Decentralized Insurance

Insurance is still a niche player in the DeFi ecosystem. But as the insurance space matures and with the entry of institutional players, insurance may grow into one of the biggest pillars in DeFi. Read on to learn more about the current DeFi insurance market and how it may fare in the future.

Lucius Fang, Market Research Analyst
11 March 2021

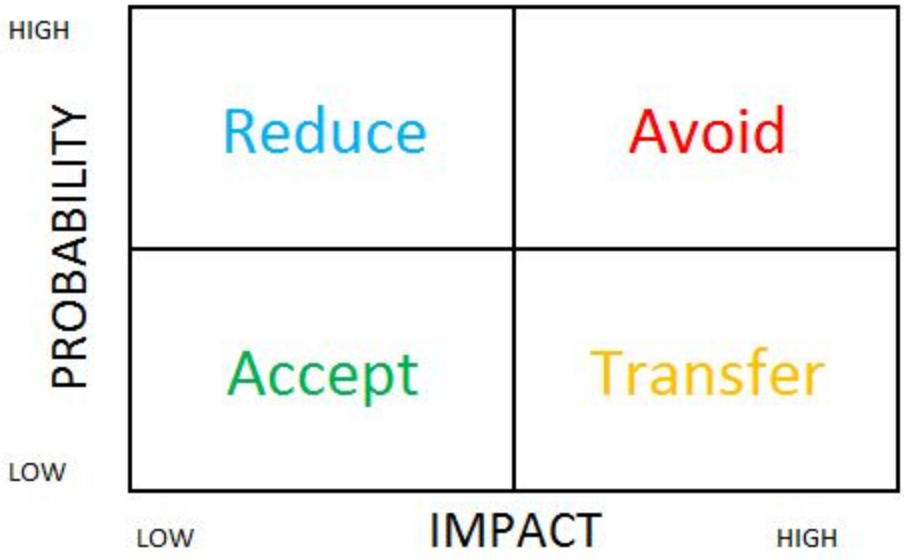
Introduction

As Decentralized Finance (DeFi) projects continue to innovate rapidly, we see an increasing amount of hacks happening with larger amounts of losses. There are 21 publicly reported major DeFi security hacks since the second half of 2019, causing more than $165 million in losses.

Adoption will stall if this space only welcomes high-risk takers. Having insurance is a critical step in attracting more users to this space.

What is insurance?

Insurance is a big industry, with total premiums underwritten across the world reaching $6.3 trillion in 2019. The world is inherently chaotic. There are always the risks of us experiencing some form of accidents. Below is a simple risk management framework to show what we should do with different kinds of risks.



Individuals should transfer out risks that have high impact but low frequency, such as natural catastrophes and terminal illnesses. Insurance is created to deal with this type of risk.

How does insurance work?

Insurance operates based on two main assumptions:

1) Law of Large Numbers
   The loss event covered by insurance must be independent. If the event is repeated frequently enough, the outcome will converge to the expected value.

2) Risk Pooling
   The loss event has the features of being low frequency and high impact. As such, insurance premiums paid by a large group of people subsidizes the losses of several big claims.

Essentially, insurance is a tool to pool capital and socialize large losses so that the participants will not experience financial ruin under a single catastrophic event.

Does crypto need insurance?

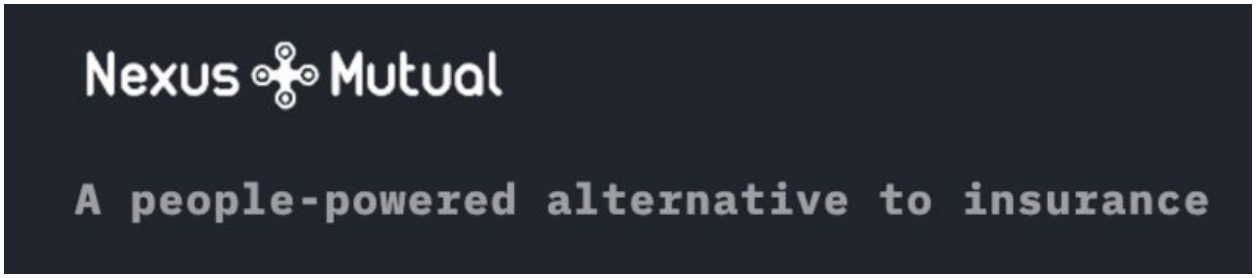
Insurance empowers individuals to take risks by socializing the cost of experiencing catastrophic events. It is an important risk management tool to encourage more user participation and is paramount for the industry to grow beyond the current niche audience. The DeFi industry requires insurance products to convince institutional players with significant capital to join in.

