mobile phone insurance, their license from the Irish financial regulator allows them to provide insurance services to consumers located in Ireland, and also to Irish citizens around the world. Traditional marketing services work for them in Ireland but they have no effective way of offering their services to the Irish abroad in a targeted manner.
The insurance provider submits the product to Verso to advertise to anyone with Irish citizenship, the participation pool is then credited with VSO, and validators verify the product from a compliance aspect. Depending on the regulations relevant to the product, the financial institution itself may need to be verified (KYB) as well as the suggested target markets (e.g. non-EU loan products may not be advertised in the EU). Validators then categorise the product and set up the smart contracts between the interested parties, which manage and control the allocation and distribution of VSO from the participation pool.

A leading wallet provider in Australia can then see the product in the marketplace and fetch and display it to consumers who hold an Irish passport. Wallet providers often have access to a wider set of consumer data including personal details such as location, interests and financial status. This scenario is typical for wallet providers everywhere, who have a more intimate longer term relationship with their customers. At the end of the product campaign that wallet provider will be entitled to a share of the fetch bonus, as well as a conversion bonus for every successful product sale.

The Irish insurance company has increased their target consumer base significantly and the Australian wallet provider has increased their transaction volume while improving customer loyalty. This new business was made possible by the Verso Network.

As part of the Verso community, both now also have the opportunity to act as Validators, and can earn VSO. What VSO they hold allows them to shape the marketplace going forward. That community will define future pricing structures and reward structures, as well as new product offerings.

3.2.1 Use Case Example: Insurance Product

The following is an illustrative example of the distribution of a micro-insurance product. In this scenario, a short-term travel insurance is sold to a customer within an e-wallet. The wallet provider settles the premium and gets rewards for the conversion.
Step 1 - Register Insurance Product

The insurance company develops a product and wants to offer it on the marketplace, e.g. A $10 insurance policy to be offered to 100 consumers. They register the product on the Verso network and define the key criteria, such as product type, product stock, product value, as well as any consumer requirements (age, residency, etc.). The official Terms of Service (ToS) for the product are also uploaded.

Step 2 - Register Campaign Requirements

In this step the insurance company chooses appropriate campaign requirements that include the campaign duration and specifics of what kind of consumers the advertisement should be displayed to.
Step 3 - Price Development Calculated By A Smart Contract

Based on the input factors of the product and campaign, an algorithm will calculate the price for the placement. This price is based primarily on campaign duration and the value of the underlying products. This fee for marketing the product is ultimately paid into the participation pool in VSO tokens.

Step 4 - Validation

The product will be validated, and validators will receive VSO tokens as a reward. Rewards are paid out from the participation pool that has been funded by the insurance company. The product is now displayed to the wallet providers as a verified product.

Step 5 - Product Fetched by Wallet Provider

The wallet provider chooses to fetch a verified product and display it to the end consumer based on the set campaign and product criteria.

Step 6 - Consumer Conversion

The consumer sees the insurance policy offered on their own wallet and decides to purchase. In order to do so, the consumer has to accept the ToS of the insurance product and allow the wallet provider to share their personal information with the insurance company.

Step 7 - Insurance Premium Payment

The wallet provider debits the wallet of the consumer according to their preferred payment method. Consumers can pay with fiat or cryptocurrencies, or any currency their wallet provider supports. The wallet provider, however, sends the premium amount to the product pool in USDC. In addition the wallet provider sends the consumer data to the insurance company for a final verification.

Step 8 - Final Consumer Verification

The financial service provider may do a last check of the customer data before approving the insurance. As soon as the insurance provider has satisfied their customer on boarding requirements and the appropriate funds have been made available, the smart contract will be executed and the funds distributed. The insurance company will receive the premium in USDC. VSO tokens will be earned by the wallet provider through fetch and conversion bonuses, in return for marketing the product.
Step 9 - Insurance Claim Settlement

If the consumer makes a claim for compensation based on the insurance, the insurance provider will settle the case by sending the funds directly to the consumer wallet. The insurance policy agreement is between the insurance company and the consumer. Verso Network is not involved in the mechanics of the insurance policy itself. The consumer receives the settlement in their preferred wallet currency.

3.2.2 Use Case Example: Loan Product

The following is an illustrative example of the distribution of a microloan product. In this scenario, a short-term loan is offered to a user directly within an e-wallet to help bridge an urgent expense.
Step 1 - Register Loan Product

The financial institution develops a loan product and wants to offer it on the marketplace, e.g. A $100 loan to be offered to 100 consumers. They register the product on the Verso network and define the key criteria, such as product type, product stock, product value, as well as any consumer requirements (age, residency, etc.). The official Terms of Service (ToS) for the product are also uploaded.

