UNION PROTOCOL FOUNDATION

Whitepaper

Draft: November 2020

Table of Contents

LEGAL DISCLAIMER

PLEASE READ THIS SECTION (AND THIS WHITEPAPER GENERALLY) CAREFULLY. YOU SHOULD CONSULT YOUR LEGAL, FINANCIAL, TAX, AND OTHER PROFESSIONAL ADVISOR(S) BEFORE TAKING ANY ACTION IN CONNECTION WITH THIS WHITEPAPER.

This whitepaper is intended to present relevant information to potential purchasers (the "**Purchasers**" and each a "**Purchaser**") in connection with the proposed offering (the "**Token Launch**") by UNION Cayman Limited, an exempted company incorporated with limited liability in the Cayman Islands, ("**the Company**", "**we**" or "**us**") of cryptographic ERC20 compatible tokens on Ethereum's blockchain with the symbol 'UNN' (the "**Tokens**"), including information about the decentralized platform described in this whitepaper developed, operated and maintained by Union Protocol Foundation (the "**UNION Foundation Platform**") and the smart contracts connected to the UNION Foundation Platform (the "**UNION Smart Contracts**"). The development and launch of the UNION Foundation Platform by Union Protocol Foundation will be in part funded by the Company using the proceeds of the sale of the Tokens.

The information contained in this whitepaper is not intended to be exhaustive and the statements included in this whitepaper are not intended to be relied upon or create or form part of a contractual relationship (unless the context otherwise requires).

Nothing in this whitepaper shall be deemed to constitute a prospectus of any sort, a solicitation for investment or investment advice nor does it in any way pertain to an offering or a solicitation of an offer to buy any securities in any jurisdiction. This whitepaper is not composed in accordance with, and is not subject to, laws or regulations of any jurisdiction which are designed to protect investors. To the maximum amount permitted by applicable law, each of the Company (collectively, the "**Associated Parties**" and each an "**Associated Party**") expressly disclaim and shall not be liable for any and all responsibility for any direct or any indirect, special, incidental, consequential or other losses of any kind, in tort, contract or otherwise (including but not limited to loss of revenue, income or profits, and loss of use or data), arising out of or in connection with (i) the Purchaser's acceptance of or reliance on any information contained in this whitepaper, (ii) any error, omission or inaccuracy in any such information or (iii) any action resulting therefrom.

All statements, estimates and financial information contained in this whitepaper, made in any press releases or in any place accessible by the public and oral statements that may be made by the Company or any Associated Party that are not statements of historical fact, constitute "forward-looking statements". Nothing contained in this whitepaper is or may be relied upon as a promise, representation or undertaking as to the future performance or policies of the Company.

Further, the Company disclaims any responsibility to update any of those forward-looking statements or publicly announce any revisions to those forward-looking statements to reflect future developments, events or circumstances, even if new information becomes available or other events occur in the future.

This whitepaper, and any sale of Tokens referred to in this whitepaper, will be subject to and governed by any terms and conditions of purchase of such Tokens. Such terms and conditions of purchase will be delivered by the Company to the prospective Purchaser after its receipt of a

completed application form, and the completion of the Company's AML and KYC procedures (defined below).[1]

Where there is any inconsistency between such terms and conditions of purchase and this whitepaper, the terms and conditions of purchase shall prevail and govern.

[1] All purchasers participating in the public sale will be required to undergo a verification process that includes liveness, proof of identity, and proof of residency.

IMPORTANT NOTICES

The acquisition of Tokens involves a high degree of risk. Before acquiring Tokens, it is recommended that each Purchaser conduct its own careful examination of all relevant information and risks about the Company, the UNION Foundation Platform and Tokens, Ethereum's blockchain and, specifically, the disclosures and risk factors set out below and in this whitepaper. If any such risks actually occur, the Company, the UNION Foundation Platform, the Tokens and the Purchaser's Tokens may be materially and adversely affected, including the Purchaser's Tokens being rendered worthless or unusable.

The acquisition of Tokens from the Company does not present an exchange of cryptocurrencies for any form of shares or equity interests in the Company, and a holder of any Tokens issued by the Company is not entitled to any guaranteed form of dividend or other revenue right. Holders of Tokens are only entitled to the use of the UNION Foundation Platform (if and when developed) and certain other rights within the UNION Foundation Platform in accordance with the terms set out herein.

The Tokens are available to Purchasers in exchange for certain other cryptographic tokens (subject to the Company's anti-money laundering ("**AML**") and "know your customer" ("**KYC**") procedures being satisfied (including as to source of funds)) and the Company does not provide any exchange of the Tokens for fiat currency. The Company also does not provide custodial or wallet services for the Tokens.

No regulatory authority has examined or approved any of the information set out in this whitepaper. No such action has been or will be taken under the laws, regulatory requirements or rules of any jurisdiction. The publication, distribution or dissemination of this whitepaper does not imply that any such applicable laws, regulatory requirements or rules have been complied with.

Any person or entity, including anyone acting on its behalf, being based, being a citizen or resident, domiciled, located or incorporated where applicable laws prohibit or restrict distribution or dissemination of the Company's materials, acquiring Tokens or accessing the UNION Foundation Platform including, but not limited to, the United States of America and any of its lands, the Cayman Islands, New Zealand, Canada, People's Republic of China, Singapore, Republic of Korea or any other country that prohibits the sale of Tokens shall not use the UNION Foundation Platform or acquire Tokens, otherwise such person assumes all the responsibility arising from the continued use of the UNION Foundation Platform and/or Tokens.

The Tokens may be placed on third-party exchanges, giving future Purchasers an opportunity to openly buy Tokens. A user seeking to acquire Tokens following the Token Launch will have to buy Tokens on such exchanges. Conversely, Tokens may be sold on such exchanges if the holder of Tokens would like to exit the UNION Foundation Platform ecosystem.

Existing laws on the circulation of securities in certain countries, such as the United States of America, People's Republic of China, South Korea, Canada and Singapore, may prohibit the sale of the Tokens to the residents of those countries. Purchasers should be aware of the restrictions on the subsequent sale of the Tokens.

The Tokens are not redeemable at the option of a Purchaser and are in essence "closed-ended". The Tokens are non-refundable save in the limited circumstances expressly set out in these terms.

The minimum aggregate Token purchase amount is $100 of DAI or USDT.

The Tokens fall within the definition of 'Equity Interests' set out in the Mutual Funds Law (2020 Revision) as the Mutual Funds Law was amended in June 2020 to expand the definition to include tokens, however the Tokens do not carry any right of redemption by the Company, and therefore it is not necessary for the Company to make application to be regulated as a mutual fund under the terms of the Mutual Funds Law (as Revised).

Pursuant to the Virtual Asset Law (2020 Revision) of the Cayman Islands (the "**VA Law**") certain entities that issue tokens will need to register with the Cayman Islands Monetary Authority. The VA Law regulates the issuance of virtual assets which is defined to exclude virtual services tokens which is defined as follows:

"virtual service token" means a digital representation of value which is not transferrable or exchangeable with a third party at any time and includes digital tokens whose sole function is to provide access to an application or service or to provide a service or function directly to its owner.

The Company will register with the Cayman Islands Monetary Authority under the VA Law. Purchasers must appreciate that the Cayman Islands Monetary Authority will not review this whitepaper and will not pass any judgment on the merits of the Company or acquiring the Tokens. The Cayman Islands Monetary Authority will have no oversight of the operations of the Company or the Tokens.

The Company is not currently required to be licensed by CIMA under the Insurance Law (2020 Revision) of the Cayman Islands ("**Insurance Law**") because in providing the technical components and decentralized governance framework the Company does not, and will not, take or affect risk, either directly or indirectly. Users of the UNION Foundation Platform pay for protection in stablecoins, such as DAI, and denote protection cover amounts in stablecoins and additionally protection underwriters deposit assets to fund the protection policies through stablecoins. Both buyers and underwriters of protection use the UNION Foundation Platform at their own discretion, using the technology of the Company as a conduit to connect with each other. The Company will not be a counterparty to any contract offered on the network. If CIMA amends the Insurance Law in a way that requires the Company to register or issues any opinion to vary the current interpretation of the Insurance Law, the Company will take all steps required to register with CIMA.

This whitepaper does not constitute an offer of the Tokens to the members of the Public in the Cayman Islands. "**Public**" for these purposes does not include a sophisticated person, a high net worth person, a company, partnership or trust of which the shareholders, unit holders or limited partners are each a sophisticated person, a high net worth person any exempted or ordinary non-resident company registered under the Companies Law (2018 Revision) or a foreign company registered pursuant to Part IX of the Companies Law (2018 Revision) or any such company acting as general partner of a partnership registered pursuant to the provisions of the Exempted Limited Partnership Law (2018 Revision) or any director or officer of the same acting in such capacity or the Trustee of any trust registered or capable of registering pursuant to the provisions of the Trusts Law (as Revised).

The Cayman Islands Government has not yet proposed or passed any legislation expressly regulating crypto currencies, cryptographic tokens, initial coin offerings or token generating

events and its regulatory intentions are unclear. Each Purchaser should be aware that any new laws imposed in the Cayman Islands (or amendments to the existing laws of the Cayman Islands, such as the MFL) could, among other things: (i) prohibit the sale, purchase or transfer of the Tokens or otherwise make holding them illegal, (ii) require the Company to register itself or the Tokens with the Cayman Islands Monetary Authority and become subject to its supervision, (iii) require the Company to cease operations or move to another jurisdiction and/or (iv) adversely affect or destroy the value of a Purchaser's Tokens, and that such new laws or amendments could be imposed very quickly and without warning.

The Cayman Islands Monetary Authority issued a public advisory on virtual currencies on 23 April 2018 ("**Advisory**"). The Advisory can be accessed online using the following link (https://www.cima.ky/upimages/noticedoc/1524507769PublicAdvisory-VirtualCurrencies_1524507769.pdf). The Advisory advises potential Purchasers to thoroughly research virtual currencies, digital coins, tokens and the companies behind them prior to purchase in order to protect themselves. All prospective Purchasers are advised to read the Advisory before proceeding with a purchase of the Tokens.

NOTICES FOR PARTICULAR PURCHASERS

Notice to prospective Purchasers in the People's Republic of China: For residents of the People's Republic of China (which, for the purposes of this whitepaper, does not include Hong Kong, Macau, and Taiwan) only: the Tokens may not be marketed, offered or sold directly or indirectly to the public in the People's Republic of China (the "**PRC**") and neither this whitepaper nor any corresponding agreement for the purchase of the Tokens ("**Purchase Documents**"), which has not been submitted to the PRC Securities and Regulatory Commission, nor any offering material or information contained herein relating to the Tokens, may be supplied to the public in the PRC or used in connection with any offer for the subscription or sale of the Tokens to the public in the PRC. The information contained in this whitepaper and the Purchase Documents will not constitute an offer to sell or an invitation, advertisement or solicitation of an offer to buy any Tokens within the PRC.

Notice to prospective Purchasers in Singapore: this whitepaper and the Purchase Documents have not been registered as a prospectus with the Monetary Authority of Singapore under the Securities and Futures Act, Chapter 289 of Singapore. Accordingly, this whitepaper and the Purchase Documents and any other document or material in connection with the offer or sale, or invitation for subscription or purchase, of the Tokens may not be circulated or distributed, nor may the Tokens be offered or sold, or be made the subject of an invitation for subscription or purchase, whether directly or indirectly, to persons in Singapore.

Notice to prospective Purchasers in the United Kingdom: this whitepaper and the Purchase Documents are being distributed only to, and are directed only at: (i) investment professionals (within the meaning of article 19(5) of The Financial Services and Markets Act 2000 (Financial Promotion) Order 2005 as amended (the "**FPO**"); (ii) persons or entities of a kind described in article 49 of the FPO; (iii) certified sophisticated investors (within the meaning of article 50(1) of the FPO); and (iv) other persons to whom it may otherwise lawfully be communicated (all such persons together being referred to as "**Relevant Persons**"). This whitepaper and the Purchase Documents have not been approved by an authorised person. The Tokens to which this document relates are available only to (and Tokens will only be sold to) Relevant Persons. Persons who are not Relevant Persons should not take any action based upon this whitepaper and should not rely on it. It is a condition of any such prospective Purchaser in the United

Kingdom receiving and retaining this whitepaper that they warrant to the Company, its directors and its officers that they are a Relevant Person.

