Take profits from crypto volatility

With our derivatives strategies For cryptocurrency holders and DeFi users

> *DeFi, la finance réinventée* Séminaire Aristote 9 juin 2022

MGH Protocol

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The Crypto Options Market landscape today Derivatives, options – focus on call/put definition



Derivatives, options – focus on call/put definition



Source: tradingview

Derivatives, options – focus on call/put definition



Source: tradingview

The TradFi derivatives markets are much larger than the spot markets.



 \rightarrow U.S. equity options volume is ~35X the spot.

Crypto options volume as a % of spot is $\sim 2\%$



Will DeFi derivatives markets follow the trend of traditional derivatives markets?



Crypto Options: Centralized vs Decentralized



Centralized Exchanges: CEX

- Counterparty risk : margining system proper to each exhchange but no central clearing
- Centralized custody (not your keys, not your crypto)
- No regulation/supervision on these exchanges
- · Quotations via orderbooks

Counterparty Risk, lack of ownership and lack of supervision on CEX.



Decentralized: Dapps

- No counterparty risks: fully or over collateralized protocols
- Decentralized: owned by the Community
- Supervised by the users (DAO)
- Backed by liquidity pools and/or vaults

Not enough liquidity for now to offer the same volume available on CEX.

<<BREAKING: Goldman Sachs makes its first over-the-counter #Bitcoin options trade .>>

Blockworks, March 21, 2022

Twitter

Our vision

Web3 is the new world...

A/ Provide billions of Web3 users with our MGH derivatives, in a gamified way



B/ Eat billions of the TradFi derivatives industry, in a decentralized way

The Crypto Options Dapps Market today (from DefiLLama)

Name	Chains 🕐	1d Change	7d Change	1m Change	TVL	📮 18 fx Polynomial Protocol			\$2 392 333
🎵 1 🥌 Opyn	€2				\$198.02m	📮 19 🎒 Siren (SI)	⊗⊘		\$2 185 065
📮 2 🧑 Ribbon Finance (RBN)	02≡				\$171.97m	📮 20 🏮 Chest Finance	⊜		\$1 514 547
📮 3 😵 Dopex (DPX)	🔊 © 🕗 🔶				\$104.17m	📮 21 PsyOptions (PSY)	=		\$873 473
📮 4 🍠 Friktion	⊜				\$66.72m	📮 22 🞯 Oddz (ODDZ)	2 (8)		\$831 309
📮 5 📥 Lyra (LYRA)	<u>@</u>				\$31.3m	📮 23 🛞 Shield (SLD)			\$826 967
📮 6 😥 Thetanuts Finance	₽2 ® 384 5				\$23.21m	📮 24 😁 Pods Finance	∞ € <i>∞</i>		\$405 628
📮 7 🍯 Jones DAO (JONES)	8				\$20.11m	📮 25 🜔 Phoenix Finance (PHX)	S 🔊 🔊		\$254 797
☐ 8 ▶4 Zeta	∋				\$15.27m	📮 26 🕐 FinNexus (FNX)	€ ®⊘		\$235 113
📮 9 🔵 FODL Finance (FODL)	•				\$13.14m	📮 27 중 Buffer Finance (IBFR)			\$187 612
📮 10 😨 Premia (PREMIA)	Ø 🔶 🗐 🌚				\$12m	📮 28 🚺 Lien (LIEN)	•		\$176 802
📮 11 🕢 Katana	≘				\$11.45m	📮 29 📧 Twindex (TWX)			\$129 162
📮 12 🔺 Delta Financial (DELTA)	•				\$9 914 644	🎵 30 🔺 Auctus (AUC)	Θ		\$121 216
📮 13 🚥 Hegic (HEGIC)	۵				\$5 589 113	📮 31 🕕 FTMguru (ELITE)	8		\$50 254
📮 14 🔄 Opium (OPIUM)	8				\$4 552 127	📮 32 💩 DeltaTheta (DLTA)	S (8)		\$28749
📮 15 🥂 Antimatter (MATTER)	۵ 🚱 🔊 🕗				\$2 998 581	📮 33 📀 Polkamarkets (POLK)	\varTheta 🖶 🚔		\$19 944
☐ 16 🕥 Thales (THALES)	<u>@</u>				\$2860934	📮 34 🂽 EverestDAO (EVRT)			\$1671
📮 17 🖤 Whiteheart (WHITE)	•				\$2 668 618	📮 35 🐺 Risq Protocol (RISQ)			\$357.62413