Step 2 - Register Campaign Requirements

The financial institution chooses appropriate campaign requirements that include duration and to whom the advertisement should be shown.

Step 3 - Price Development Calculated by a Smart Contract

Based on the input factors of the product and campaign, an algorithm will calculate the price for the placement. This price is based primarily on campaign duration and the value of the underlying products. This fee for marketing the product is ultimately paid into the participation pool in VSO tokens.

Step 4 - Validation

The product will be validated, and validators will receive VSO tokens as a reward. Rewards are paid out from the participation pool that has been funded by the financial institution. The product is now displayed to the wallet providers as a verified product.

Step 5 - Pre-funding of Loan Amount

The financial institution prefunds the product pool with USDC based on the accumulated value of loans underwritten for the whole campaign.

Step 6 - Product Fetched by Wallet Provider

The wallet provider chooses to fetch a verified product and display it to the end consumer based on the set campaign and product criteria.

Step 7 - Consumer Conversion

The consumer decides to buy the loan which is displayed to them through the app of their normal wallet provider. The consumer accepts the ToS and agrees to the sharing of required data between the wallet provider and the financial institution.
Step 8 - Consumer Information

The wallet provider sends the consumer data to the insurance company to set up the loan agreement.

Step 9 - Final Consumer Verification

The financial service provider may do a last check of the customer data before approving the loan. As soon as the financial institution has satisfied their customer on boarding requirements and the appropriate funds have been made available, the smart contract will be executed and the funds distributed.

Step 10 - Loan Disbursement To Wallet

The loan amount itself is settled in USDC from the product pool to the wallet provider for distribution. VSO tokens are earned by the wallet provider through fetch and conversion bonuses, in return for marketing the product.

Step 11 - Loan Disbursement To Consumer

The wallet provider credits the wallet account of the consumer thereby disbursing the loan amount in the appropriate wallet currency.

Step 12 - Loan Repayment & End of Contract

At the end of the loan period, the smart contract invokes a debit request to the wallet provider. The wallet provider debits the predetermined repayment amount for the loan from the consumer wallet and sends it directly to the financial service provider in USDC.

The Verso Network is not involved in the mechanics of the loan itself, apart from having visibility through the smart contract. When all clauses of the smart contract are fulfilled, it is automatically terminated and the loan agreement is closed.
3.2.3 Use Case Example: DeFi Product

The following is an illustrative example of the distribution of a DeFi product. In this scenario, the product is offered to a user of an e-wallet who wishes to generate a passive income by providing a certain amount of liquidity for a specific time.

**Step 1 - Product Registration**

DeFi service provider wants to offer a new product globally. In order to fill liquidity pools it wants to offer monthly interest to anyone willing to stake assets. Let’s say they are willing to offer 10% interest for $100 worth of USDC staked for a month.
The DeFi service provider registers the product on the Verso network and sets the key criteria such as number, type, and value of asset contracts, interest rate, and geographic availability.

**Step 2 - Campaign Criteria**

DeFi company defines the campaign criteria regarding duration, population etc..

**Step 3 - Development**

Based on the input factors of the product and campaign, an algorithm will calculate the price for the placement. This price is based primarily on campaign duration and the value of the underlying products. This fee for marketing the product is deposited in the participation pool in VSO tokens.

**Step 4 - Validation**

Validators process unverified products in return for validation fee. Smart contracts are created. Verified products are made available for wallet providers to participate.

**Step 5 - Product Fetch**

Wallet providers who want to participate ‘fetch’ the products and make them available to their consumers who fit the campaign criteria.

**Step 6 - Conversion**

Consumer decides to avail of the asset placement product through their app.

**Step 7 - Verso UI, Data Input**

The product ToS from the DeFi service provider is offered for the consumer to accept.

**Step 8 - Data Input and Distribution of Fetch and Conversion bonus**

Customer data is transferred to the DeFi service provider and relevant fetch / conversion VSO bonuses are earned.

**Step 9 - Confirmation and Request For Collateral**

DeFi company requests the collateral that is to be submitted by the consumer.

**Step 10 - Settlement of Collateral Through Wallet Provider**
The consumer sends the requested collateral, which could be any coin or currency supported by their wallet provider. In this example the collateral for this product is USDC, so USDC is sent directly to the liquidity pool of the DeFi product provider by the wallet provider.

**Step 11 - Interest Payout**

Interest payouts are sent to the wallet provider for disbursement to the consumer. This disbursement can take place in the relevant currency of the consumer wallet.