Any person or entity subject to sanctions from the United States of America, the United Kingdom or the Cayman Islands from time to time including, without limitation, certain citizens of Belarus, Burundi, Central African Republic, Cuba, Iran, Libya, North Korea, Somalia, Sudan and Darfur, Mali, Republic of Guinea, Republic of Guinea-Bissau, Syria and Zimbabwe will not be permitted to enter into the Purchase Documents or otherwise purchase Tokens.

DISCLOSURES REGARDING THIS WHITEPAPER

Accuracy of Information, No Consent of Parties Referenced in whitepaper

This whitepaper includes market and industry information and forecasts that have been obtained from internal surveys, reports and studies, where appropriate, as well as market research, publicly available information and industry publications. Such surveys, reports, studies, market research, publicly available information and publications generally state that the information that they contain has been obtained from sources believed to be reliable, but there can be no assurance as to the accuracy or completeness of such included information.

The Company may provide hyperlinks to websites of entities mentioned in this whitepaper, but the inclusion of a link does not imply that the Company endorses, recommends or approves any material on the linked page or accessible from it. Such linked websites are accessed entirely at the prospective Purchaser's own risk. The Company accepts no responsibility whatsoever for any such material, or for consequences of its use.

Save for the Company and its respective directors, executive officers and employees, no person has provided his or her consent to the inclusion of his or her name and/or other information attributed or perceived to be attributed to such person in connection therewith in this whitepaper and no representation, warranty or undertaking is or purported to be provided as to the accuracy or completeness of such information by such person and such persons shall not be obliged to provide any updates on the same.

Neither the Company nor any of the Associated Parties has conducted any independent review of the information extracted from third party sources, verified the accuracy or completeness of such information or ascertained the underlying economic assumptions relied upon therein. Consequently, neither the Company nor its directors, executive officers and employees acting on its behalf makes any representation or warranty as to the accuracy or completeness of such information and shall not be obliged to provide any updates on the same.

Terms Used

To facilitate a better understanding of the Tokens being offered by the Company for purchase, and the businesses and operations of the Company, certain technical terms and abbreviations, as well as, in certain instances, their descriptions, have been used in this whitepaper. These descriptions and assigned meanings should not be treated as being definitive of their meanings and may not correspond to standard industry meanings or usage.

In this whitepaper, words importing the singular shall, where applicable, include the plural and vice versa and words importing the masculine gender shall, where applicable, include the feminine and neuter genders and vice versa. References to persons shall include corporations. References to any law or regulation shall include references to any statutory modification or re-enactment thereof.

Forward Looking Statements

All statements, estimates and financial information contained in this whitepaper, made in any press releases or in any place accessible by the public and oral statements that may be made by the Company or any Associated Party that are not statements of historical fact, constitute "forward-looking statements". Some of these statements can be identified by forward-looking

terms such as “aim”, “target”, “anticipate”, “believe”, “could”, “estimate”, “expect”, “if”, “intend”, “may”, “plan”, “possible”, “probable”, “project”, “should”, “would”, “will” or other similar terms. However, these terms are not the exclusive means of identifying forward-looking statements. All statements regarding the Company’s financial position, business strategies, plans and prospects and the future prospects of the industry which the Company is in are forward-looking statements. These forward-looking statements, including but not limited to statements as to the Company’s revenue and profitability, prospects, future plans, other expected industry trends and other matters discussed in this whitepaper regarding the Company are matters that are not historic facts, but only predictions.

Such forward-looking statements involve known and unknown risks, uncertainties and other factors which may cause actual events or results, performance or achievements to differ materially from the estimates or the results implied or expressed in such forward-looking statements. These factors include, amongst others:

- changes in political, social, economic and stock or cryptocurrency market conditions, and the regulatory environment in the countries in which the Company conducts its respective businesses and operations;
- the risk that the Company may be unable to execute or implement its business strategies and future plans;
- changes in interest rates and exchange rates of fiat currencies and cryptocurrencies;
- changes in the anticipated growth strategies and expected internal growth of the Company or the UNION Foundation Platform;
- changes in the availability and fees payable to the Company in connection with its respective businesses and operations and/or the UNION Foundation Platform;
- changes in the availability and salaries of employees who are required by the Company to operate the respective businesses and operations and/or the UNION Foundation Platform;
- changes in preferences of the customers of the Company or the UNION Foundation Platform;
- changes in competitive conditions under which the Company operates, and the ability of the Company to compete under such conditions;
- changes in the future capital needs of the Company and the availability of financing and capital to fund such needs;
- war or acts of international or domestic terrorism;
- occurrences of catastrophic events, natural disasters and acts of God that affect the businesses and/or operations of the Company and/or the UNION Foundation Platform;
- other factors beyond the control of the Company; and
- any risks or uncertainties associated with the Company and its business and operations, the Tokens, the Token Launch, the UNION Foundation Platform and the underlying assets (each as referred to in this whitepaper).

Nothing contained in this whitepaper is or may be relied upon as a promise, representation or undertaking as to the future performance or policies of the Company. Further, the Company disclaims any responsibility to update any of those forward-looking statements or publicly announce any revisions to those forward-looking statements to reflect future developments,

events or circumstances, even if new information becomes available or other events occur in the future.

No further information or update

No person has been or is authorised to give any information or representation not contained in this whitepaper in connection with the Company and its business and operations, the Tokens, the Token Launch and the underlying assets (each as referred to in the whitepaper) and, if given, such information or representation must not be relied upon as having been authorised by or on behalf of the Company. The Token Launch (as referred to in this whitepaper) shall not, under any circumstances, constitute a continuing representation or create any suggestion or implication that there has been no change, or development reasonably likely to involve a material change in the affairs, conditions and prospects of the Company or in any statement of fact or information contained in this whitepaper since the date hereof.

Restrictions on Distribution and Dissemination of whitepaper

The distribution or dissemination of this whitepaper or any part thereof may be prohibited or restricted by the laws, regulatory requirements and rules of any jurisdiction. In the case where any restriction applies, you are to inform yourself about, and to observe, any restrictions which are applicable to your possession of this whitepaper or such part thereof (as the case may be) at your own expense and without liability to the Company or the Associated Persons.

Persons to whom a copy of this whitepaper has been distributed or disseminated, provided access to or who otherwise have the whitepaper in their possession shall not circulate it to any other persons, reproduce or otherwise distribute this whitepaper or any information contained herein for any purpose whatsoever nor permit or cause the same to occur.

Language of whitepaper

This whitepaper may have been prepared in multiple languages. In the event of any inconsistencies between one version and another, the English language version shall prevail.

UNION PROTOCOL FOUNDATION

Open Platform lowering DeFi Access, Cost, and Risk Barriers

Abstract

Decentralized finance (DeFi) seeks to use both innovations in distributed ledger technology and smart contracts to offer a robust, composable ecosystem for the extension of financial services to an ever-growing community. In creating robust projects, the DeFi ecosystem has created new opportunities for wealth and participation, as each user creates liquidity, participates in governance, and reduces volatility for every other. If DeFi can be observed as a composable set of programmatic features deployed to a distributed ledger network, each user's path through these features may be unique, but are underpinned by similar considerations and risks as paths are navigated. By observing these paths as choices among all DeFi participants, the UNION Protocol Foundation seeks to enable the development of software and tools that introduce intelligent, non-monopolistic intermediary functions, which simplify access to the DeFi ecosystem, while reducing cost and risk for its participants.

1. Background

1.1 State of DeFi

Decentralized finance (DeFi) has become the premier narrative in the crypto sector in 2020. The DeFi market represents a broad stroke effort to infuse financial innovation, governance, and permissionless access into the global financial system. Many DeFi observers and analysts view Compound Finance's launch of its native COMP governance token as the spark for the recent DeFi bull run. A parabolic price run and the realization of liquidity mining as an effective means to align incentives among community users quickly gathered momentum and spread to other projects.

Total value locked (TVL) amongst DeFi protocols has soared past $11 billion[2], and decentralized exchanges (DEXs) such as Uniswap, Curve, and Balancer have absorbed vast portions of user capital. In particular, Uniswap's locked value recently surpassed $2 billion, and the DEX's daily trading volume now exceeds[3] that of centralized exchange (CEX) behemoth Coinbase.

The innovation happening within DeFi circles is not simply replacing legacy systems and slapping decentralized labels on them either. Tinkering with open-source, community-governed concepts has led to myriad breakthroughs in what's possible with a composable financial stack.

[2] https://defipulse.com/

[3] https://cryptobriefing.com/uniswaps-daily-volume-overtook-coinbase-more-80-million/

For example, Yearn Finance has broached meaningful discussions on the potential of community-governed hedge funds and how to design sustainable yield farming strategies; Curve has implemented a blend of liquidity pools and bonding curves ideal for swapping stablecoins with minimal slippage; and Synthetix is delivering a wave of products focusing on synthetic assets and decentralized derivatives. Synthetix is even among the first projects to use the Optimistic Rollups scaling testnet for Ethereum. Many of these projects have been forked into new protocols and iterated upon, for better or for worse.

1.2 The Problem

However, with the massive influx of capital and usage demands into the DeFi markets, three issues have come to the fore:

1) scaling issues on Ethereum (leading to the exclusivity of usage against the broader ethos of DeFi);
2) attenuated yield in a multitude of situations due to inefficient capital allocation; and
3) a dire need for broader, scalable insurance across smart contracts and DeFi protocols.

As capital flooded into borrowing/lending protocols, DEXs, and other yield farming opportunities, gas fees on Ethereum soared to new ATHs[4]. Straightforward transactions began costing in excess of $15 while a minimum of $100 in fees was often the barrier to participate in yield farming opportunities. DeFi quickly became a theater for speculation for large whales, precluding users with smaller capital from participating.

Inefficient capital allocation is another problem holding back DeFi adoption, as seen in the over-collateralized (OC) lending that dominates lending in DeFi. In such designs, users over-allocate assets to a protocol in return for a specific asset, usually a stablecoin. To mitigate extreme outlying risk, minimum collateralization ratios for protocols like Maker are 150 percent, meaning users that deposit 1.5 ETH receive 1 ETH worth of DAI (in debt) in return. Consequently, the capital allocation in DeFi is inefficient to the degree that it has a tangible impact on muting yields for situations ranging from straight lending to yield farming strategies across the broader market.

Finally, as the TVL of leading DeFi protocols continues to balloon, a specific need has become glaringly obvious -- protection of the assets. Protocols with anonymous founders and hundreds of millions of dollars in AUM are not secure depositories for user funds, especially when they are both unaudited and uninsured. With no central counterparty to appeal to, users in DeFi usually shoulder the principal risk of their investments. A lack of insurance is also unsurprisingly a major barrier to the entry of institutions, who are accustomed to FDIC-insured accounts and a web of regulatory and insurance apparatuses protecting both themselves and investors.

With these problems in mind, it's critical to examine the protection component of DeFi more closely and how it serves as a lynchpin for helping DeFi continue on its journey to become the future of finance.

[4] https://coinmetrics.io/the-defi-fee-explosion-how-yams-collapse-drove-ethereum-fees-to-new-heights/

2. Intro to the UNION Solution

As users participate in DeFi broadly, they have expectations of service and responsiveness for the features they engage that are beyond those of the decentralized networks to which DeFi activities, themselves, are bound. Consider the legacy of centralized finance and the innovations of financial technology, whereby users have become accustomed to making tradeoffs between the flexibility of control and their choices in composability in return for reliability and accountability of a responsive financial services infrastructure. Left to their own devices, a user of the DeFi ecosystem is left to managing the risks associated with these activities for themselves; the management of which amounts to cost, risk, and difficulty.

The UNION Protocol Foundation (UNION) addresses this gap between CeFi and DeFi by providing the following building blocks:

1. Bundled protection with different layers of coverage and segregated underwriter exposure (e.g., Layer 1 risk, smart contract risk, exposure risk, transaction completion risk). The UNION Protocol Foundation platform provides DeFi the benefits of complete protection, both in terms of coverage and cost savings, that traditional insurance companies offer through their bundled insurance packages.
2. A truly decentralized protection platform not bound by a “members only” model, without KYC requirements, paired with an effective governance process to protect a) the validity of claims and b) the solvency of pools to meet coverage claims.
3. A decentralized secondary market to manage risk for protection writers as well as for protection buyers. A liquid secondary market not only frees up capital but also distributes risk, allowing the entire DeFi ecosystem to scale more efficiently, much as how insurance companies in the centralized world are able to take more risk through reinsurance companies.
4. Multi-token protocol that cleanly separates governance from the market dynamics of protection buying and writing.