Two big players are currently dominating the DeFi insurance market - Nexus Mutual and Cover Protocol. We will be looking at how they operate in detail below. We will also be deep-diving into Armor Protocol as it serves a key role in Nexus Mutual's growth.

Those that already know how they function can skip to the comparison section, where we will look at their key differences and how they fare against each other. We will briefly mention some of the upcoming insurance protocols at the end of this report with some comments on the DeFi insurance industry.

Protocols Deep Dive

1. Nexus Mutual



Nexus Mutual is the largest insurance player in the crypto market by a wide margin. It has Total Value Locked (TVL) of $288 million compared to $14 million by the second player, Cover Protocol. Nexus Mutual was founded by Hugh Karp - a former CFO of Munich Re in the U.K.

Nexus Mutual is registered as a mutual in the U.K. Unlike companies that follow a shareholders model, a mutual is governed by its members. Only members are allowed to do business with the mutual. It's akin to a company run solely by the members for its members.

Type of Covers

Nexus Mutual offers two types of covers:

1. Smart Contract Covers
   Cover DeFi protocols that custody users' funds as these smart contracts may experience hacks due to smart contract bugs. Insurance covers major DeFi protocols such as Uniswap, MakerDAO, Aave, Synthetix, and Yearn Finance.

2. Custody Covers
   Cover the risks of funds getting hacked or when the withdrawal is halted. Nexus Mutual offers covers for centralized exchanges such as Binance, Coinbase, Kraken, Gemini, and lending services such as BlockFi, Nexo, and Celcius.

In total, users can buy covers for 72 different smart contract protocols, centralized exchanges, lending services, and custodians.

Cover purchase

To buy a cover from Nexus, users will have to register as members by going through the Know Your Customer (KYC) process. There is a one-time membership fee of 0.002 ETH. Users can then purchase cover using ETH or DAI.

Nexus Mutual will convert the payment into NXM - the protocol's token representing the right to the mutual's capital. 90% of the NXM is burned as the cover cost. 10% of the NXM will remain in

the user's wallet. It will be used for deposit when submitting a claim and will be refunded if there are no claims.

Claim Assessment

Users can claim anytime during the Cover Period or up to 35 days after the Cover Period ends. Users will have to lock 5% of the premium when they submit a claim. As such, they are allowed to submit claims at most two times for each policy.

Unlike traditional insurers, the claim result is decided through members voting. Members voting has full discretion on whether a claim is valid. Members can stake their NXM to participate as a claim assessor, subjected to a seven-day lock-up period.

When the result is aligned with the vote, 20% of the policy's premium will be shared proportionately with these members. But if the vote is not aligned with the result, members will not receive any rewards, and the locking period will be extended by another seven days.

To be eligible for a valid claim, users will have to prove that they have lost the fund.

- Smart Contract Cover - lose at least 20% of their funds.
- Custody Cover - lose at least 10% of their funds.

Risk Assessment

Pricing of the cover is decided by the amount of capital staked on a particular protocol. Users can stake NXM on the protocols to become risk assessors. The pricing formulas are as follow:

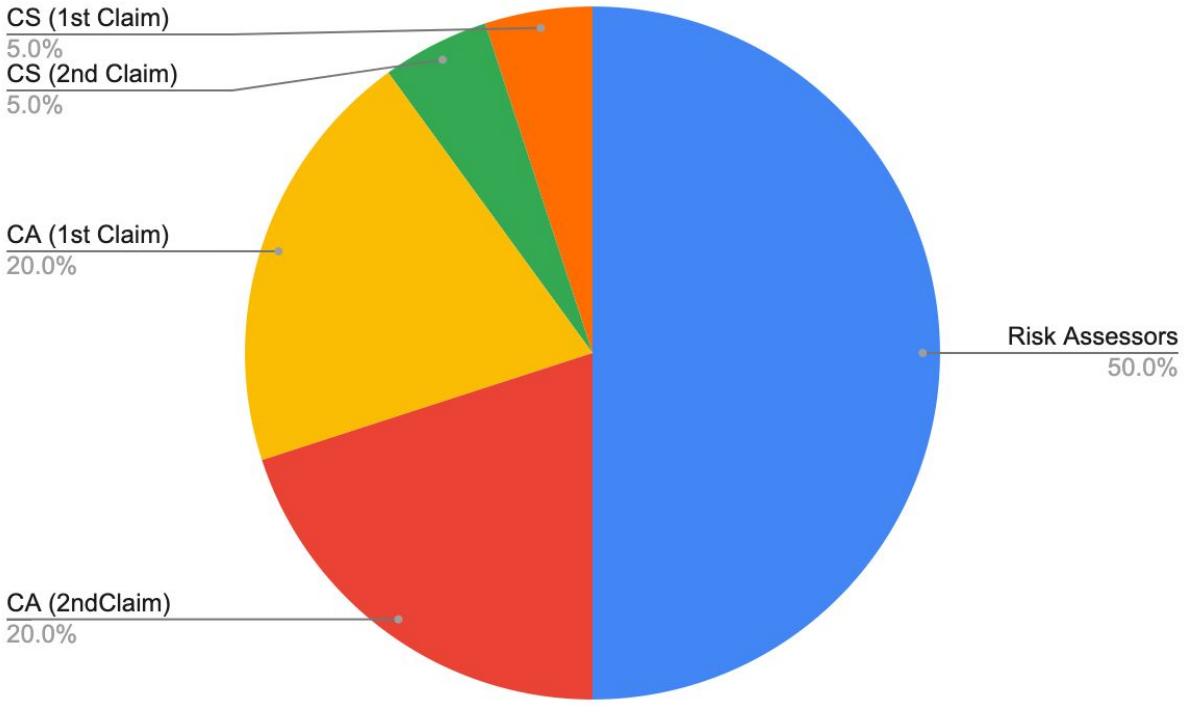
- Risk_Cost = 1 - (net_staked_NXM / low_risk_cost_limit)^(1/7)