**Step 12 - Return of Principal**

One month after the placement, if the consumer wants to remove the collateral, they send a request to the DeFi service provider. This will trigger the repayment clause in the smart contract. DeFi product provider sends back the collateral for disbursement to the consumer wallet. The smart contract terminates.

### 3.3 Regulatory Obligations

The Verso Network consists of licensed and unlicensed financial institutions, geographically spread, subject to varying degrees of local and international regulation. Banks, eMoney providers, stored value facilities, remittance operators, insurance underwriters, microloan companies, all have a vested interest in working together to make sure product marketing is appropriate for individual consumers, and vice versa. The Verso Network ensures that products are only displayed to consumers who fit the particular eligibility criteria, and vice versa, that only products relevant to the consumer are actually displayed to them. The final product contract is always between the financial service provider and the consumer. The Verso Network does not in any way replace the binding regulatory requirements on each of the partners in the network, however it does allow for collaboration and sharing of resources to ensure compliant personalised marketing services by complementary businesses.

In a regulated environment the effect of a bad player anywhere in the process would have significant implications from a legal responsibility aspect throughout the product chain. With that in mind it is imperative that community behavior at every level is aligned in ensuring total compliance with all local and international financial regulation. In the regulated world compliance is a must, and non-compliance is penalised harshly. Equally in the Verso network, any action that is found to be non-compliant is penalised. If a validator is found to have approved an inappropriate product, their validation bonus is burned, along with an equal amount from their staked VSO collateral. If a wallet provider is found to have fetched and offered a product to inappropriate consumers it would lead to failed conversions. A failed conversion will cause the
related fetch and conversion bonuses to be burned. Such behaviour is easily identified and actioned thanks to the decentralised nature of the network.

By burning the VSO related to non-compliant behaviours, the interests of the wider community are promoted. Ongoing compliant behaviour is rewarded with a louder voice when deciding on the future of the community, as well as notionally inflated bonuses for validation work and product conversions.

3.4 User Experience

Financial Service Providers access the Verso Portal to define products and campaigns for placement, as well as to review ongoing product statistics and performance. They can view the status of the various reward pools for their campaign.

Validators are a subset of Financial Service Providers, so their Verso Portal access credentials will also allow them to access validator functionality. They can opt to take part in the validation of a certain product or campaign, as well as register their findings and their vote. They can also monitor and manage their validation bonuses.

When Wallet Providers or Banks access the portal it offers them a list of the products available for them to fetch. They can also monitor the progress of already fetched products, as well as managing their conversion and fetch bonuses.

Consumer related personal data is not exposed to the Verso Portal. Verso furnishes the Financial Service Provider and Wallet Providers/Banks with secure APIs to populate the product smart contract which encompasses the product.

Consumer UI is completely flexible, giving the Wallet Provider full responsibility for UE. This is desirable since it is the Wallet Provider or the Bank who holds the ongoing relationship with the consumer. This allows the customer to ‘feel at home’, with new products being offered with the same look and feel that they are accustomed to. White label wallet providers can offer the same products through various different wallets that have a very different look and feel tailored to their consumer communities. The customer journey is driven by elegant API’s that are invisible to the consumer.
3.5 Industry Considerations

Microfinance products have been on the rise for decades with the boom not expected to end any time soon. Over the last ten years, microfinance products have continually increased in volume. Microloans for instance had an 11% annual growth rate globally, with total loan capital in the hundreds of billions [4].

South East Asia especially has experienced the steepest increase in microlending, with over 24% annual growth in 2016 and 2017. Another metric of interest is the number of consumers that purchased microfinance products. This increased from 98 million people in 2010, to 140 million in 2018. While this reveals tremendous growth over the years, one of the biggest opportunities that has been left untapped is the unbanked population [4]. According to the World Bank and Findex, 1.7 billion people remain without any access to financial services. A recent study by Mastercard [2] reveals an opportunity whereby over 500 million people currently have no access to a mobile phone. In those emerging markets, consumers currently experiencing first time mobile adoption will also be exposed to financial inclusion for the first time, in a mobile first environment.

Traditional financial institutions, be they insurance underwriters, asset management, or loan providers, leave this huge market potential untapped as they have simply no way of reaching people without a bank account. Many of these consumers have access to digital wallets, but wallet providers typically don’t have the regulatory authority to issue loans or insurance products to their users. In addition, many of these wallets are built in silos and according to different standards, making it difficult to integrate with regulated financial service partners in a standardised manner.