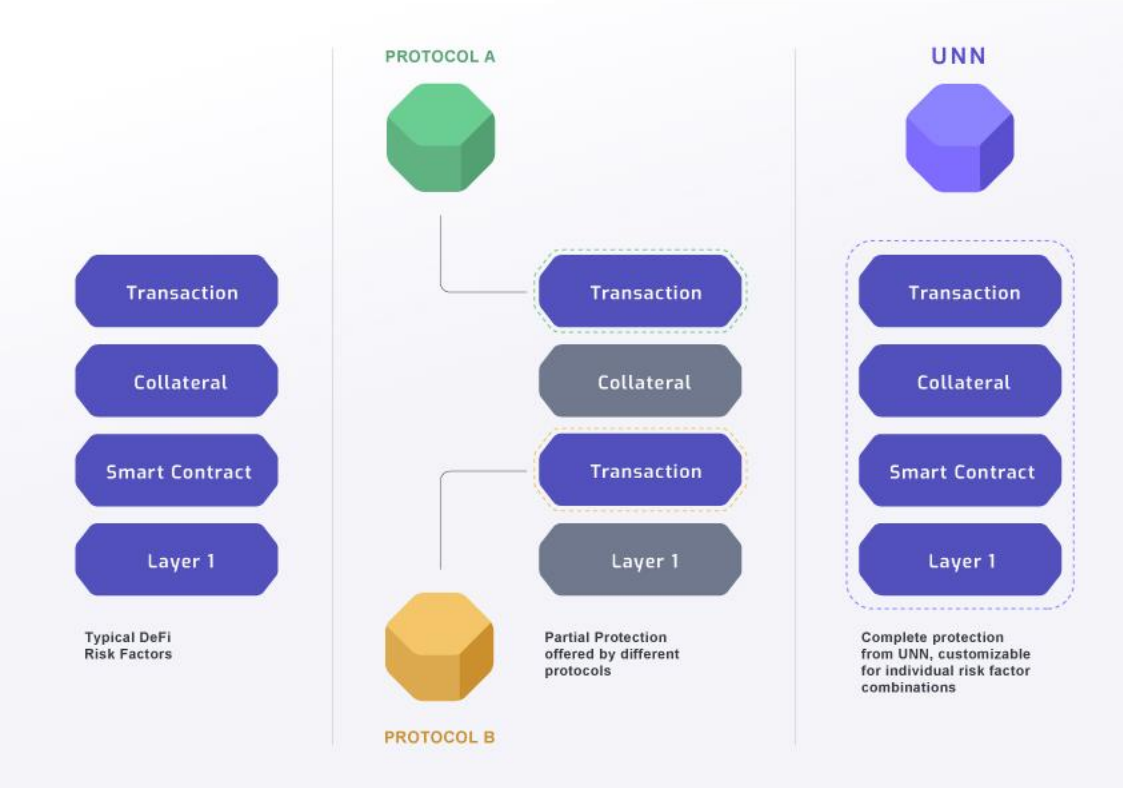

Figure 1: DeFi participants are exposed to various levels of risk, however current protocols cover only a portion of these risks. UNION will create a complete protection bundle that creates a safe environment for DeFi to grow.

In order to provide these building blocks, UNION will provide these protocol components:

1. an economics model that grows the ecosystem in a rewarding and sustainable fashion;
2. a capital model that effectively utilizes capital while maintaining solvency;
3. a pricing model balancing the supply and demand curves while adjusting dynamically to macro conditions;
4. a suite of products that have market fit and a realistic go-to market in the rapidly evolving world of DeFi;
5. governance process—along with incentives for said governance—that protects, upgrades, and grows the project; and
6. transparent reporting of financial and risk key performance indicators (KPIs) to create trust in and adoption of the protocol.

This paper describes each of these components in the following sections.

3. Economics

UNION's DeFi Protection platform is based on three primary components:

13. a dynamic pricing model for the protection premium that provides an efficient and real-time price discovery mechanism
14. a capital model that adjusts leverage, maximizing solvency of protection pools while providing returns through surplus capital
15. a multi-layer governance, claim, and challenge mechanism that ensures claims are handled in a fair and transparent manner.

The UNION protection platform operates on a three-token system. The three tokens are: UNN, uUNN, and pUNN. The UNN token is used for governance purposes, such as voting on protection claims and related conflict resolution protocols, adjusting risk parameters, or adjusting incentive programs. Buyers of protection will receive uUNN tokens giving them rights to the protection policy. Writers of protection will receive pUNN tokens, which represent the % share of the protection pool that the writer is powering. Both uUNN and pUNN tokens can be traded in UNION's secondary market.

This three-token system represents an explicit decision to separate governance tokens from protection tokens, thereby preventing conflict of interest or avoid unforeseen market dynamics as was experienced by NXM during September of 2020[5].

3.1 Buying Protection

A protection contract is generated whenever a buyer purchases a protection product, either individually or in a bundle. The contract specifies:

1. type of protection – this identifies which protection pool writes the protection and in return, earns the premium
2. the cover amount
3. the term of the insurance (start date / end date), and
4. the premium level.

Premiums and cover amounts will be in stablecoin DAI denominations to start. If approved by governance, additional payment and cover amount currencies can be accepted.

Once purchased, buyer will receive uUNN tokens that denote their right to the protection policy. Protection begins upon the later of premium deposited or start date of protection contract. Protection claims can be made by buyer through the Claim process described later in this document.

Buyers who stake a portion of UNN tokens through approved channels such as Uniswap liquidity providers, will receive a discount in the protection premium. Furthermore, protection holders will share in a small portion of UNN reward that accrues every block. Additional details

[5] https://cryptobriefing.com/nexus-mutual-just-ran-out-defi-coverage-heres-why/

around this incentive will be provided in future date, and is subject to end based on governance voting.

Alternatively, buyers are able to sell their protection policies in the secondary market described later in this document.

3.2 Capital Model

The capital model is a fundamental component that optimizes the leverage of protection writers: locking capital to meet solvency based on stringent standards used in insurance and finance while providing economic incentives that attract protection writers and help fund ecosystem development. Additional details on the Solvency Capital Requirement (SCR) used to control leverage is provided later in this document.

Any pool amount in excess of SCR will be deployed to the Surplus Pool for additional, low-risk yield opportunities such as collateralized lending through open-source protocols. These returns are then shared back to protection writers of the pool, with a small percentage set aside as additional reserve. If the capital amount within the protection pool drops below the SCR, funds will be drawn down from the Surplus Pool until the SCR is met.

Participants who wish to write protection and earn premium, choose the type of protection they want to power, and join the relevant pool by depositing capital in DAI. Once deposits have been cleared, the protection writer will receive pUNN tokens that prove their % share of the pool. pUNN tokens are analogous to Liquidity Pool tokens for Liquidity Providers. Based on their pUNN, protection writers will earn a portion of the total protection premiums powered by the pool and in return, will be responsible for meeting a percentage of the cover amount for any triggered protection contract.

In addition to a share of the pool premium, protection writers can take their pUNN tokens and stake for more UNN. Furthermore, holders of pUNN (even if they have staked the pUNN) will share in a small portion of UNN that accrues every block. This incentive is subject to end based on governance voting.

Alternatively, protections writers can offload their pUNN tokens to other buyers through the secondary market described later in this document.

3.3 UNN Staking

UNN holders can stake their holdings to earn additional UNN through liquidity mining. Incentives will be split into two general categories: liquidity providers and locked tokens for governance purposes.

UNION will provide the UNN Geyser for holders to provide liquidity on different protocols and DEXes, starting with Uniswap. Details around the incentive will be provided at a later date. Additional incentives will be announced and voted through the governance process.

The second category of staking, locking for UNN governance, allows holders to partake in shaping the future of UNN through a decentralized governance process. UNN can be locked for different terms ranging from 1 month to 4 years, during which they cannot be withdrawn or transferred. Staked UNN will earn rewards proportional to locked terms with additional incentives to be announced to encourage ecosystem growth and utility.

4. Governance

Over the past few months, the DeFi "yield farming" activity has given further credence to an important aspect of DeFi: decentralized governance. Projects such as Curve, Yearn, Compound , to name a few, have demonstrated that when properly structured and incentivized, active engagement from the community in governance for the advancement of the protocol can be achieved.

The governance structure is comprised of two layers: the community stakeholders and the UNION DAO. The purpose of both is to ensure that UNION operates in a fair, transparent, and sustainable fashion on all aspects of business development, technology development, claim assessment, and risk management. Tasks range from daily operation decisions (such as adjudicating contested claims, updating risk parameters) to strategic decisions (such as proposing new protection contracts, adjusting ecosystem tokenomics) to emergency "break-the-glass" decisions (such as pausing functionality if required).

Any person who holds UNN is considered a community stakeholder, and will be able to participate in the governance process by locking UNN in return for voting rights, with economic incentives as outlined under the previous section of UNN Staking. There will also be avenues for holders to delegate their voting rights to others, for purposes of either convenience or for more strategic outcomes like joining the DAO.

The DAO will serve as the arbitrator for situations where community stakeholders are unable to reach a decision and will also serve as a fail-safe to override decisions that may be deemed detrimental to the UNION ecosystem. The DAO will be comprised initially of the Foundation and UNN holders who stake a significant amount of UNN . The amount to qualify to be a DAO member and mechanism to become such a member will be shared at a future date.

Furthermore, individuals or entities with expertise in finance, insurance, and governance may be appointed by the initial members of the DAO. These DAO members may be incentivized with UNN that vest over their tenure, assuming the actions of said members contribute positively to the growth of the UNION ecosystem. The goal for UNION is to function as a steward, and eventually transfer all DAO governance to members as voted in by the DAO and focus only on development and sustaining the platform as directed by the governance process.

5. Insurance Math Primer

Before explaining the basics of UNION's capital model, we will provide a simplified intro to the math and risk methodology behind insurance . Those who are familiar with risk-weighted probabilities can skip to the Capital Model section.

The actuarial science behind how traditional insurance agencies manage to pay out large sums for insurance events and still maintain solvency is based on two fundamental concepts in probability: 1) the Law of large numbers (LLN) and 2) weighted probability.

LLN states that the average of the results obtained from a large number of trials or recorded observations will converge to the expected value[6]. That is, given a random variable X with n occurrences:

The sample average:

$$\overline{X}_n = \frac{1}{n}(X_1 + \cdots + X_n)$$

Converges to the expected value $E(X)$:

$$\lim_{n\to\infty} \overline{X}_n = E(X)$$

The simplest example is the coin flip, where the probability of flipping a head is 50%. The first few flips will likely result in a ratio of heads vs. tails that is far from 50%. However, as more flips are done, the ratio will gravitate towards the expected ratio of 50%. Replace the coin flip with historical occurrences of an insured event, for example an automobile accident, and we start to understand how companies are able to project the probability of an accident occurring given certain conditions.

Weighted probability, the second concept, attaches different weights to the various outcomes of an event, to arrive at an adjusted expected value of an event. The weighting schemes fall into two broad categories: value and objective probabilities. For purposes of this paper, we will focus on value weighted transformations, where the value is the monetary impact of an outcome. Furthermore, there are different types of weighting functions used to model non-linear outcomes, which are beyond the introductory focus of this paper. Given an event X with n different outcomes, with equal probability of p_i, and a weighting variable of w_i for each outcome, the expected value of an event can be calculated as:

$$E(X) = \sum_{n=1}^{n} w_1 * p_1 + \cdots + w_n * p_n$$

[6] https://www.wikiwand.com/en/Law_of_large_numbers

A very simplistic example for insurance is, given 1,000 people paying insurance of $200 a month, thus $2,400 a year and a probability of 5 people getting into an accident in a year, costing $50,000 per year per accident:

- The probability of an accident occurring is 5 / 1,000, with weight of -$50,000
- The probability of an accident not occurring is 995 / 1000 with weighting of +$2,400
- The expected value over a year for each insured person:

$$E(X) = -\$50{,}000 * \frac{5}{1{,}000} + \$2{,}400 * \frac{995}{1{,}000} = \textbf{\$2,138}$$

In other words, for every person that the company insures, the company is expected to make $2,138 over the year. While this sample is very small, as the sample size increases, following principle 1 of LNN, the insurance company gets more confident in its outcome. In addition, insurance companies account for the risk profile of the individual, the insured vehicle, the region of the insured, and many other factors in order to optimize the insurance premium charge to an individual policy.