- Cover_Price = Risk_Cost x (1+surplus_margin) x cover_period / 365.25 x cover_amount

Low_risk_cost_limit is the minimum staked NXM required to reach the lowest pricing of 2%. The limit is set at 50,000 NXM. The surplus margin is set to meet costs and create a surplus for the mutual. The surplus margin is set at 30%. So the lowest possible cover cost is 2.6%.

The risk assessor bears the loss when there is a claim. For taking on this risk, 50% of the policy's premium is shared with the risk assessors.

Below is a pie chart showing where the premium flows to:



CS: Fees paid by the user to submit a claim
CA: Fees earned by Claim Assessor if there is a claim submission

If no claims are submitted when the policy expires, 10% of the premium will be refunded to the cover buyer, while 40% of the premium will go to the capital pool.

Risk assessors are allowed to stake 10x the capital provided to maximize capital efficiency. For example, if a risk assessor has 100 NXM, he can stake 1,000 NXM across multiple protocols with a maximum stake on any one protocol capped at 100 NXM.

The assumption here is that it will be very rare to have multiple protocols be hacked at the same time simultaneously. This practice is aligned with how insurance is supposed to operate based on the law of large numbers and risk pooling.

If the claim amount is larger than the capital staked by the risk assessors, the mutual's capital pool will pay the remaining amount.

To ensure there will always be enough capital to pay for claims, the mutual needs to have capital above the Minimum Capital Requirement (MCR). Usually, MCR is calculated based on the risk of the covers sold. But due to the lack of claim data, the mutual follows manual parameters decided by the team.

Token Economics

NXM token economics is a big factor in attracting and retaining capital. It uses a bonding curve to determine the NXM's price. The formula is as follow:

$$\text{Price} = A + \left(\frac{\text{MCR}_{\text{ETH}}}{C} \right) \times \text{MCR\%}^{4}$$

A = 0.01028
C = 5,800,000
MCR (ETH) = Minimum Capital Required
MCR% = Available Capital/ MCR (ETH)

MCR% is a key factor in determining the NXM's price as it has a power of four in the price formula. When people buy NXM through the bonding curve, available capital will increase, causing MCR% to grow, leading to an exponential increase in NXM's price.

The key thing to note here is that the bonding curve's withdrawal will be halted when MCR% is lower than 100%. This is to make sure there is enough capital to pay claims.

wNXM

Nexus Mutual released wrapped NXM (wNXM) as a way for investors to have exposure to NXM without doing KYC. When the withdrawal of NXM is halted, users can wrap their NXM into wNXM and sell it through secondary markets such as Uniswap and Binance.

wNXM has many shortcomings as it cannot be used in risk assessment, claim assessment, and governance voting. The launch of the Armor protocol helps to solve the issue by converting wNXM into arNXM.

Further details can be found below in the Armor Protocol's section.

Shield Mining (Yield Farming)

To encourage more risk assessors to stake their NXM, Nexus Mutual released the Shield Mining program where projects can reward stakers with their native tokens. Shield Mining helped to increase the amount of staked NXM and boosted up available covers.

Protocol Revenue

NXM token differs from other governance tokens because a formula controls the token price. So if the mutual is earning a profit, it will help increase the capital available and increase the price of NXM.