There has been significant growth in solutions from DeFi service providers that directly target aforementioned consumers. The idea of short-term yield products, peer-to-peer lending and borrowing and more may present a viable option but current complexity and perception prevents mass adoption. Cointelegraph mentions that the main barrier hindering the scalability of DeFi products is interoperability of smart contracts and with traditional financial institutions and service providers [4]. DeFi products are simply not connected to mainstream solutions such as banks and wallets.

In recent years, the new breed of ‘super-apps’ have grown more and more conscious about implementing financial services into the user journey. Payments, investments and microfinance have been implemented by the likes of Grab, WeChat, Gojek, Kakao, Naver and more. This unique way of adding financial services to non-financial apps is often called “embedded finance”. According to Andreessen Horowitz, embedded finance has the potential to boost customer value.
by 2-5x, unlocking tremendous potential for apps to increase user stickiness. More and more apps are following this example [5]. Even Clubhouse, an audio streaming app, recently announced embedded payments in their user journey [6]. This will produce opportunities like enabling users to send donations directly to content creators with the click of a button. The demand for embedded finance solutions is ever increasing and Verso is poised to be a key market enabler for embedded Defi and CeFi products.

Now is the time to streamline distribution of financial products. There is already gravitation towards embedded financial services in non-financial products. Solving this challenge will make embedded finance even more impactful. This market opportunity is highlighted by a recent article published by Forbes claiming that revenues of embedded finance will increase by 10x to a whopping $230 billion USD in revenue by the end 2025 [7].
4. TECHNICAL OVERVIEW

4.1. Avalanche Chain

To make microfinance and DeFi products available for mass adoption via blockchain technology, Verso needed to find a solution for two substantial problems that most of the blockchains face today:

**Problem 1: The high fees**

To take out a blockchain microloan of $5 - $100 could easily cost $20 - $40 in network fees at the moment, which make such use cases practically impossible.

**Problem 2: The low transaction speed**

Most blockchains can only handle somewhere between 10-20 transactions per second, which is another big factor for the slow adoption in mass markets.

Verso solves these problems by using Avalanche, a new and revolutionary blockchain technology created by one of blockchains earliest experts. This expertise is brought in by Emin Gün Sirer, Ivy League associate professor at Cornell University, who has studied and taught blockchain technology for 20 years. He also co-created one of the earliest blockchain projects in 2003, 6 years before the famous Bitcoin Whitepaper. His new blockchain solution, Avalanche, now allows us to create new and valuable applications:

- With Avalanche, Verso will be able to dramatically reduce the cost of network fees by a factor of several thousand. Taking a $5 - $100 microloan will not cost $20 - $40 in network fees this way, but instead only a few cents, at most.
- The network can handle around 4,500 transactions per second. Compare this to the Visa network processing 150 Million transactions per day on average, or about 1740 per second, this means that users will be able to have a great user experience with fast transactions.

Especially valuable is that Avalanche did not get to these breakthroughs the way that many competitors did. Many projects continue to describe themselves as decentralised blockchains, though actually they have opted for high degrees of centralisation, to bring down costs and increase speed.
Instead, Avalanche was able to create a new consensus mechanism, which solves these problems at their root. Using a particular form of proof-of-stake consensus, the main blockchain problems of today are avoided from the start: energy-intensiveness, high-prices and slow networks. This is a fundamental contrast to blockchain networks that use the proof-of-work consensus, like Bitcoin. Each of these technologies have their advantages, and proof-of-stake features fast transactions at high volumes and cheap prices.

Avalanche’s consensus mechanism and technology have garnered the project recognition by industry leaders such as Charles Hoskinson from Cardano or Vitalik Buterin from Ethereum, who went as far as to compare Avalanche to Bitcoin, saying both had “similar levels of legitimacy”.

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<th>Bitcoin</th>
<th>Ethereum</th>
<th>Tendermint</th>
<th>Avalanche</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transactional Throughput</td>
<td>~7 tx/sec* Protocol Bound</td>
<td>~14 tx/sec* Protocol Bound</td>
<td>~1,000 tps* Bandwidth-bound</td>
<td>&gt; 4,500 tps* CPU-bound</td>
</tr>
<tr>
<td>Transactional Finality</td>
<td>~60 mins 6 confirmations</td>
<td>~6 mins 25 confirmations</td>
<td>6-7 second block time</td>
<td>&lt; 3 seconds Often far less</td>
</tr>
<tr>
<td>Energy Efficient</td>
<td>No ASIC-optimal</td>
<td>No GPU-optimal</td>
<td>Yes CPU-optimal</td>
<td>Yes CPU-optimal</td>
</tr>
<tr>
<td>Number of Validators</td>
<td>3 pools with &gt; 51% hash rate</td>
<td>2 pools with &gt; 51% hash rate</td>
<td>&lt; 200 nodes without tps loss</td>
<td>Thousands of nodes no hash rate req’d **</td>
</tr>
<tr>
<td>Sybil Protection</td>
<td>Proof of Work</td>
<td>Proof of Work</td>
<td>Proof of Stake</td>
<td>Proof of Stake</td>
</tr>
<tr>
<td>Safety Threshold</td>
<td>51%</td>
<td>51%</td>
<td>33%</td>
<td>80% parameterized</td>
</tr>
</tbody>
</table>