This probability weighted outcome forms the foundation of how insurance companies stay in business, given the perceived large negative payouts.

6. Capital Model

The capital model determines how much capital pools need to hold in order to meet their obligations and remain solvent over a period of time. While a pool could hold 100% of collateral to match its cover amount exposure, this would be highly inefficient use of capital given the probabilistic occurrence of events.

Traditional insurance companies rely heavily on leverage to enhance their risk-return profile and operate within the regulatory requirements that limit the amount of leverage they can have. In the US, companies utilize risk based capital (RBC) approaches with rules that vary by states. In the EU, companies use a standard set forth by the EOIPA's Solvency II framework[7].

The Solvency II framework ensures that European companies can meet their obligations over one year with a 99.5% probability by meeting a combination of Minimum Capital Requirement (MCR) and Solvency Capital Requirement (SCR).

Asides from being an insurance industry standard, the framework is analogous to a well-known risk metric in the financial market: the Value at Risk, or VaR85% (for MCR) or VaR99.5% (for

---

7 https://www.actuaries.org.uk/system/files/field/document/IandF_SA2_SolvencyII_2016.pdf#:~:text=The%20SCR%20for%20each%20individual,in%20the%20stressed%20balance%20sheet.

SCR). As such, we believe the SCR is a conservative and justified baseline to determine the locked capital in each protection pool, and in turn, the unlocked capital that can be used to earn rewards through low-risk yield opportunities.

As the only difference between SCR and MCR calculation is the probability threshold, this paper will expound on the SCR only. The SCR employs a modular framework: SCRs are first calculated for each protection module and then aggregated across modules to arrive at an overall SCR. In Solvency II there are additional operational and adjustment modules considered. We will examine and implement parallels to these modules at appropriate times, subject to governance voting.

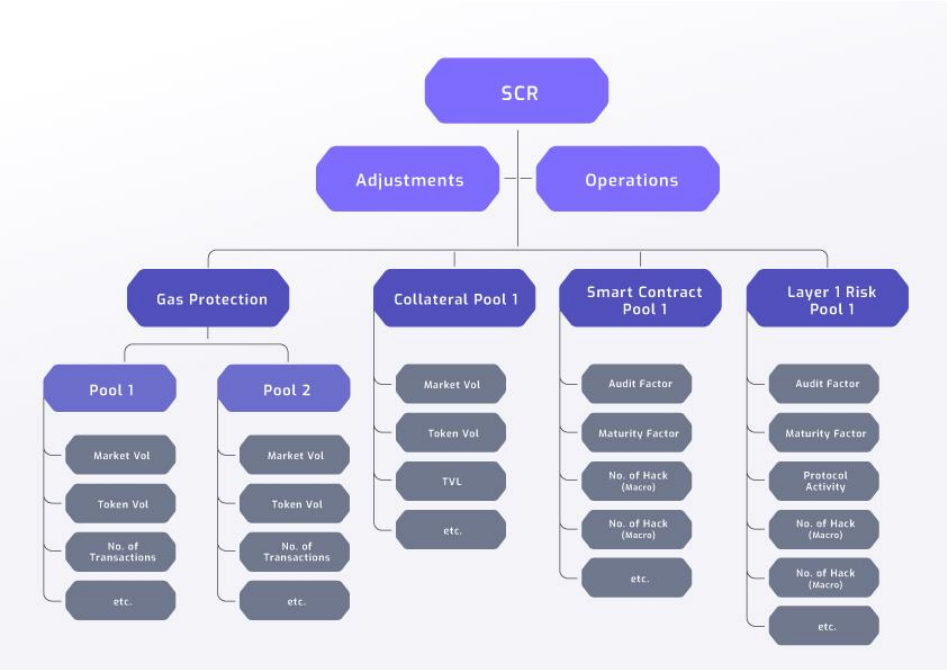

Figure 2: The Solvency II SCR framework applied to UNN. Note that each protection type can extend to multiple tokens / protocols and with their own protection pool. This figure is for reference purposes.

Each individual module will have different approaches (parameters, probability distributions, and approaches) for calculating SCR that best reflect the type of risk being protected against. For fixed cover amount products, the formula used for SCR is:

$$SCR_x = \sqrt{\sum_{i,j} Corr(i,j) * P_i * Exp_i * P_j * Exp_j}$$

Where:

$$Corr(i,j) = \begin{pmatrix} 1 & \cdots & \rho_{ji} \\ \vdots & \ddots & \vdots \\ \rho_{ij} & \cdots & 1 \end{pmatrix}$$

- SCR_x = SCR for risk module x.

- P_i, P_j = probability of exposures *i* and *j* occurring, respectively.
- Exp_i, Exp_j= exposure (that is, the amount covered) of risks *i* and *j*, respectively.
- $Corr(i, j)$ = Correlation matrix of risks *i* and *j*.
- ρ_{ij}= Correlation coefficient between risks *i* and *j.*

In addition to the module of each risk coverage, there is also a currency module, *Fx*, that accounts for currency price movements held in reserve across the components. Because the currencies follow linear pricing profiles and exhibit behavior that follow liquid assets, we can use parametric VaR to calculate capital needed in the currency module:

$$VaR_p = \alpha\sqrt{x'\sum x}$$

Where :

$$x = \begin{pmatrix} x_1 \\ \vdots \\ x_n \end{pmatrix}$$

$$\sum = \begin{pmatrix} \sigma_{11} & \cdots & \sigma_{1n} \\ \vdots & \ddots & \vdots \\ \sigma_{n1} & \cdots & \sigma_{nn} \end{pmatrix}$$

- VaR_p = Value at Risk of portfolio p with n assets.
- α= z-score based on confidence. E.g., for 99% confidence, the z-score is 2.33
- x = vector of weights of the n assets.
- x' = transpose of the weight vector x
- Σ= covariance matrix of *n* assets.
- σ_{nm}= covariance of asset *n* and *m*.

We then aggregate the modules into an overall SCR simply by replacing the correlation matrix of individual exposures in SCR_x with the correlation matrix of the individual modules. Each pool will have to meet their own SCR to operate, while the overall SCR is used to monitor UNION's overall financial health.

The initial parameters will be set based on research of available market data at time of launch. The parameters will be monitored continuously, and based on market dynamics and subject to governance voting, be updated periodically. It is expected that initially, the parameters will be conservative, and as additional data is gathered, the SCR will be optimized.

To serve the diverse DeFi industry, we will support multiple protocols. Certain protection contracts will be limited to a single protocol with its own coin, and risk calculations can be limited to just that coin. However, many of the protection offered will be across tokens running

on another protocol (e.g., ERC20 tokens on Ethereum), and in order to arrive at an "apples to apples" comparison, we need to normalize the calculations. We are currently evaluating using DAI denomination as our base currency for calculating SCR, but may consider ETH given its dominance in DeFi.

The total SCR will be calculated regularly as it is a criteria for various funding and protection writing operations. In periods of large volatilities, we will act quickly to calibrate SCR and protect the solvency of the pool. As the calculations will be resource intensive, they will be performed off-chain due to gas considerations. The results will be posted on-chain after a specified number of blocks, in accordance with our efforts to create a transparent ecosystem, discussed later in this document.

Should the pool liquidity fall below its SCR, assets will be transferred back from the surplus pool to "top up" the collateral back to SCR limits. Should the pool liquidity fall below MCR, new protection contracts cannot be written and capital withdrawals from the pool will be suspended until capital is increased back to SCR limits.

6.1 Beyond SCR

While the SCR provides a strong starting point, we should avoid turning a blind eye on well-established financial approaches to risk that can strengthen the robustness of our modeling. We therefore will leverage additional risk metrics used in the financial markets which include, but are not limited to:

1. Factoring in conditional value-at-risk[8] (cVaR), which measures the size of the expected losses after passing the SCR or VaR. For example, SCR measures only what the reserve is needed to withstand up to 99.5% of events, while cVaR would measure the size of the loss in the remaining 0.5% of events.
2. Inclusion of fat-tail distributions, such as the student-t[9], which better model the risk profiles of currencies when calculating stochastic returns.
3. Leveraging probability of default[10] (PD) analyses as set forth in Basel II guidelines to better capture the non-linear outcomes of protection contracts.

[8] https://www.wikiwand.com/en/Expected_shortfall
[9] https://www.wikiwand.com/en/Student%27s_t-distribution
[10] https://www.wikiwand.com/en/Probability_of_default

7. Pricing

As explained in our insurance math primer section, insurance companies are able to price their premiums effectively using the LNN as they have copious amounts of data to draw from. However, in the DeFi world—outside of certain crypto assets prices—there is not sufficient data to draw from. This small sample size problem is especially true for protection products that cover smart contract or Layer 1 risks and doubly so for the cross-interference / correlation of said events.

In the face of this data paucity, we will use a dynamic pricing model based on five factors: demand, marginal correlation, marginal concentration, pool size to SCR ratio, and a product-specific risk model that includes temporal considerations.

1. The demand factor is based on a monotonous demand curve, and is continuously calibrated up or down based on a target optimal demand. As demand increases, price is increased along the optimal demand curve to decrease the demand, and vice versa should demand fall below optimal demand. If demand continuously exists above the target demand curve, then the target demand curve is shifted upwards, and vice versa should demand fall below the demand curve.
2. The marginal correlation and marginal concentration factors measure the increase or decrease in the total correlation/concentration based on the addition and removal of the policy exposure. In other words, purchases of protection that have outsize impact on the risk of pool will be more expensive. We base our framework on the financial metric of marginal-VaR.
3. The pool size to SCR ratio measures the pool protection power (which is the sum of locked and unlocked assets) to the SCR ratio. As this ratio decreases, the price of premium will increase and vice versa.
4. The product-specific risk model is a model that best captures the risk return profile of an instrument. Each type of protection offered will be analyzed for best fit and will draw from financial models such as, but not limited to, options, bonds, and credit default swaps. Models in other industries will be investigated and incorporated if fit is found.

This pricing model affords the following behaviors:

1. As demand increases and supply decreases, the premium rate increases.
2. As correlation and concentration risk to the pool increases (even from protection written in other pools), the premium rate increases.
3. As overall relevant macro risks—such as private volatility—increase, the premium rate increases.

8. Protection Products

While there are many types of products that UNION will offer, including the bundling of these products to provide more affordable and complete coverage, we share three sample products we are investigating and prioritizing for launch.

The approaches represent our current avenue of thinking, and may adjust if we find more efficient methods that balances accuracy, input limits, and capacity limits. We will employ a conservative go-to market strategy to identify any teething issues, reprioritize product launches as needed, then scale out to mainstream opportunities.

8.1 Protection 1: Transaction Gas

The initial gas protection product will cover single-step send transaction gas overage with fixed cover amount over the period of protection bought. The product covers the amount of gas over a fixed gas strike selected by the buyer, which is deducted from the cover amount bought up until the end of the protection period.

As an example, if the gas to send tokens from one address to another is 50 gwei, an active yield farmer who wants to pay no more than 70 gwei over the coming 30 days could buy a gas protection contract with a cap of 100 gwei and cover amount of 5 ETH for 30 days. Thus, over the next 30 days, any gas exceeding 70 gwei for qualified transactions can be claimed against the 5 ETH cover amount. The protection will cover the buyer until either the 5 ETH is used or the 30 day expiration has passed, whichever occurs first.

The product-specific risk model behind this product leverages an option model. In essence, the buyer of the coverage exhibits the same risk profile as that of buying an American call option. Likewise, the pool writing the protection is selling a naked American call option. An American call option can be suitably approximated by the Black-Scholes model[11] in a low interest-rate environment and over small periods of time. For longer periods of time, the American call option can be calculated more accurately by the Binomial Options model[12] proposed by William Sharpe.