There are two sources of profit:

- Premiums collected - Claims paid - Expenses.
- 2.5% spread when users sell NXM from the bonding curve

2. Armor Protocol

To overcome the limitation of KYC, Yearn Finance created yInsure where users can buy Nexus Mutual's covers without doing KYC. yInsure was supposed to be taken over by Safe Protocol. However, due to some infighting between the founder, Alan and a prominent community member, Azeem, the project was cancelled. Alan went on to release Cover Protocol, and Azeem took over the yInsure product and released Armor protocol.

Armor protocol has four main products: arNXM, arNFT, arCORE, and arSHIELD.

arNXM

Nexus Mutual created Wrapped NXM (wNXM) to allow investors to have exposure to NXM without doing KYC. However, as more wNXM were created, less NXM became available for internal functions of the mutual such as staking, claim assessment, and governance voting.

Armor created arNXM to solve this issue by allowing investors to participate in Nexus Mutual's operations without doing KYC.

To get arNXM, users can stake wNXM in Armor. Armor unwraps wNXM, and the NXM token is then subsequently staked on Nexus Mutual. By staking on Nexus Mutual, stakers signal that the smart contracts are safe, opening up more insurance covers for sale.

Armor will keep a reserve of 10,000 wNXM to ensure sufficient liquidity to exchange between arNXM and wNXM. Armor will refill the reserve every ten days.

arNXM can be referred to as a wNXM vault, where users deposit wNXM into the vault and can expect to receive a higher amount of wNXM in the future.

arNFT

arNFT is the tokenized form of insurance coverage purchased on Nexus Mutual. arNFTs allow users to buy insurance cover without having to do KYC. Since these insurance covers are tokenized, users can now transfer them to other users or sell them on the secondary market. These tokenized covers also allow for further DeFi composability.

arNFTs can be minted for all Nexus Mutual's covers.

arCORE

arCORE is a pay-as-you-go insurance product. Armor tracks the exact amount of user funds as they dynamically move across various protocols and bills by the second using a streamed payment system. Underlying arCORE are pooled arNFTs that are broken down and sold at a premium. arCORE allows for much more innovative product design and showcases the composability nature of the DeFi ecosystem.

arCORE's products are charged at a higher premium to compensate arNFT stakers for taking the risk of not fully selling out the cover. Currently, the multiplier is 161.8%, meaning the price would be 61.8% higher instead of purchasing directly from Nexus Mutual.

For the additional premium, 90% is given back to arNFT stakers and 10% is charged by Armor as an admin fee. At a 1.618 premium multiplier and 90% share of revenue, utilization would have to be greater than 69% for this to be profitable for arNFT stakers. If the covers sold are less than 69% of those staked in the pool, then the stakers will have to foot the cover costs themselves.

arSHIELD

arSHIELD is an insured storage vault for Liquidity Providers (LP) tokens where insurance premiums are automatically deducted from the LP fees earned. arSHIELD essentially creates insured LP tokens where users do not have to pay upfront payments.

arSHIELD only covers the protocol risk of the liquidity pools. For example, insured Uniswap LP tokens only cover Uniswap's smart contract's risk of getting compromised, but not the risks of the underlying assets (e.g., a hack of underlying asset protocol).

A such, arSHIELD is just a repackaged version of arCore. arSHIELD is offered in two versions with differing risk levels, similar to how fixed interest rate products are designed in tranches.

1) Shield+ Vaults
   Shield+ Vaults are the safest risk tranche, where claim payouts are guaranteed. It is fully collateralized, but cover capacity is limited. It has a higher premium multiplier of 200%, making it two times more expensive than Shield Vault.

2) Shield Vaults
   Shield Vaults are the higher risk tranche, where claim payouts may not be fully reimbursed, as it depends on the available capital in the pool during the time of hack. To compensate for the extra risks, it only has a premium multiplier of 100%, meaning it is the same price as directly buying from the Nexus Mutual itself. Cover capacity is designed to be unlimited, so users will have to be comfortable with the collateralization ratio as it might not be fully collateralized.

	Premium multiplier	Collateralization ratio	Loss Recovery	Max Capacity
Shield +	200%	Fully collateralized	100%	Total available cover
Shield	100%	Dynamically adjusted	Up to total collateral	Unlimited

Claim

After a user files a claim, a review process will be triggered and submitted to Nexus Mutual for consideration. Armor token holders will also participate in Nexus Mutual's process for claim approvals and payouts. If a payout is confirmed, the amount will be sent to Armor's payout treasury before being distributed to the affected users.

Protocol Revenue

Below is the profit-sharing fees table updated as of February 2021.