* Best estimates from online information & core dev conversations.
** Theoretically able to accommodate millions of participants.
4.2. Product Distribution

Verso’s main objective is to give millions of people access to financial products they couldn’t use before, while also offering broad market access to financial service and product providers who had limited exposure so far.

Using Verso, companies will be able to offer their products across borders and to consumer groups they were previously unable to reach. This dynamic will be even stronger for Decentralized Finance products, which have very limited market access at the moment, though in many cases they offer highly competitive rates and terms, due to their completely digital and often automated nature. Creating such an ecosystem of open access, these main challenges have to be solved:

**Fraud Protection**

Financial products have to be checked to be legitimate, before they can be offered to customers.

**Quality Assurance**

They must be of high quality and be able to reliably fulfill what they promise.

**Compliance**

They must fulfill all requirements in terms of the law, such as KYC, AML, data protection, etc..

**Facilitating Easy, Borderless Access**

Users and product providers must have an easy way to find and interact with each other.

Verso’s infrastructure is therefore focused in a way that meets these challenges and creates a useful and comfortable user experience. Companies and projects are getting the help that they need to reach the market, fraud and low-quality offers are filtered out and users can participate in a growing market of competing financial products, which leads to better, cheaper and more inclusive financial access.
4.2.1 Product Onboarding

A new financial product is onboarded in a completely decentralised manner by allowing the financial service provider direct and unrestricted access to interact with the campaign creation portal.

The product onboarding is executed in three direct smart contract interactions:

1. Product definition
2. Campaign definition
3. Placement offering

---

**Product Definition**

Financial Institutions will use a UI to define the Products they wish to place. General product details as well as specific compliance criteria will be defined. The product definition structure may include details such as:

- Product Provider
- Product Name
- Product Type
- Product Price
- Product Volume
- Product Duration
- Consumer Eligibility Criteria
- Age
- Nationality
- Residency

- Wallet Eligibility Criteria
  - Wallet Geography
  - Wallet Currency

**Campaign Definition**

The Financial Institution UI will allow them to define specific campaigns for the products they offer. The campaign definition structure may include details such as:

- Campaign Geography
- Campaign Duration
- Target Wallet Criteria
  - Wallet Geography
  - Wallet Currency
- Target Consumer Criteria
  - Age
  - Nationality
  - Residence
  - Geo-Location
  - Current Wallet Balance
  - Average Wallet Balance
  - Average Monthly Transactions
  - Wallet Age
  - Consumer Credit Score

**Placement Offering**

In order to submit the Campaign for validation, Verso tokens must be deposited to the participation pool. Placement pricing and its structure will be driven by market forces and through community management. Pricing models and values for each product type will be defined and agreed periodically through community governance.

Product Placement Price = Validation bonus + Fetch Bonus + Conversion Bonus + Ecosystem Development Contribution (EDC).
● Validation bonus – Fixed amount per validation. Shared between the Validators assessing the Product and Campaign. Any share associated with an incorrect validation will be burned.

● Conversion Bonus – Reward shared between wallet providers who successfully convert. Traditional commission based structure. % of the USDC product value at the time when the product is placed.

● Fetch Bonus – Incentivises wallet providers to display the products to their consumers. When the campaign ends the fetch bonus available will be split between the participating wallet operators, according to how many eligible active subscribers the product was available to. Any failed conversions by a wallet provider would indicate that the product was offered to inappropriate consumers, so their share of fetch bonus will be burned.

● Ecosystem Development Contribution (EDC) - For each campaign placed a small number of Verso tokens will be placed in a separate reserve pool which is non-circulating. Any future use of this reserve pool will be agreed upon through community governance.

4.2.2 Product Validation

Product validation involves a staking pool where validators deposit a fixed minimum amount of VSO tokens, which could then be used as collateral in the event of malicious behaviour.