In both approaches, the model affords these behaviors:

1. The more volatile the covered instrument, the higher the premium.
2. The further the covered cap kicks in from current price, the lower the premium.
3. The longer the cover is bought, the higher the premium.

This product is a very good market fit for adopters given 1) immediate resolution of the high gas fees experienced by DeFi participants over the last 6 months and 2) application of a well-tested financial model with significant amount of “price” data to draw from.

---

[11] https://www.wikiwand.com/en/Black%27s_approximation

[12] https://www.wikiwand.com/en/Binomial_options_pricing_model

As the product matures, we will extend the protection to cover multi-step transactions such as staking USDT through yearn.finance. Insurance premiums would be optimized based on analysis of the most-efficient path from beginning to end, as well as the probabilistic occurrence of underlying gas movements affecting multiple steps all together or none.

8.2 Protection 2: Collateralization Ratio

The collateralization protection will also be a fixed cover amount over the period of protection bought. The product covers any amount of collateralization over a set ratio selected by the user. Any overage of collateralization can be claimed against the fixed cover amount until the end of the protection period.

For example, given an overcollateralization (OC) ratio of 150% with a liquidation ratio of 50%, the borrower can instead post to a lender a reduced collateralization ratio x% and a protection contract that creates the same risk to the lender. The protection contract in this case can also be well-modeled by an American put option on the underlying collateral. Should price drops result in liquidation of collateral, the put option protection is triggered and covers the lender for the difference between the original OC ratio of 150% versus the reduced ratio of x%.

The methods and benefits of using options have already been described under the Gas Protection product.

8.3 Protection 3: Smart Contract

Given the launches of other Smart Contract Covers, such as from NXM, the use of the product is well described and understood. In short, the contract covers "unintended code usage" that may or may not affect the buyer's funds directly. As long as an event has occurred, the buyer is paid out, subject to approval from governance.

However, we feel that given the paucity of smart contract hack events from a statistical perspective, a good product-specific model to investigate is that of the credit default swap (CDS) model. Often described as insurance against non-payment / default[13] , the CDS model attempts to model a non-predictable, non-linear loss with statistically low records—very similar to the risk profile of smart contract risk. Specifically, we choose the doubly-stochastic (aka, Cox process) intensity pricing model which utilizes an inhomogeneous Poisson process[14].

13

https://www.investopedia.com/terms/c/credit_default_insurance.asp#:~:text=A%20credit%20default%20swap%20(CDS,exchange%20for%20a%20periodic%20fee.&text=Credit%20default%20swaps%20have%20existed%20since%201994.

14 http://www.columbia.edu/~mh2078/FoundationsFE/credit_models.pdf

9. Secondary Markets for Protection

A crucial step towards a robust and scalable DeFi protection ecosystem is the development of a risk sharing mechanism between protection writing protocols. The analogy to this mechanism in the traditional insurance industry is reinsurance. Reinsurance is where multiple insurance companies share their risk by purchasing insurance policies from other insurers to limit their own loss. In other words, this is "insurance for insurance companies".

With the innovations presented by cryptocurrency, we will create a platform where protection writers and buyers can exchange their risk with liquidity, in a fair and transparent manner as befits the DeFi market. Not only do we expect individual participants exchanging policies (similar to the NFT approach taken by Yearn and Rarible[15]), we also see participants and other protocols exchanging or offloading protection pool participation tokens. In addition to risk transfer, a liquid secondary protection market enables: better capital management including solvency margin relief, arbitrage opportunities for mispriced protection risk, and access to risk expertise of another protection protocol.

There are many protocols and models of DEXes[16] for us to draw from, and we are investigating off-chain computation with on-chain settlement models such as that used by 0x.

10.Claim Assessment

In the DeFi world, providing a claiming protocol for protection policies that allows decentralized decision-making and participation while protecting against fraudulent actions is a challenging problem. Without a centralized entity requiring KYC of policy buyers and writers, it is feasible for bad actors to game the system such as acting as both protection buyer and writer of the same protection contract. While this problem can be completely removed in certain protection policies such as gas protection contacts through the use of oracles, in other protection policies such as smart contract protection, a voting mechanism is needed to make the final decision.

10.1 Claiming

To disincentivize claiming abuse and waste of resources, protection buyers must lock in an amount of stablecoin equal to the premium of their protection contract for the duration of the claiming period to initiate a claim. Provided the buyer is not flagged as a bad actor, the stablecoin will be released back to the buyer upon completion of claim assessment.

As soon as a claim has been submitted, the covered amount in the pool will be locked, where the contribution of the locked amount is distributed pro-rata to the protection pool participants based on their % share of the pool. Tokens will remain locked until either the claim has been

[15] https://gov.yearn.finance/t/partner-up-with-rarible-for-nft-insurance/4530
[16] https://yos.io/2018/11/16/ethereum-signatures/

denied, at which point they will return to the pool, or the claim has been paid out, at which point they will be given to the protection buyer.

For policies that can be automatically adjudicated through the use of oracles, such as gas protection, there is no need to trigger a voting mechanism. Any buyer of protection needs simply to submit their claim with relevant details, and after a set timing window, the UNION protocol will automatically release the covered amount if conditions are met. The timing window is put in place to allow buyer or writer to access the Challenge Protocol if needed.

For policies that do require voting mechanisms, such as smart contract protection, UNION will employ a three-layer governance mechanism to align incentives of all participants. The first layer is the protection writers in the protection pool. The second layer is the protection writers in all pools. The third layer is the UNION DAO. Depending on the policy, up to all three layers may be involved by default. In each layer involved, a majority consensus must be reached in order to forward the claim. There will be incentives for both voting in favor of majority, and disincentives for voting against majority. In addition, there will be disincentives for a lower layer not reaching a decision within a set period of time.

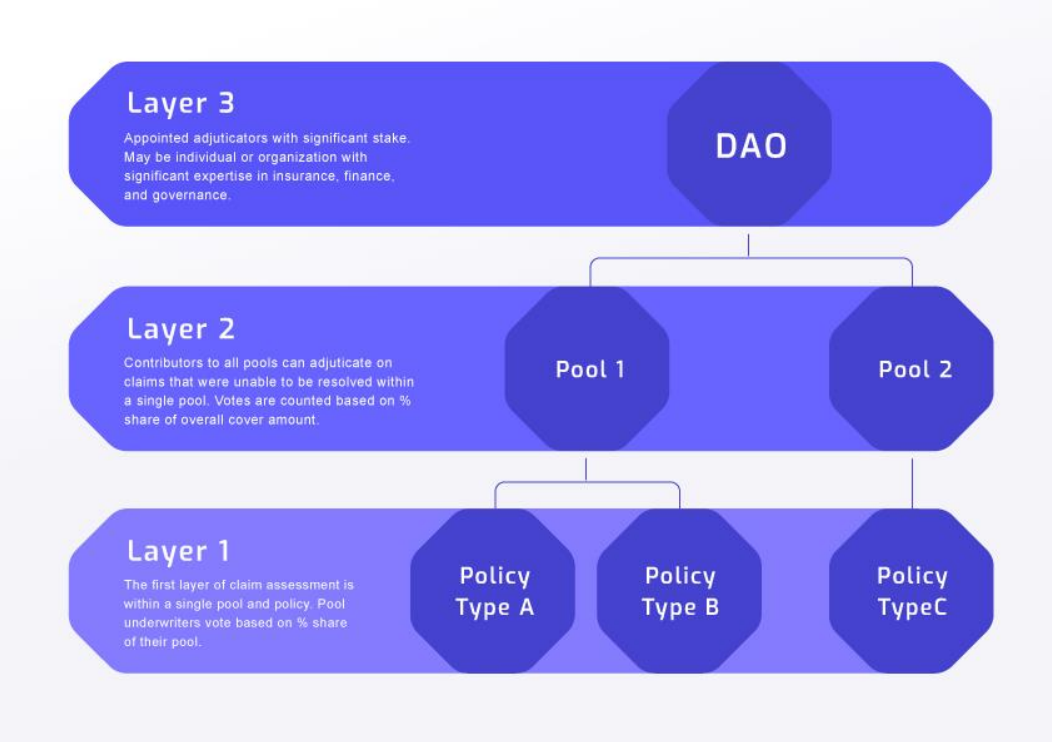

Figure 3: A governance framework where each pool acts as their own decentralized community with an escalation and appeal process is present to protect all participants in the UNN ecosystems.

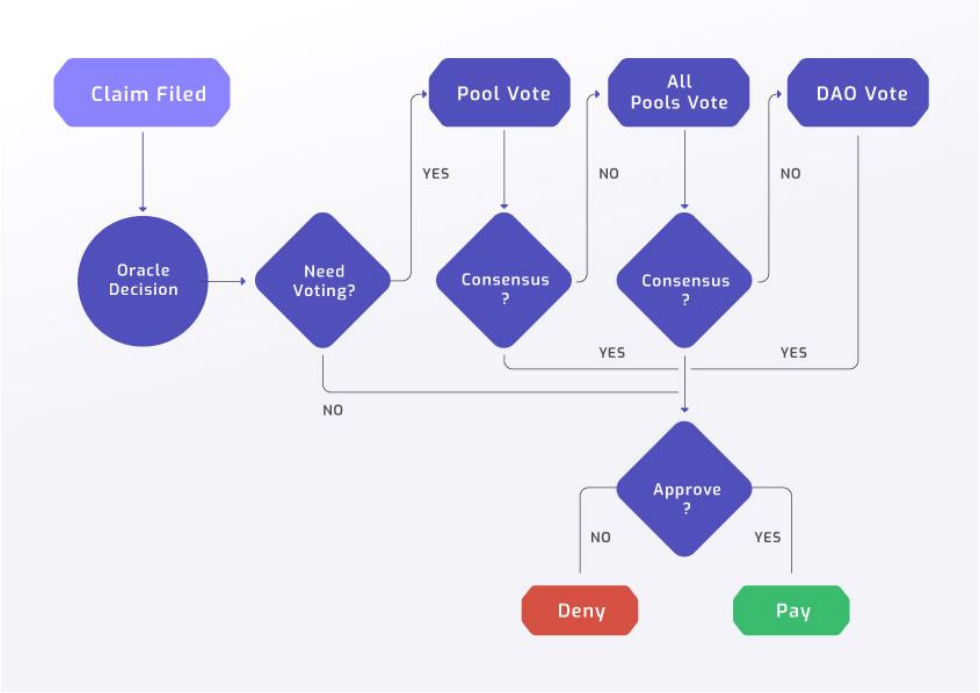

Figure 4 : A simplified claim flow showing the escalation process. For clarity, the Challenge flows have been excluded.

10.2 Challenge Protocols

To provide a fair system for all participants, a Challenge Protocol will be established. For every claim decision, both protection buyer and writer can access the Challenge Protocol to challenge the decision of a claim or certain voting outcomes. After each claim decision, there will be a Timing Window suitable to the nature of the claim where the Challenge Protocol can be accessed.

Challenging would require a non-negligible amount of locked stablecoin by the challenger. Should the governance vote (as determined by the escalation protocol) ultimately result in favor of the challenger, the locked stablecoin is released back to the challenger. Should the vote result against the challenger, then the locked stablecoin will be transferred to the protection pool, minus a small percentage that will be set aside for reserve.

A challenge will have a defined time to resolve in an outcome, during which the claim is on hold. If no outcome is reached, then the challenged decision stands and the claim is processed accordingly. Pools that do not engage in a responsible fashion to a challenge from a claimant will have penalties imposed by the UNION DAO.

This “checks and balances” protocol allows for buyers and writers to challenge each other as well as decisions made by the protocol itself.

10.3 Escalation Protocol

To prevent abuse of a decentralized system and ensure that the UNION protection system is functioning for the better of all, an Escalation Protocol will be set. In some claim types, the Escalation Protocol will automatically be triggered. In others, participants can manually trigger an escalation, such as through accessing the Challenge Protocol.

At any voting layer lower than the UNION DAO, participants can choose to escalate decisions to a higher level of governance to review. This may be due to a Challenge Protocol or standard adjudication process from claim assessment. The party triggering escalation would need to lock in an appropriate amount of stablecoin. Should the escalated vote result in favor of the party escalating, then the locked stablecoin will be returned to the party. Else, the locked stablecoin will be split between the involved governance voting parties, with a small percentage set aside for emergency reserve.