Product	Stakers' Share	Treasury Share
arNXM	90%	10%
arCore	90%	10%
arNFT	0%	100%

One thing to note is that for every cover bought from Nexus Mutual, 10% of the premium is reserved for claim purposes, where the claim fee is 5% of the premium. Every user can claim twice with the same policy. If there are no claims at the end of the policy period, the 10% premium will be refunded. This is the source of the arNFT's profit.

3. Cover Protocol

The Cover Protocol was incubated by Yearn Finance, starting as the Safe protocol that offers yInsure. But due to some infighting between the founder - Alan, and a prominent community member, Azeem, the project was canceled where Alan went on to release Cover Protocol, and Azeem took over the yinsure product and released Armor protocol.

Yearn Finance announced a merger with Cover Protocol to insure all of its yvaults with Cover Protocol. However, Yearn Finance has chosen to end the partnership on 5 March 2021.

Type of Covers

Cover Protocol only offers Smart Contract Covers.

Let's see an example of how the covers are being sold. Market makers can deposit 1 DAI, and they will be able to mint one NOCLAIM token and one CLAIM token. Both tokens represent only the risk of a single protocol. The tokens are only valid under a fixed timeframe, such as half a year.

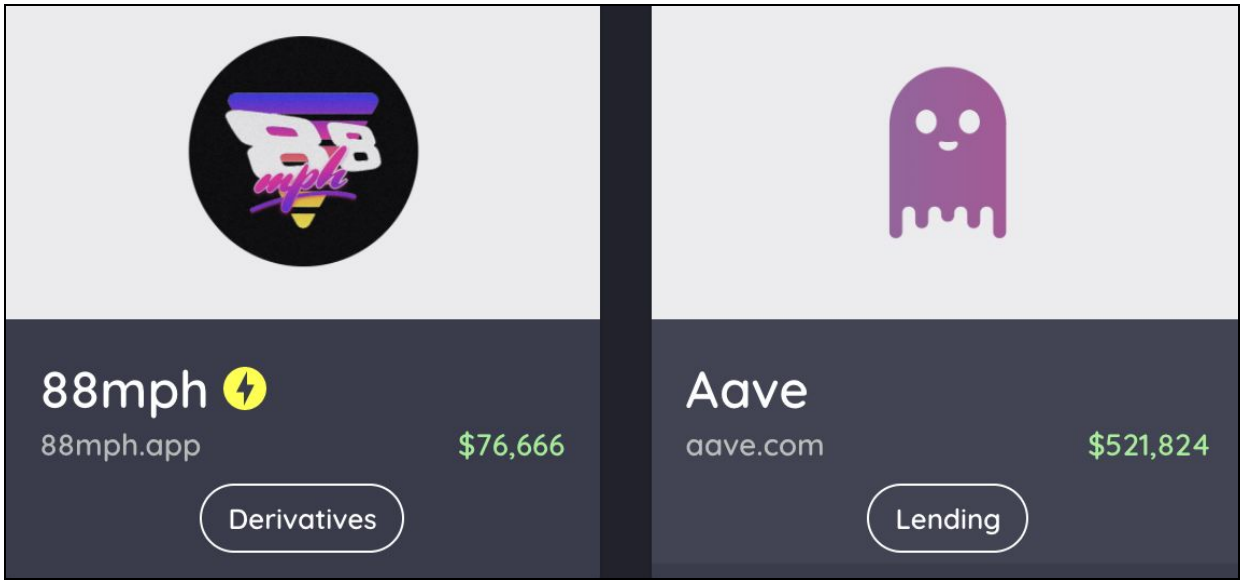
Two scenarios can happen after half-year:

- If there are no valid claim events, NOCLAIM token holders can claim 1 DAI, while CLAIM tokens will have zero value.
- If there is a valid claim event, CLAIM token holders can claim 1 DAI while NOCLAIM token will have zero value.

This is akin to a prediction market that users are betting whether or not the protocols will get hacked within a fixed timeframe.

Cover Protocol introduced partial claim, so the payout for CLAIM token holders when there is a valid claim event will be decided by the Claim Validity Committee (CVC).

Cover Purchase



There are currently two ways to buy cover: Flash Swaps (lightning strike symbol) and Balancer Swap. The differences will be explained in the risk assessment section below.

1. Balancer Swap (Old)
   Users will have to go to Balancer Exchange and buy the CLAIM token from the Balancer pool.

2. Flash Swap (New)
   Users can buy from the Cover Protocol's web page itself with just one Ethereum transaction.

Claim Assessment

There are two options for users to file for a claim:

1. Regular claim: A regular claim costs 10 DAI. COVER token holders will first vote on the validity of the claim. Then it will move to the Claim Validity Committee (CVC) for a final decision.

2. Force claim: A force claim costs 500 DAI, and it is sent to the CVC directly for a decision.

The CVC consists of external smart contract auditors. Cover Protocol will refund the claim filing cost if the claim is approved.