A validator pool forms part of the product and campaign registration smart contract. Once the campaign has been registered and a deposit in VSO tokens is made, a timer is set to a fixed time interval to allow all the validation pool participants to cast their regulatory votes.

After a consensus (80% of the voters) has been reached, the campaign is validated, and made available to be fetched by wallet providers.

Every validator vote has the same value. All validators are equal in this process. The validation bonus relating to the campaign in question is shared between participating validators. The validation bonus appropriated to an incorrect validation will be burned along with an equal amount from the validators staked VSO collateral.

Voting and participation in the validator pool is done through the Verso Portal. More information on staking requirements can be found in the section further in the text.

4.2.3 Product Fetching and Customer Verification
Once the product and campaign have been approved by the validators it is made available for wallet providers on the Verso Portal. They can see the entire range of available products but may decide to fetch only a few that align with their own users and company policies.

The fetch is recorded on the AVAX chain and rewarded with VSO tokens. The product is made available on the APIs that integrate wallet providers with the Verso backend.

**Decentralised Finance (DeFi) Products**

In addition to CeFi products Verso is intended to distribute DeFi Products. Such products often have much more competitive rates and speed of execution. DeFi Products are integrated by leveraging already existing oracles and cross-chain communication solutions like ChainLink in order to communicate with lending platforms like AAVE or CREAM.finance to provide financial services.
Verso will provide a standardised interface for simple and painless integration, so as to deliver DeFi products through it’s marketplace to millions of existing users through partnerships with e-wallet providers.

One important benefit of integration with DeFi products is that there is no need for permissions in order to interact with the underlying smart contracts. Meaning, we can build elegant UI/UX fitting the flow and style of a multiple or specific wallet provider in order to provide the best experience for their users and maximise the conversion rate. As a part of the Verso Network wallet providers are able to customise the look and feel of the purchase pages for DeFi products.

**Centralised Finance (CeFi) Products**

Providing traditional CeFi products requires partnerships with existing financial institutions and strict compliance with differing regulation in every geography. The community verification aspect of products on Verso allows consensus between the compliance functions of the validators to ensure all international regulation is respected.

By offering standardised product APIs from multiple financial service providers, the Verso Network removes many of the barriers to adoption of traditional financial products by wallet users everywhere.
5. ROADMAP

Q2
- IDO
- CeFi/DeFi Distribution Logic
- POC for product onboarding (service provider side)
- Establishing partnerships

Q3
- Onboard first DeFi product
- Add non-custodial wallet function
- POC for product delivery & settlement (consumer app side)
- Product distribution to beta participants
- Add exchange partners for FIAT-Crypto conversions

Q4
- Implement Product Validator (distribution of rewards)
- Implement Compliance Validator (distribution of rewards)
- Onboard yield product
- Public release
6. VERSO TOKEN MODEL

VSO is Verso Network’s native token being issued on the Avalanche C-Chain. VSO is a utility token to access network services and reward network service providers. In addition, VSO tokens are required to participate in community governance to continuously develop the Verso ecosystem.

6.1 Token Specs

<table>
<thead>
<tr>
<th>Token Name</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Token Ticker</td>
<td>VSO</td>
</tr>
<tr>
<td>Token Type</td>
<td>ERC20 - Burnable</td>
</tr>
<tr>
<td>Token Supply</td>
<td>100,000,000</td>
</tr>
<tr>
<td>Blockchain</td>
<td>Avalanche C-Chain</td>
</tr>
<tr>
<td>Contract Address</td>
<td>TBA</td>
</tr>
</tbody>
</table>

6.2 Token Utility

The Verso token (VSO), is an ERC-20 standard-based utility token created on the Avalanche chain. The token grants users the access to Verso financial platform and its services. The token is required for product funding, validator rewards, voting and processing product fetching. In addition to VSO, stable coins are used as well depending on the implemented use case.

6.3 Staking

VSO token can be staked in 2 different ways. First, by becoming a financial product validator where a stake (collateral) is needed in order to ensure fair behaviour among the validators. Second, in order to participate in the governance process a stake towards a proposal is required in order to allow the participants to cast their votes.
6.3.1 Governance

Once mature, Verso will gradually transition to community governance, allowing the community to decide the future of the network. VSO token holders may stake their VSO to vote on or propose new ideas to improve the Verso network. Some of such decisions could be:

- New product types
- Addition or removal of product parameters
- Data sharing
- Adjustment to product placement price and related allocations
- Approval of new Validators
- Any future actions to be taken on the tokens in the Ecosystem Development Pool

Governance voting is performed by issuing a VIP (Verso Implementation Proposal). Once the VIP is ready for voting all the interested parties (most likely financial product providers and wallet providers) vote by staking their tokens in favour or against the proposal. In other words, the more VSO tokens a single entity stakes, the more voting power they possess.