11.Transparency

In order to trust a system where participants are at economic odds with others, and payouts may introduce large binary outcomes, transparency is a critical ingredient. While one of blockchain's benefits is transparency that tracks all the transactions on chain, accessing this information and deriving important financial key performance indicators (KPIs) is another story. As such, UNN will provide mainstream access, such as APIs and web pages, for financial KPIs such as SCR, pool amount to SCR ratio, number of contracts per pool, coverage amount distribution, etc.

Equally important to transparency, is access to certain off-chain risk parameters used for premium pricing and SCR, which include correlation matrices, volatility calculations, hazard function calculations, etc.

12. Competitive Advantage

The prevailing need for insurance in the DeFi market concentrated the spotlight on several emerging insurance projects. Insurance mutuals, shareholder-style platforms, and decentralized price derivatives (e.g., options) gathered consideration as potential solutions to the growing demand for smart contract risk as money continued streaming into DeFi protocols.

The different insurance protocols each offer unique advantages and disadvantages to their users, which resonates with the optionality of a thriving DeFi stack -- the choice is up to the user. In particular, four different insurance platforms represent the primary types of insurance offered to DeFi users so far. They are optimal for succinctly covering the economic models, governance, and type of coverage afforded to DeFi users today.

What's evident is that a framework for decentralized insurance has been tested, and there is both a distinct demand and a handful of working models that are rapidly progressing. Below, we will move through the spectrum of DeFi insurance options via the following:

1) Decentralized KYC insurance mutual -- **Nexus Mutual:** One of the most established insurance protocols so far in the DeFi market with a track record of meeting claims. However, Nexus Mutual is a KYC-only platform, requiring onerous KYC requirements for all its members. For many DeFi users, this is a prohibitive factor in joining and limits the potential inflow of capital by risk assessors. Furthermore, Nexus Mutual only covers one risk factor – specifically, smart contract risk.
2) Decentralized no-KYC insurance mutual -- **yInsure** (*underwritten by Nexus Mutual*): Championed by Andre Cronje, the resident chef of Yearn Finance, yInsure enabled yVault users to gain coverage underwritten by Nexus Mutual without KYC via yInsure -- a major development for many YFI users. However, the use of yNFT insurance tokens (underwritten by Nexus Mutual without KYC) for yield farming SAFE tokens resulted in a speculative bubble[17] of the NXM token price, which eventually was dragged down by SAFE's theatrical downfall.
3) Decentralized Derivatives Options Pricing -- **Opyn** : Opyn is built on Convexity, a generalized options protocol for users to create call and put options on an open market. While not an exact fit for insurance, there are aspects of options which may be used to offer protection contracts. However, coverage pricing on Opyn is a function of liquidity on Uniswap, where oTokens are bought and sold via Uniswap's AMM model. Additionally, Opyn is not currently tailored towards broad insurance protection for smart contract vulnerabilities.
4) Decentralized no-KYC market-traded shareholder insurance – **Nsure:** One of the new entries and using a decentralized insurance model is NSure, which also utilizes an injection of a more traditional shareholder-style structure for its platform. NSure currently has an MVP on the Rinkby Testnet. However, similar to Nexus Mutual, Nsure is only offering smart contract protection.

The array of DeFi protection options available today are promising. However, they each come with explicit advantages and disadvantages characteristic of building a composable DeFi stack from the ground-up.

At UNION, our combination of 1) bundled protection addressing cost and risk of transacting in DeFi, 2) inclusive decentralized service, 3) robust capital and pricing models leveraging tried models used in the insurance and finance industry, 4) a secondary market that helps protection participants distribute risk, and 5) a decentralized governance framework that protects all participants will keep us at the forefront of the industry and continually grow the network.

[17] https://cryptobriefing.com/nexus-mutual-just-ran-out-defi-coverage-heres-why/

13. Conclusion

The current state of DeFi is both ambitious and exhilarating. It appears only a matter of time before DeFi overcomes its barriers to entry, but reaching that point will require significant work before the industry appeals to the mainstream and the industry balances rapid innovation “test in prod” with the necessary guard rails.

The exponential rise in volume and TVL on DeFi has highlighted pressure points that need to be addressed: high transaction cost, inefficient use of leverage, and insufficient protection on TVL. UNION seeks to resolve these pressing pain points through its innovative technology, dynamic models, a decentralized participation and governance framework, and composability with other DeFi building blocks. With products that have market fit and incentives that align the actions of all participants, we are confident UNION will become a critical component of DeFi.

For questions and to discuss our technology, please join us on one of our social channels:

Discord: https://discord.gg/f5EQ4AH
Telegram: https://t.me/UNNFinance
Twitter: https://twitter.com/unnfinance

RISK FACTORS AND DISCLOSURES[18]

IMPORTANT NOTICE: PROSPECTIVE PURCHASERS SHOULD CAREFULLY CONSIDER THE RISKS INVOLVED IN DETERMINING WHETHER PURCHASING THE TOKENS IS SUITABLE FOR THEM, CERTAIN OF WHICH ARE SUMMARISED BELOW. THE COMPANY RESERVES THE RIGHT TO UPDATE THIS LIST OF RISK FACTORS AND DISCLOSURES FROM TIME TO TIME.

DISCLOSURES REGARDING TOKENS

Nature of Tokens

Except as explicitly set out in this whitepaper, Tokens do not have any rights, uses, purpose, attributes, functionalities or features, express or implied, including, without limitation, any uses, purpose, attributes, functionalities or features on the UNION Foundation Platform. The Company does not guarantee and is not representing in any way to a Purchaser that the Tokens have any rights, uses, purpose, attributes, functionalities or features. The purchase of Tokens does not provide a Purchaser with rights of any form with respect to the Company or its revenues or assets, including, but not limited to, any voting, distribution, redemption, liquidation, proprietary (including all forms of intellectual property), or other financial or legal rights; is not a loan to the Company; and does not provide the Purchaser with any ownership or other interest in the Company.

A high degree of technical expertise is needed to understand the Tokens, the UNION Foundation Platform and the Token Launch. A prospective Purchaser should not proceed with a purchase of the Tokens unless they fully understand the technical aspects involved.

Tokens are non-refundable

Other than instances described in this whitepaper related to the non-completion of the Token Launch, the Company is not obliged to provide Token holders with a refund for any reason and Token holders will not receive money or other compensation in lieu of a refund. The Tokens are also not redeemable at the option of the Purchaser. Statements set out in this whitepaper are merely expressions of the Company's objectives and desired work plan to achieve those objectives. and no promises of future performance or price are or will be made in respect to Tokens, including no promise of inherent value, and no guarantee that Tokens will hold any particular value.

Tokens are provided on an 'as is' basis

The Tokens are provided on an "as is" basis. The Associated Parties and each of their respective directors, officers, employees, shareholders, affiliates and licensors make no representations or

[18] **Note:** Risk factors to be reviewed in their entirety with any specific risks of the UNION Foundation Platform or Tokens being included.

warranties of any kind, whether express, implied, statutory or otherwise regarding the Tokens, including any warranty that the Tokens and the UNION Foundation Platform will be uninterrupted, error-free or free of harmful components, secure or not otherwise lost or damaged. Except to the extent prohibited by applicable law, the Associated Parties and each of their respective directors, officers, employees, shareholders, affiliates and licensors disclaim all warranties, including any implied warranties of merchantability, satisfactory quality, fitness for a particular purpose, non-infringement, or quiet enjoyment, and any warranties arising out of any course of dealings, usage or trade.

Tokens may have no value

The Tokens may have no value and there is no guarantee or representation of liquidity for Tokens. The Company is not and shall not be responsible for or liable for the market value of the Tokens, the transferability and/or liquidity of the Tokens and/or the availability of any market for Tokens through third parties or otherwise.

Lack of development of market of Tokens

There are no warranties that Tokens will be listed or made available for exchange for other cryptocurrency and/or fiat money. It shall be explicitly cautioned that if Tokens are made available on an exchange, such exchange, if any, may not be subject to regulatory oversight, and the Company does not give any warranties in relation to any exchange services providers. Because there has been no prior public trading market for Tokens, the Token Launch may not result in an active or liquid market for Tokens, and the price of Tokens may be volatile. Token holders may not be able to dispose of Tokens easily and where no secondary market develops, a Token holder may not be able to liquidate at all. Proposed transfers of the Tokens may be blocked by the Company in circumstances where the proposed transferee has not already completed the Company's KYC and AML procedures (including, without limitation, verification of identity and source of funds) to its satisfaction. Purchasers should be aware of the restrictions on their subsequent sale.

The viability of the UNION Foundation Platform and the usability of the Tokens depends on the establishment of partnerships with other platforms, apps, merchants, retailers, dApp stores etc. Accordingly, if there is a low or limited development of such partnerships, the Tokens may be unusable and become worthless with the entire amount contributed by a Purchaser being at risk.

Risks relating to highly speculative prices

The valuation of cryptocurrency in a secondary market is usually not transparent, and highly speculative. The Tokens do not hold any ownership rights to the Company's assets and, therefore, are not backed by any tangible asset. The value of Tokens in the secondary market, if any, may fluctuate greatly within a short period of time. There is a high risk that a Purchaser could lose its entire contribution amount. In the worst-case scenario, Tokens could be rendered worthless.

Force Majeure

The Token Launch and the performance of the Company's activities set out in this whitepaper and the development roadmap may be interrupted, suspended or delayed due to force majeure circumstances. For the purposes of this whitepaper, "**force majeure**" shall mean extraordinary events and circumstances which could not be prevented by the Company and shall include: changes in market forces or the technology, acts of nature, wars, armed conflicts, mass civil disorders, industrial actions, epidemics, lockouts, slowdowns, prolonged shortage or other failures of energy supplies or communication service, acts of municipal, state or federal governmental agencies, other circumstances beyond the Company's control, which were not in existence at the time of Token Launch.

Insurance

Unlike bank accounts or accounts at financial institutions, Tokens are uninsured unless you specifically obtain private insurance to insure them. Thus, in the event of loss or loss of utility value, there is no public insurer or private insurance arranged by the Company to offer recourse to a Purchaser.

GOVERNMENTAL DISCLOSURES

The Company is not a regulated mutual fund

The Tokens fall within the definition of 'Equity Interests' set out in the Mutual Funds Law (2020 Revision) as the Mutual Funds Law was amended in June 2020 to expand the definition to include tokens, however the Tokens do not carry any right of redemption by the Company, and therefore it is not necessary for the Company to make application to be regulated as a mutual fund under the terms of the Mutual Funds Law (as Revised).

Virtual Asset Law

Pursuant to the Virtual Asset Law (2020 Revision) of the Cayman Islands (the "VA Law") certain entities that issue tokens will need to register with the Cayman Islands Monetary Authority. The VA Law regulates the issuance of virtual assets which is defined to exclude virtual services tokens which is defined as follows:

"virtual service token" means a digital representation of value which is not transferrable or exchangeable with a third party at any time and includes digital tokens whose sole function is to provide access to an application or service or to provide a service or function directly to its owner.

The Company will register with the Cayman Islands Monetary Authority under the VA Law. Purchasers must appreciate that the Cayman Islands Monetary Authority will not review this whitepaper and will not pass any judgment on the merits of the Company or acquiring the Tokens.

The Cayman Islands Monetary Authority will have no oversight of the operations of the Company or the Tokens.

Risk of unfavourable regulatory action in one or more jurisdictions

The regulatory status of cryptographic tokens, digital assets, and blockchain technology is undeveloped, varies significantly among jurisdictions and is subject to significant uncertainty. It is possible that certain jurisdictions may adopt laws, regulations, policies or rules directly or indirectly affecting the Ethereum blockchain, or restricting the right to acquire, own, hold, sell, convert, trade, or use Tokens. Developments in laws, regulations, policies or rules may alter the nature of the operation of the blockchain network upon which the Tokens are dependent. There can be no assurance that governmental authorities will not examine the operations of Associated Parties and/or pursue enforcement actions against Associated Parties. All of this may subject Associated Parties to judgments, settlements, fines or penalties, or cause Associated Parties to restructure their operations and activities or to cease offering certain products or services, all of which could harm Associated Parties' reputations or lead to higher operational costs, which may, in turn, have a material adverse effect on the Tokens and/or the development of the UNION Foundation Platform.