Risk Assessment

Balancer Swap (Old)

As mentioned above, Cover Protocol relies heavily on Market Maker to bootstrap the coverage capacity. After they minted the NOCLAIM and CLAIM token, they will have to provide liquidity in the Balancer pool against DAI. Below is the specification:

- NOCLAIM / DAI pool with the ratio of 98% / 2% and a swap fee of 3%
- CLAIM / DAI pool with the ratio of 80% / 20% and a swap fee of 5%

Flash Swap (New)

Rather than relying on two different pools to bootstrap NOCLAIM and CLAIM tokens, the new method only has one pool.

- NOCLAIM / DAI pool with the ratio of 50% / 50% and a swap fee of 0.2%

Market makers' earnings are mainly from the swap fees generated from the Balancer Pool.

When users buy the cover using Flash Swap, the following steps are carried out in the background.

1. A flash loan of DAI is taken from dydx.
2. The DAI is then used to mint CLAIM and NOCLAIM tokens.
3. The NOCLAIM token is then sold for DAI through the Balancer pool.
4. Users will have to pay for the remaining DAI to pay back the flash loans. This is the premium paid to get the cover.
5. Users will receive the CLAIM token.

The following steps will be carried out in the background for selling the :

1. A flash loan of DAI is taken from dydx.
2. The DAI is then used to buy NOCLAIM tokens from the Balancer pool.
3. The CLAIM token from the users will then be combined with the NOCLAIM token to redeem the underlying DAI from Cover Protocol.
4. The flash loan is repaid with the DAI.
5. The remaining DAI after trading fees and protocol fees is sent back to the user.

There are a few benefits under the new Flash Swap system:

- Cover cost is expected to reduce as there is only one Balancer pool to conduct yield farming programs. With the right incentives, market makers will buy more NOCLAIM tokens to yield farm or earn trading fees, pushing up the price of NOCLAIM tokens. As such, the price of the CLAIM token will reduce as CLAIM = 1 - NOCLAIM.
- Market Maker is expected to earn more fees as every cover purchase involved selling NOCLAIM tokens into the Balancer pool. And unlike in the old system, market makers only need to provide liquidity for one pool rather than two.

- Cover Protocol is expected to receive higher platform revenue as every purchase involves the CLAIM/NOCLAIM token minting with a 0.1% fee during redemption.

The cover price is decided by the supply and demand of the Balancer pool.

Yield Farming

Cover Protocol conducts yield farming for both NOCLAIM / DAI pool and CLAIM / DAI pool in the old Balancer Swap system. Within the new Flash Swap system, only the NOCLAIM / DAI pool is incentivized.

Protocol Revenue

0.1% fees will be charged on redeeming CLAIM and NOCLAIM tokens. COVER token holders have the right to vote on how to use the treasury. The staking of COVER tokens to earn dividends is being discussed, but details are not finalized.

Comparison between Nexus Mutual and Cover Protocol

Capital Efficiency

Nexus Mutual allows capital providers to have 10x leverage on the capital they stake. This translates into higher premium income for the stakers. Capital providers do have to take on more risks, but this approach is more aligned with how the traditional insurance providers spread the risk across multiple distinct products that have different risk profiles.

In the meantime, capital providers for the Cover Protocol could not leverage their capital as every pool is isolated. There are plans to bundle up different risks together in Cover V2, but details are scarce.

Cover Protocol's covers are more expensive than those from Nexus Mutual due to less capital efficiency. For example, buying cover sold for Origin Dollar would cost 12.91% annually in Cover Protocol, while it only cost 2.6% in Nexus Mutual.

We can calculate capital efficiency quantitatively by dividing the active cover amount over the capital pool. Nexus Mutual is having a capital efficiency ratio as high as 200%. While for Cover Protocol, by design, it will always be less than 100%.

Covers Available

Cover Protocol only has coverage for 22 protocols, while Nexus Mutual has coverage for 74 counterparties. Nexus Mutual offers more flexibility on cover terms where users can decide to start the cover on any day and have a coverage period up until one year.

Cover Protocol only offers fixed-term insurance where the end date is decided beforehand. For example, for a particular series, the insurance term is valid until the end of May. Regardless of when the user buys the cover, the cover will end in May. So as time goes by, CLAIM token will converge to $0 while NOCLAIM token will converge to $1.

Users can find more comprehensive offerings from Nexus Mutual as it covers most of the main DeFi protocols. It offers a higher amount of coverage than Cover Protocol, which is limited by its Total Value Locked (TVL). Even then, many covers are sold out due to the lack of stakers. The launch of Armor Protocol did help to alleviate the issue by attracting more wNXM into arNXM that allows NXM to be staked. More covers are available as a result.