6.3.2 Validator Rewards

To become a product validator and earn VSO rewards a certain amount of work is required to be performed. In addition to that, to become a validator it is necessary to stake 1 million VSO tokens (at the initial public sale price of $0.05 that is $50,000 worth of tokens as collateral).

Each quorum member must have a set minimum amount of staked tokens, and their votes are equal. This will even out the voting power for validation, unlike the governance staking where more tokens equals more voting power.

Once a product has been entered into the smart contract a voting round is started allowing the participants a fixed time period to approve or reject the submitted product. Depending on the outcome of the vote a product is approved and available for distribution. If the product is rejected the VSO tokens deposited for the “Fetch and Conversion”- bonuses are returned to the Financial Institution. In either case the validators are rewarded with VSO tokens for performing the voting and regulatory checks ensuring the quality of the products in distribution.

It is important to note that in case of illicit behaviour of one of the validators, his validator bonus is burned along with an equal amount from his staked collateral. In case the collateral falls below the 1 million VSO mark, it needs to be topped-up again prior to performing additional validations.
## 6.4 Token Distribution

<table>
<thead>
<tr>
<th>Allocation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Liquidity Pools</strong></td>
<td>- 6,000,000 VSO tokens (6%)</td>
</tr>
<tr>
<td></td>
<td>- Initial DEX Offering in April 2021</td>
</tr>
<tr>
<td><strong>Seed supporters</strong></td>
<td>- 3,000,000 VSO tokens (3%)</td>
</tr>
<tr>
<td></td>
<td>- Sold at $0.02</td>
</tr>
<tr>
<td></td>
<td>- Tokens are vested over 6 months; 20% unlocked after IDO; see release schedule below</td>
</tr>
<tr>
<td><strong>Private-sale</strong></td>
<td>- 12,000,000 VSO tokens (12%)</td>
</tr>
<tr>
<td>participants</td>
<td>- Sold at $0.04</td>
</tr>
<tr>
<td></td>
<td>- Tokens are vested over 4 months; 20% unlocked after IDO; see release schedule below</td>
</tr>
<tr>
<td><strong>Public-sale</strong></td>
<td>- 35,000,000 VSO tokens (35%)</td>
</tr>
<tr>
<td>participants</td>
<td>- Sold at $0.05</td>
</tr>
<tr>
<td></td>
<td>- Tokens are vested over 2 months; 20% unlocked after IDO; see release schedule below</td>
</tr>
<tr>
<td><strong>Team</strong></td>
<td>- 10,000,000 VSO tokens (10%)</td>
</tr>
<tr>
<td></td>
<td>- Team helps launch the initial version of the Verso Network and future upgrades</td>
</tr>
<tr>
<td></td>
<td>- Tokens are vested over 24 months; unlock begins 6 months after IDO; see release schedule below</td>
</tr>
<tr>
<td><strong>Advisors</strong></td>
<td>- 5,000,000 VSO tokens (5%)</td>
</tr>
<tr>
<td></td>
<td>- Advisors helps launch the initial version of the Verso Network and future upgrades</td>
</tr>
<tr>
<td></td>
<td>- Tokens are vested over 12 months; unlock begins 6 months after IDO; see release schedule below</td>
</tr>
<tr>
<td><strong>Ecosystem Grant</strong></td>
<td>- 29,000,000 VSO tokens (29%)</td>
</tr>
<tr>
<td></td>
<td>- Ecosystem Grant with the mandate to grow and promote the Verso Ecosystem.</td>
</tr>
<tr>
<td></td>
<td>- Tokens are released over a period of 12 months; unlock begins 1 months after IDO; see release schedule below</td>
</tr>
</tbody>
</table>
### 6.5 Token Release Schedule