Purchaser bears responsibility of legal categorization

There is a risk that Tokens might be considered a security in certain jurisdictions, or that they might be considered to be a security in the future. The Company does not provide any warranty or guarantee as to whether the Tokens will be a security in the jurisdiction of the Purchaser. Each Purchaser will bear all consequences of Tokens being considered a security in their respective jurisdiction. Every Purchaser is responsible to confirm if the acquisition and/or disposal of Tokens is legal in its relevant jurisdiction, and each Purchaser undertakes not to use Tokens in any jurisdiction where doing so would be unlawful. If a Purchaser establishes that the purchase or use of Tokens is not legal in its jurisdiction (or would only be legal if the company had taken additional steps such as registration or licensing), it should not acquire Tokens and immediately stop using or possessing Tokens.

Acquiring Tokens in exchange for cryptocurrency will most likely continue to be scrutinised by various regulatory bodies around the world, which may impact the usage of Tokens. The legal ability of the Company to provide or support Tokens in some jurisdictions may be eliminated by future regulation or legal actions. In the event that the Company determines that the purchase or usage of Tokens is illegal in a certain jurisdiction, the Company may cease operations in that jurisdiction, or adjust Tokens in a way to comply with applicable law.

Purchaser bears responsibility for complying with transfer restrictions

Tokens may be placed on third-party exchanges, giving future purchasers and users an opportunity to openly buy Tokens. A user seeking to enter the UNION Foundation Platform following the Token Launch will have to buy Tokens on such exchanges. Conversely, Tokens may

be sold on such exchanges if the holder of Tokens would like to exit the UNION Foundation Platform ecosystem. Existing laws on the circulation of securities in certain countries, such as the United States of America, China, South Korea, Canada and Singapore, may prohibit the sale of the Tokens to the residents of those countries. When buying Tokens, Purchasers should be aware of the restrictions on their subsequent sale.

GENERAL SECURITY RISKS

Risk of theft and hacking

Token generation events and initial coin offerings are often targeted by hackers and bad actors. Hackers may attempt to interfere with the Purchaser's digital wallet, whether located on the UNION Foundation Platform or otherwise, (the "**Purchaser's Wallet**"), the UNION Smart Contracts or the availability of Tokens in any number of ways, including without limitation denial of service attacks, Sybil attacks, spoofing, smurfing, malware attacks, or consensus-based attacks. Any such attack may result in theft of a Purchaser's Tokens.

Private keys

Tokens purchased by a Purchaser may be held by a Purchaser in the Purchaser's Wallet or vault, which requires a private key, or a combination of private keys, for access. Accordingly, loss of requisite private key(s) associated with Purchaser's Wallet or vault storing the Tokens will result in loss of such Tokens. Moreover, any third party that gains access to such private key(s), including by gaining access to login credentials of a hosted wallet or vault service Purchaser uses, may be able to misappropriate Purchaser's Tokens. The Company is not responsible for and shall be held harmless in respect of any such losses.

Failure to map a public key to Purchaser's Wallet

Failure of the Purchaser to map a public key to such Purchaser's Wallet may result in third parties being unable to recognize buyer's Token balance on the Ethereum blockchain when and if they configure the initial balances of a new blockchain based upon the UNION Foundation Platform.

Risk of incompatible wallet service

The wallet or wallet service provider used for the acquisition and storage of the Tokens has to be technically compatible with the Tokens. The failure to assure this may result in the Purchaser not being able to gain access to its Tokens.

Risk of weaknesses or exploitable breakthroughs in the field of cryptography

Advances in cryptography, or other technical advances such as the development of quantum computers, could present risks to cryptocurrencies, the Ethereum blockchain and Tokens, which could result in the theft or loss of Tokens.

Internet transmission risks

There are risks associated with using Tokens including, but not limited to, the failure of hardware, software, and internet connections. The Company shall not be responsible for any communication failures, disruptions, errors, distortions or delays you may experience when using the UNION Foundation Platform and Tokens, howsoever caused. Transactions in cryptocurrency may be irreversible, and, accordingly, losses due to fraudulent or accidental transactions may not be recoverable. Cryptocurrency transactions are deemed to be made when recorded on a public ledger, which is not necessarily the date or time when the transaction is initiated.

UNION FOUNDATION PLATFORM DISCLOSURES

No guarantee that the UNION Foundation Platform will be developed

Each Purchaser acknowledges, understands and agrees that such Purchaser should not expect and there is no guarantee or representation or warranty by the Company that:

- the UNION Foundation Platform will ever be adopted;
- the UNION Foundation Platform will be adopted as developed by the Company and not in a different or modified form;
- a blockchain utilizing or adopting the Tokens will ever be launched; and
- a blockchain will ever be launched with or without changes to the UNION Foundation Platform and with or without a distribution matching the fixed balance of Initial Tokens (as defined below).

Furthermore, the Tokens initially generated upon the Token Launch ("**Initial Tokens**") will not have any functionality or rights on the UNION Foundation Platform and holding Initial Tokens is not a guarantee, representation or warranty that the holder will be able to use the UNION Foundation Platform, or receive any tokens utilized on the UNION Foundation Platform, even if the UNION Foundation Platform is launched and the UNION Smart Contracts is adopted, of which there is no guarantee, representation or warranty made by the Company.

Risks associated with the UNION Foundation Platform and associated software and/or infrastructure

The UNION Foundation Platform is based on the Ethereum blockchain. As such, any malfunction, unintended function or unexpected functioning of the Ethereum protocol may cause the Tokens and/or the UNION Foundation Platform to malfunction or function in an unexpected or unintended manner.

The Ethereum blockchain rests on open source protocol for value exchange, and accordingly there is the risk that the UNION Foundation Platform and/or UNION Smart Contracts may contain intentional or unintentional bugs or weaknesses which may negatively affect Tokens or result in the loss or theft of Tokens or the loss of ability to access or control Tokens. In the event of such a software bug or weakness, there may be no remedy and Token holders are not guaranteed any remedy, refund or compensation.

On the Ethereum blockchain, timing of block production is determined by proof of work so block production can occur at random times. For example, Ether transferred to the Company's recipient digital wallet address in the final seconds of a distribution period may not get included for that period.

Purchaser acknowledges and understands that the Ethereum blockchain may not include the Purchaser's transaction at the time the Purchaser expects, and the Purchaser may not receive the Tokens the same day the Purchaser sends payment. The Ethereum blockchain is prone to periodic congestion during which transactions can be delayed or lost. Individuals may also intentionally spam the Ethereum network in an attempt to gain an advantage in purchasing cryptographic tokens. The Purchaser acknowledges and understands that Ethereum block producers may not include the Purchaser's transaction when the Purchaser wants or the Purchaser's transaction may not be included at all.

Ether, the native unit of account of the Ethereum blockchain may itself lose value in ways similar to the Tokens, and also other ways. More information about Ethereum is available at http://www.ethereum.org.

Risks associated with the Company's Business.

The UNION Foundation Platform's success depends on its continued innovation to provide new, and improve upon existing, products and services that make the UNION Foundation Platform useful for users. As a result, the Company must continually invest significant resources in research and development to improve the attractiveness and comprehensiveness of its products and services and effectively incorporate new mobile, internet, blockchain and other technologies into them. If the Company is unable to continue offering high-quality, innovative products and services, it may be unable to attract additional users or retain current users, which could harm its business, results of operations and financial condition.

In addition, the Company's success depends on its ability to continue to attract users to its UNION Foundation Platform and enhance their engagement with its products and services. The UNION Foundation Platform's existing and potential competitors include, but are not limited to, companies that operate, or could develop similar mobile applications and websites. These companies could devote greater technical and other resources than the Company has available, have a more accelerated timeframe for deployment and leverage their existing user bases and proprietary technologies to provide products and services that users might view as superior to the UNION Foundation Platform's offerings. Any of the UNION Foundation Platform's future or

existing competitors may introduce different solutions that attract users or provide solutions similar to the UNION Foundation Platform's but with better branding or marketing resources. If the Company is not able to continue to attract users to the UNION Foundation Platform, its business, results of operations and financial condition would be harmed.

The UNION Foundation Platform's future success also substantially depends on the continued use of the internet as the primary medium for its proposed operations. For any number of reasons, internet use may not continue to develop as the Company anticipates. If users begin to build communities outside of the UNION Foundation Platform and the Company fails to innovate, its business, results of operations and financial condition may be negatively impacted. Further, the UNION Foundation Platform's market, especially using blockchain technology, is in the early stages of development, and significant shifts in custom and use habits occur constantly and rapidly. The Company continues to learn a great deal about the market participants as the industry evolves. The Company may not successfully anticipate or keep pace with industry changes, and it may invest considerable financial, personnel and other resources to pursue strategies that do not, ultimately, prove effective such that its business, results of operations and financial condition may be harmed.

The potential users of the UNION Foundation Platform are affected by local, regional, national and international economic conditions and other events and occurrences that affect the use of the UNION Foundation Platform.

Irreversible nature of blockchain transactions

Transactions involving Tokens that have been verified, and thus recorded as a block on the blockchain, generally cannot be undone. Even if the transaction turns out to have been in error, or due to theft of a user's Tokens, the transaction is not reversible. Further, at this time, there is no governmental, regulatory, investigative, or prosecutorial authority or mechanism through which to bring an action or complaint regarding missing or stolen cryptocurrencies and digital tokens. Consequently, the Company may be unable to replace missing Tokens or seek reimbursement for any erroneous transfer or theft of Tokens.

Amendments to protocol

The development team and administrators of the source code for Ethereum blockchain or the UNION Smart Contracts could propose amendments to such network's protocols and software that, if accepted and authorized, or not accepted, by the network community, could adversely affect the supply, security, value, or market share of Tokens.

Risk of mining attacks

As with other decentralized cryptocurrencies, the Ethereum blockchain, which is used for the Tokens, is susceptible to mining attacks, including but not limited to double-spend attacks, majority mining power attacks, "selfish-mining" attacks, and race condition attacks.

Any successful attacks present a risk to the Tokens, expected proper execution and sequencing of Tokens, and expected proper execution and sequencing of Ethereum contract computations in general. Despite the efforts of the Company and Ethereum Foundation, the risk of known or novel mining attacks exists. Mining attacks, as described above, may also target other blockchain networks, with which the Tokens interact with and consequently the Tokens may be impacted also in that way to the extent described above.

COMPANY DISCLOSURES

Legal structure of Token generator

The Company is an exempted company incorporated in the Cayman Islands pursuant to the Companies Law (Revised) of the Cayman Islands. An exempted company is a body corporate which has separate legal personality capable of exercising all the functions of a natural person of full capacity irrespective of any question of corporate benefit, and having perpetual succession. The constitution of an exempted company is contained in two documents, the memorandum of association and the articles of association (the "**Articles**"). The Articles typically provide that there must be at least one director of a Cayman company. Generally, the Articles will specify that the management of a Cayman company is the responsibility of, and is carried out by, its board of directors. If the Articles permit it, a Cayman company may indemnify officers and directors of the company from all liabilities and expenses incurred by search persons in the performance of their duties.

The memorandum of association of a Cayman Islands company must specify the authorised share capital of such company (if limited by shares) or the level of the guarantee (if limited by guarantee). The memorandum of association will state how the membership of the company operates and what the members' respective rights are. As a Token holder, you are not a party to the memorandum of association or the Articles, are not a member of the Company and are not entitled to any right or interest in or to shares of the Company and have no rights to appoint or remove the board of directors of the Company.

Dependence on management team

The ability of the UNION Foundation Platform project team which is responsible for maintaining competitive position of the UNION Foundation Platform is dependent to a large degree on the services of a senior management team. The loss or diminution in the services of members of such senior management team or an inability to attract, retain and maintain additional senior management personnel could have a material adverse effect on the UNION Foundation Platform and the value of the Tokens. Competition for personnel with relevant expertise is intense due to the small number of qualified individuals, and this competition may seriously affect the Company's ability to retain its existing senior management and attract additional qualified senior management personnel, which could have a significant adverse impact on the UNION Foundation Platform and the value of the Tokens.

Risks related to reliance on third parties

Even if completed, the UNION Foundation Platform will rely, in whole or in part, on third-parties to adopt and implement it and to continue to develop, supply, and otherwise support it. There is no assurance or guarantee that those third-parties will complete their work, properly carry out their obligations, or otherwise meet anyone's needs, any of which might have a material adverse effect on the UNION Foundation Platform and the value of the Tokens.