Cover Protocol can be seen to be competing on long-tail insurance because projects can list much faster and do not have to go through cumbersome risk assessment. This is because every risk is isolated and contained within a single pool, unlike NXM, where a claim from any single protocol can eat into the capital pool.

However, bootstrapping coverage for lesser-known projects is not an easy task. Other than being constrained by limited capacity, the insurance cost is often too expensive. For example, the cover cost for a newly listed project - Reflexer Finance is offered at 32.46% annually.

Claim Payout Ratio

Yearn Finance suffered an $11 million hack in February 2021. Even though Yearn Finance decided to cover the loss through their fund in the end, insurance protocols have decided to pay out the claims to showcase that their product does work as intended.

Nexus Mutual has accepted 14 claims, amounting to a claim payout of $2,410,499 (1,351 ETH + 129,660 DAI). This resulted in a 9.57% loss to the NXM stakers that staked on Yearn Finance. The losses were fully paid if the claimants can show that they have indeed lost at least 20% of their fund.

Meanwhile, Cover Protocol decided to only have a payout percentage of 36% due to the loss being only 36% of the vault affected. If users hold 1,000 CLAIM tokens, they receive only $360. There were only $409K of CLAIM tokens available for Yearn Finance. Effectively the market makers only lost $147K. Cover buyers should realize that buying insurance from Cover Protocol does not guarantee a full payout of loss. The way the claim payout is decided is more similar to a prediction market.

Summary

	Nexus Mutual	Cover Protocol
Token Model	Mutual	Shareholder
Product	Insurance	Prediction Market

Risk Pooling	Yes	No
Capital Efficiency	High	Low
Counterparties covered	72	33
Claims	Voted by members	Voted by auditors
KYC	Not Required (Armor)	Not Required
Proof of Loss	Required	Not Required
Loss Covered	Full	Partial
Total Value Locked	$288 million	$14 million

Nexus Mutual currently has a huge lead in the insurance market with seemingly no competitors in sight. But insurance penetration rate in DeFi is super low, with roughly only 2% of the total DeFi TVL.

There are plenty of rooms for competitors to catch up. In the field where innovations sprung up every day, the throne for insurance king is always up for grabs.

Cover Protocol has been innovating rapidly, even throughout the Safe Protocol fiasco. Even though the product has yet to gain significant traction, zero to one innovation was never easy. We have to remember that Cover Protocol is only live for less than a year. The race is still early to call on the winner.

Other upcoming insurance protocols

1. Unslashed Finance

Unslashed Finance is currently in private beta mode. Unslashed Finance offers bucket-style risk pooling for capital providers. The first product, named Spartan Bucket, covers 24 different risks covering counterparties such as custodians, wallets, exchanges, smart contracts, validators, and oracles.

Lido Finance purchased $200 million worth of cover from Unslashed Finance for its stETH (ETH 2.0 staking) to cover the risk of slashing penalties. Slashing refers to penalties exerted towards the Proof of Stake (PoS) network's validator when the validators fail to maintain the network consistently.

2. Nsure

Nsure raised a $1.4 million seed fund from Mechanism Capital, Caballeros Capital, 3Commas, AU21, Signal Ventures, and Genblock back in September 2020. Currently, it is deployed on Ethereum's Kovan testnet.

Nsure is a marketplace to trade risk. It relies on the staking of NSURE tokens to signal the riskiness of a protocol and uses it to price cover. They are running an underwriting program in testnet to test out how the pricing will work in mainnet. Participants will receive NSURE tokens as a reward.

They also came out with a risk rating scale to rate every protocol based on

- History and team
- Exposure
- Audit
- Code Quality
- Developer community

Other than the staking component, the risk rating will contribute to the final cover price.

3. InsurAce

InsurAce recently raised $3 million from VCs such as Alameda Research, DeFiance Capital, ParaFi Capital, Maple Leaf Capital, Wang Qiao, and Kerman Kohli. InsurAce has yet to announce its launch date.

InsurAce aims to become the first portfolio-based insurance protocol, where it offers both investment and insurance products to improve capital efficiency. Unlike the current offerings, where users will have to buy several covers if they are exposed to different protocols while doing yield farming, InsurAce offers a portfolio-based cover covering all the protocols involved in the said investment strategy.

The project claims to adopt an actuarial-based pricing model rather than relying on staking or market to price the cover. Due to the lack of claim history in the DeFi ecosystem, it is doubtful that they can come up with a credible model.

Other insurance protocols include InsureDAO and Insured Finance.