<table>
<thead>
<tr>
<th>Allocation</th>
<th>Vesting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Liquidity Pools</td>
<td>No lockup – tokens are liquid depending on DEX volume needed; remaining tokens are not in circulation.</td>
</tr>
<tr>
<td>Ecosystem Grant</td>
<td>20% to be unlocked 1 month after IDO; 80% to be vested linearly over the next 12 months.</td>
</tr>
<tr>
<td>Team</td>
<td>20% to be unlocked 6 months after IDO; 80% of team tokens vested linearly over the next 24 months.</td>
</tr>
<tr>
<td>Advisors</td>
<td>20% to be unlocked 6 months after IDO; 80% of team tokens vested linearly over the next 12 months.</td>
</tr>
<tr>
<td>Seed Supporters</td>
<td>20% to be unlocked immediately after IDO; 80% to be vested linearly over the next 6 months.</td>
</tr>
<tr>
<td>Private sale</td>
<td>20% to be unlocked immediately after IDO; 80% to be vested linearly over the next 4 months.</td>
</tr>
<tr>
<td>Public sale</td>
<td>20% to be unlocked immediately after IDO; 80% to be vested linearly over the next 2 months.</td>
</tr>
</tbody>
</table>

#### 6.6 Circulating Supply Projection

![Circulating Supply Projection](image-url)
Multi-sided marketplace platforms are omnipresent in today’s digital world, but consumers typically have little incentive to join a platform if no sellers are present and vice versa. Marketplace platforms have to overcome this challenge in order to benefit from network effects. Blockchain-enabled tokens bring new dynamics in the process of platform development by incentivising early participants with a potential financial gain and therefore overcome this “chicken-and-egg” problem. In addition, one of Verso’s founding partners is Wallet Engine, an embedded finance and wallet-as-a-service provider for cross-border apps. Wallet Engine will be a locomotive and drive early demand for Verso while setting an example in terms of the financial product range that can be offered around regulated digital wallets.

Aside from these market forces and in order to sustain token value in the long-term, sound economic principles need to be in place. Many of them are similar to the macroeconomic principles appalled in monetary policies, such as the equation of exchange and the quantity theory of money. In economics, the equation of exchange is the relation:

\[ M \times V = P \times Q \]

Where \( M \) is the total amount of money supply in circulation, \( V \) is the velocity of money (the average frequency with which it is spent), \( P \) is the price, and \( Q \) is the quantity (or total number of transactions).
In order to solve for the token price ($P$), one must calculate $M$ by working out the size of the market in dollars ($P \times Q$), divide it by Velocity ($V$) and then divide $M$ by the number of tokens in supply.

The Verso ecosystem is designed with a gradual increase in token velocity in mind. In addition to the demand-driven strategy through wallet providers, this is achieved by the following key measures:

**Staking Requirements**

Staking requirements for validators (1 million tokens) and Community Governance (time-based) will lower the circulating quantity.

**Built-in Burning Mechanism**

Incorrect validations and failed conversions will result in tokens being burned, hence reducing the circulating quantity.

**Ecosystem Development Contribution**

For each Campaign offered a number of VSO tokens will be allocated towards the ecosystem development pool, which is non-circulating. Any future use of this pool will be agreed upon through community governance.

In addition, there are options to take additional measures through community governance to sustain a long-term price appreciation, such as one-off burning to reduce the overall supply.
7. TEAM AND PARTNERS

7.1 Core Team

Gregor Arn, CEO

An evangelist for inclusive financial services and passionate fintech entrepreneur since 2014 with a focus on emerging markets. Gregor launched the first social payments app in the Philippines prior to starting Wallet Engine, a Singapore-based wallet-as-a-service provider that powers embedded finance in cross-border apps.

Barry Hurley, Product Lead

A veteran senior leader in the Telecoms and Financial Services industries, and more recently Fintech Entrepreneur and co-founder of several startups. Barry brings a particular focus on the development and operations of mass market fintech products in highly regulated environments.

Pascal Kurzawa, Ecosystem Development

Fintech and payments enthusiast with experience in business development and partnership management. Head of Sales at Wallet Engine

Ivan Reif, Blockchain Lead

An experienced software engineer and project manager from the FinTech space, Ivan now focuses entirely on blockchain and building finance of the future. Founded his own blockchain consulting company, Senzu GmbH, in early 2016 and has delivered multiple successful projects to date.
Farid Bahlol, Blockchain Engineer

Blockchain, crypto and open finance enthusiast since 2015, now educating and coding the solutions of tomorrow.

7.2 Our Partners

- TrustSwap
- WALLET ENGINE
- BLOCKROCKET
- HACKEN
- SENZUL
- Chainsulting
8. REFERENCES


[3] Cointelegraph, 2020,
https://cointelegraph.com/explained/key-defi-ecosystem-problems-explained

[4] Convergence, 2018,

[5] Andreessen Horowitz, 2020,
https://a16z.com/2020/08/04/fintech-scales-vertical-saas/

https://techcrunch.com/2021/04/13/clubhouse-rolls-out-payments-to-over-60k-creators-following-initial-test/

[7] Forbes, 2020,