Insufficient interest in the UNION Foundation Platform and the Tokens

It is possible that the UNION Foundation Platform or Tokens will not be used by a large number of individuals, businesses and organizations and that there will be limited public interest in the creation and development of its functionalities. Such a lack of interest could impact the development of the UNION Foundation Platform and the value of the Tokens.

UNION Foundation Platform development risks

The development of the UNION Foundation Platform and/or UNION Smart Contracts may be abandoned for a number of reasons, including lack of interest from the public, lack of funding, lack of commercial success or prospects, or departure of key personnel.

Changes to the UNION Foundation Platform

The UNION Foundation Platform is still under development and may undergo significant changes over time. Although Associated Parties intend for the UNION Foundation Platform to have the features and specifications set forth in this whitepaper, changes to such features and specifications may be made for any number of reasons, any of which may mean that the UNION Foundation Platform does not meet the expectations of the Purchaser.

Other projects

The UNION Foundation Platform may give rise to other, alternative projects, promoted by parties that are affiliated or unaffiliated with the Associated Parties, and such projects may provide no benefit to the UNION Foundation Platform.

Disclosures relating to conflicts of interest

Any of the Associated Parties may be engaged in transactions with related parties and conflicts of interest may arise, potentially resulting in the conclusion of transactions on terms not determined by market forces.

ACKNOWLEDGEMENTS AND WARRANTIES BY PURCHASERS

ACKNOWLEDGEMENTS

By (i) accessing or accepting possession of any information in this whitepaper (or any part thereof) or (ii) transferring payment (whether in fiat currency or cryptocurrency) and agreeing to purchase the Tokens, each Purchaser agrees and acknowledges that:

1. the Tokens do not and are not intended to constitute securities in any jurisdiction. This whitepaper does not constitute a prospectus or offer document of any sort and is not intended to constitute an offer of securities or a solicitation for investment in securities in any jurisdiction;
2. the Tokens are not intended as securities or other assets to be used for speculative trading purposes. The Company does not operate an exchange for Tokens and there is no guarantee of the future value of the Tokens. The Company does not take any responsibility for any trade in Tokens in or through third-party exchanges. The possibility exists that the Tokens could be worth nothing;
3. this whitepaper does not constitute or form part of any opinion on, any advice to buy or sell, or any solicitation of any offer to purchase any Tokens nor shall it or any part of it nor the fact of its presentation form the basis of, or be relied upon in connection with, any contract or any investment or purchase decision;
4. no regulatory authority in any applicable jurisdiction has examined or approved of the information set out in this whitepaper and the publication, distribution or dissemination of the whitepaper to you does not imply that any applicable laws, regulatory requirements or rules have been complied with;
5. any agreement as between the Company and a Purchaser, and in relation to any sale and purchase, of Tokens is, in the absence of Purchase Documents, to be governed by this whitepaper;
6. notwithstanding any other section of this whitepaper, and to the extent permissible by applicable laws, the Company shall not be liable for any indirect, special, incidental, consequential or other losses of any kind, in tort, contract or otherwise (including but not limited to loss of revenue, income or profits, and loss of use or data), arising out of or in connection with any acceptance of or reliance on this whitepaper or any part thereof by a Purchaser;
7. no information in the whitepaper should be considered to be business, legal, financial or tax advice regarding the Company, the Tokens or the Token Launch;
8. they should consult their own legal, financial, tax or other professional adviser regarding the Company and its respective businesses and operations, the Tokens and the Token Launch;

9. that Company may collect information from the operation of the UNION Foundation Platform sent by the Purchaser's computer, mobile phone, or other access device. This information may include the Purchaser's IP address, device information including, but not limited to, identifier, name, and type, operating system, mobile network information and standard web log information, such as the Purchaser's browser type, and the pages the Purchaser accessed on the Company's website. When the Purchaser uses a location-enabled device with the Company's website, the Company may collect geographical location data or use various means to determine the location, such as sensor data from the Purchaser's device that may, for instance, provide data on nearby cell towers and wi-fi access spots. When the Purchaser accesses the website or UNION Foundation Platform, the Company or its applicable third party service providers on behalf of the Company may place small data files called cookies on the Purchaser's computer or other device. The Company may share the Purchaser's personal data with third parties in order to complete the Token Launch, reveal or suppress fraud, fix technical bugs or eliminate security problems. The Company will disclose the Purchaser's personal data in so far as is necessary to complete the Token Launch and fulfil the purposes set out above. The processing of the Purchaser's personal information shall otherwise be in accordance with the terms of the Company's privacy policies in effect from time to time;
10. the Company will process the Purchaser's personal data to market, conduct and perform technical analysis on the completion of the Token Launch. Processing of the Purchaser's personal data will also be carried out in order to: (a) fulfil the Company's obligations under this whitepaper and under applicable law (including to comply with its AML and KYC policies and procedures); (b) complete the Purchaser's registration; (c) provide technical support and (d) to assist the Company in the development of the UNION Foundation Platform and the performance of the activities set out in this whitepaper;
11. it may receive commercial electronic messages and advertising materials from Company or third parties by order of the Company on the email address and the mobile phone number that the Purchaser provided to the Company throughout the use of the website or UNION Foundation Platform. At any time, the Purchaser will be entitled to withdraw its consent to receive such materials by following the instructions provided in such materials; and
12. all agreements, notices, disclosures and other communication that the Company provide pursuant to this whitepaper or in connection with or related to the Purchaser's acquisition of Tokens, may be provided by the Company, in its sole discretion, to the Purchaser, in electronic form.

WARRANTIES

By (i) accessing or accepting possession of any information in this whitepaper (or any part thereof) or (ii) transferring payment (whether in fiat currency or cryptocurrency) and agreeing to purchase the Tokens, each Purchaser represents and warrants to the Company as follows:

1. that they have read, understood and accepted sole responsibility for the disclosed and undisclosed risks, disclaimers and other disclosures inherent in participating in the Token Launch and the purchasing of Tokens as set out in this whitepaper;
2. that they are not a citizen or resident of any jurisdiction or territory into which a sale or distribution of the Token would be unlawful (each a "**Prohibited Territory**") and are not purchasing the Tokens on behalf of, whether directly or indirectly, a citizen of any Prohibited Territory;
3. that they have the power to enter into, exercise any rights and perform and comply with their obligations under this whitepaper and their entry into, exercise of their rights and/or performance of or compliance with their obligations under this whitepaper including accessing, distribution or dissemination of this whitepaper, is not prohibited or restricted by the applicable laws, regulations or rules in the Purchaser's jurisdiction or country of residence, and where any restrictions in relation to the aforementioned are applicable, the Purchaser:
    a. accepts sole liability for non-compliance with such applicable laws, regulations and rules in the Purchaser's jurisdiction or country of residence; and
    b. has observed and complied with all such applicable laws, regulations and rules in the Purchaser's jurisdiction or country of residence at the Purchaser's own and sole expense;
4. that all actions, conditions and things required to be taken, fulfilled and done:
    a. in order to enable the Purchaser to lawfully enter into, exercise their rights and perform and comply with their obligations imposed by this whitepaper and to ensure that those obligations are legally binding and enforceable; and
    b. for the issue of the Tokens on the terms and conditions set out in this whitepaper, have been taken, fulfilled and done;
5. that all the Purchaser's obligations under this whitepaper are valid, binding and enforceable on such Purchaser in accordance with their terms;
6. that the Purchaser has adequate understanding of the operation, functionality, usage, storage, transmission mechanisms and other material characteristics of cryptocurrencies, blockchain-based systems, cryptocurrency wallets or other related coin/token storage mechanisms, blockchain technology and smart contract technology;
7. that the Purchaser is not exchanging cryptocurrencies for Tokens for the purpose of speculative investment or for the purpose of exchanging one form of virtual currency for another, with the present intention of delivering the Tokens to another person, in a coordinated series of steps intended to complete a single transaction; and

8. that all of the above representations and warranties are true, complete, accurate and non-misleading from the time of the Purchaser's pre-registration (where applicable) and purchase of Tokens pursuant to the Token Launch.

OTHER NOTICES

AML AND KYC

Measures aimed at the prevention of money laundering and terrorist financing will require a Purchaser to verify their identity and/or the source of funds to the Company. This procedure may apply on all or any of (i) the initial purchase of the Tokens, (ii) the use of the UNION Foundation Platform, (iii) the transfer of the Tokens, (iv) the receipt of any Tokens via the UNION Foundation Platform or UNION Smart Contracts or (v) as the Company deems necessary or desirable in connection with its AML and KYC policies and procedures.

By way of example, an individual may be required to produce the original passport or identification card or copy duly certified by a public authority such as a notary public, the police or the ambassador in his country of residence, together with two original documents evidencing his address such as a utility bill or bank statement or duly certified copies. In the case of corporate applicants this may require production of a certified copy of the Certificate of Incorporation (and any change of name) and of the Memorandum and Articles of Association (or equivalent), and of the names and residential and business addresses of all directors and beneficial owners.

The details given above are by way of example only and the Company will request such information and documentation as it considers is necessary to verify the identity and source of funds of a prospective Purchaser.

Each Purchaser acknowledges that the Company shall be held harmless against any loss arising as a result of a failure to provide such information and documentation as has been requested by the Company.

Each Purchaser further acknowledges and agrees that any failure by them to comply with the Company's requests in relation to measures aimed at the prevention of money laundering and terrorist financing, may result in action being taken against the Purchaser in respect of the Tokens including, without limitation, the suspension or withdrawal of the Purchaser's account on the UNION Foundation Platform or the Tokens held by them.

Tax Information Exchange Obligations

The Purchaser acknowledges that the Company may be subject to certain obligations (the "**Tax Information Exchange Obligations**") to gather and disclose to the competent authorities information relating to purchasers of Tokens under: (i) the United States Foreign Account Tax Compliance Act provisions enacted under the United States Hiring Incentives to Restore Employment Act and any guidance, or regulations relating thereto ("**FATCA**"); (ii) any other legislation, regulations, or guidance enacted in any jurisdiction which seeks to implement similar tax reporting, tax information exchange, reporting, and/or withholding tax regimes (including the OECD Common Reporting Standard on the automatic exchange of financial account information); (iii) any intergovernmental Application between the Cayman Islands (or any Cayman Islands

government body) and the U.S. or any other jurisdiction (including any government bodies in any other such jurisdiction), entered into, in order to comply with, facilitate, supplement, or implement the legislation, regulations or guidance described in (i) and (ii), including the OECD Multilateral Competent Authority Application; and (iv) any legislation, regulations or guidance in the Cayman Islands that give effect to the foregoing.

The Purchaser hereby agrees to execute properly and provide to the Company in a timely manner any documentation or other information that the Company or its agents may request in writing from time to time in connection with the Tax Information Obligations. The Purchaser waives any provision under the laws and regulations of any jurisdiction that would, absent a waiver, prevent or inhibit the Company's compliance with applicable law as described in this paragraph, including but not limited to by preventing either (i) the Purchaser from providing any requested information or documentation, or (ii) the disclosure by the Company and its agents of the provided information or documentation to applicable regulatory authorities.

Without limitation, the Purchaser hereby agrees to provide any documentation or other information regarding the Purchaser and the Purchaser's beneficial owners requested by the Company or its agents in connection with the Tax Information Exchange Obligations. If the Purchaser provides information and/or documentation that is in anyway misleading, or the Purchaser fails to provide the Company or its agents or delegates with the information and documentation that has been requested, (whether or not such action or inaction leads to compliance failures by the Company, or a risk of the Company or its Token holders being subject to withholding tax or other penalties), the Company reserves the right:

- to take any action and/or pursue all remedies at the Company's disposal including, without limitation, compulsory reversion of Purchaser's acquisition of Tokens in full or in part; and
- to hold back from any reversion proceeds in respect of the Tokens so reverted, any liabilities, costs, expenses, or taxes arising (directly or indirectly) from such action or inaction.

Further, the Purchaser shall have no claim against the Company, or any of the Company's agents or delegates, for any form of damages or liability as a result of actions taken or remedies pursued by or on behalf of the Company in order to comply with the Tax Information Exchange Obligations.