Some derivative protocols also offer interesting insurance products such as:

- Hakka Finance's 3F Mutual - covers the de-pegging risk of DAI.
- Opium Finance - covers the de-pegging risk of USDT.

The adoption of these insurance products offered by the derivative protocols so far has been lackluster.

Unlike other types of projects such as DEX and lending, insurance projects do receive less attention. Besides being a more capital-intensive operation, the awareness of buying protection is not that prevalent in the crypto field. With more insurance protocols slated to launch this year, we may see more users getting onboard to use insurance.

Conclusion

- Lack of adoption of insurance products as only around 2% of the DeFi Total Value Locked (TVL) is covered.
- NXM price is stalling despite having great business growth.
- Armor Protocol's launch is a huge boon to Nexus Mutual, cementing its lead in the DeFi insurance market.
- Cover Protocol is innovating at a rapid pace, but the business growth is not satisfactory.

Lack of adoption of insurance products as only around 2% of the DeFi Total Value Locked (TVL) is covered.

The insurance market is still underexplored. According to the active cover amount of Nexus Mutual, only around 2% of the DeFi's Total Value Locked (TVL) is covered.

Derivatives products such as Credit Default Swap (CDS) and options may dilute the need to buy insurance. But the construction of those products is usually more capital intensive than the risk pooling method of insurance, leading to more expensive covers. Plus, derivatives are rightfully more costly as they have exposure to price risk.

There is a possibility that high-risk-takers and retail users dominate the current DeFi market. They may not have a strong emphasis on risk management and therefore do not consider buying insurance. Insurance market will gain more traction when the space matures and has more involvement with institutional capital.

NXM price is stalling despite having great business growth.

The underlying business of Nexus Mutual is humming well, with the active cover amount increasing in a healthy clip from $68 Million at the start of the year to $730 Million in February. That is an impressive 10x jump. But NXM's price has been stalling.

MCR% has reached its floor of 100% as capital providers withdraw their capital from Nexus Mutual. Capital providers face more choices when it comes to compounding their Ethereum stacks. Now NXM is competing with ETH yield from ETH 2.0 staking (Lido's stETH, Ankr's AETH), Alpha Homora's ibETH, and Curve's ETH pools.

The $8 million hack in NXM tokens of Nexus Mutual's founder - Hugh Karp, has led the hacker to unload NXM through the wNXM market, crashing the price of wNXM. Since the MCR% has reached its floor of 100%, NXM holders cannot sell NXM through the bonding curve. The only way for the holders to exit their position is to sell it through wNXM, creating a price gap between wNXM and NXM.

As long as the price gap exists, the optimal way to have exposure to NXM is by buying the cheap wNXM. As such, capital does not flow into the mutual until the price gap is closed. As per the formula, NXM's price will stay suppressed until new capital flows into the mutual.

Nexus Mutual has several plans ahead to solve the issue:

- A community fund has been created and will be used to incentivize greater participation from the community members.
- Nexus Mutual is exploring ways to invest the idle capital pool, such as ETH 2.0 staking.
- Expand product offerings by introducing stacked risk covers, stablecoins de-pegging covers, and oracles cover.

Armor Protocol's launch is a huge boon to Nexus Mutual, cementing its lead in the DeFi insurance market.

As a wNXM vault, arNXM is intended to replace wNXM. It has attracted so much wNXM that arNXM now contributes 47% of the total NXM staked. This has helped to open up more covers for purchase.

Current arNFTs have a total active cover amount of roughly $491 million, compared with Nexus Mutual's active cover amount of $700 million. arNFTs has contributed approximately 70% of the total active cover.

Armor protocol was launched just two months ago and is already having a significant contribution to the growth of Nexus Mutual.

Cover Protocol is innovating at a rapid pace, but the business growth is not satisfactory.

Cover Protocol offers fewer product offerings and has less flexibility in cover terms. But it allows projects to list faster and can offer coverage with relatively less capital. As such, several projects are only available on Cover Protocol but not on Nexus Mutual.

Cover cost is more expensive in Cover Protocol, but it might still be worthwhile to buy the cover due to the high yield farming rewards. People can also bet on which protocol may get hacked like a prediction market. This does not work for Nexus Mutual as they require proof of loss.

Cover Protocol has just released a Credit Default Swap (CDS) product alongside Ruler Protocol. What needs to be noted here is that Ruler Protocol's team is the same as Cover Protocol's team. Releasing another token using the same developer resource may not be a good sign. Yearn Finance has decided to end their partnership with Cover Protocol. Without an innate demand from the yVaults, it may be hard for Cover Protocol to overtake Nexus Mutual.

Cover Protocol future roadmap includes

- Risk pooling between different risks in Cover Protocol v2
- Cross Chain insurance