Options Protocols Ecosystem Map



Data as of: 12/31/2021

Structured Product Layer

- Vaults with defined option strategies
- Yield from option premiums
- Utilize an Option Marketplace
- Often cross-chain implementations
- Covered Calls most popular strategy

Marketplace Layer

- Base protocol for creating options
- Facilitate buying and selling of options
- Underwriting via liquidity pool or per trader
- Responsible for pricing options and volatility

Decentralized Options: Potential and current Limitations

Focus on Liquidity Pools and Decentralized Options Vaults





Focus on Liquidity Pools and Decentralized Options Vaults

Market Validation of Options Protocols – Hegic

Hegic is a successful peer-to-pool protocol that was launched in February 2020. Below are the protocol's key metrics over the past 6 months:

Key Protocol Metrics Nov 10, 2021 **Cumulative Numbers** Sep 10, 2021 Oct 10, 2021 Total Trading Volume (TTV) \$38,000,000 \$63,900,000 \$94,400,000 MoM Change (\$) **Options Acquired** 481 790 1,003 MoM Change Unique Buyers Addresses 215 256 285 Total Value Locked (TVL) \$20,500,000 \$15,500,000 \$18,800,000 MoM Change (\$) Total Premiums + Fees \$3,417,000 \$4,453,000 \$6,088,000 MoM Change (\$) **Total Premiums** \$2,700,000 \$3,500,000 \$4,641,000 MoM Change (\$) Total Net Revenues (Fees) \$717,000 \$953,000 \$1,447,000 MoM Change (\$) Total Net Revenues / User \$3,333 \$3,721 \$5,077 MoM Change (\$)

Hegic in Numbers

Key Protocol Metrics: Q2

Cumulative Numbers	Dec 10, 2021	Jan 10, 2022	Feb 10, 2022
Total Trading Volume (TTV)	\$144,700,000	\$218,300,000	\$391,900,000
MoM Change (\$)		50.86%	
Options Acquired	1,246	1,627	2,267
MoM Change		30.58%	
Unique Buyers Addresses	316	342	374
MoM Change	10.88%		
Total Value Locked (TVL)	\$15,100,000	\$12,000,000	\$10,000,000
MoM Change (\$)		-20.53%	-16.67%
Total Premiums + Fees	\$8,827,000	\$10,458,000	\$13,598,000
MoM Change (\$)			30.02%
Total Premiums	\$6,486,000	\$7,513,000	\$9,386,000
MoM Change (\$)		15.83%	
Total Net Revenues (Fees)	\$1,622,000	\$1,877,000	\$2,346,000
MoM Change (\$)	12.09%		
Total Net Revenues / User	\$5,133	\$5,488	\$6,273
MoM Change (\$)			

- Our goal is to have more traction and volume than this type of protocols, using a novel loss recovery process.
- ▶ We have compared our model to this one on the "stress test" slides at the end of this deck.





Focus on Liquidity Pools and Decentralized Options Vaults

Focus on Liquidity Pools and Decentralized Options Vaults





The unsolved DeFi Dapps Options problem we are addressing



DeFi Options buyers do not find enough volume available due to full and over collateralization



LPs experiment severe losses due to volatility, and they are only incentivized in an artificial way with protocol's token as rewards that cannot be sustainable in the long run



Without adapted tools to help LPs reduce their losses, options protocols may collapse when they run out of usage rewards

Our Solution

The solution

An easy to use Decentralized Options Vault that:



Incentivizes LPs through volatility



Transfers risks between LPs, Stakers and DAO Treasury



Offers high yield, by staking & lending available and dormant liquidity





In volatile crypto markets, LPs and stakers of our Dapp should be doing well

• <u>3 scenarios:</u> Adverse (BTC ends lower), Range (BTC remains within a Range) and Bull-Bear (BTC ends where it started but with wider moves):





In volatile markets, our limit orders are more likely to be filled:

- <u>Adverse scenario</u>: traditional Dapps collapse, our TVL remains at a high level (9M USDC)
- **<u>Range scenario</u>**: we double the TVL of a classic Dapp
- **Bull-Bear scenario:** our TVL is x13 higher than classic Dapps

These figures are given as an indication and do not constitute a commitment of the project leaders















Backtesting of MGH Protocol's models























Automated loss recovery process – Available liquidity













Automated loss recovery process – Performance





MGH Protocol Ecosystem Overview



Automated loss recovery process. – Flight to Volatility









Competitive advantage



And the more volatile the market is, the lower we can make MGH option prices, Compared to traditional options prices which increase linearly with volatility.

Use cases, future work and conclusion

- Protections against stablecoins depeg
- Options as a Service
- Multichain, and L2

Thank you!

Appendix

If markets were non-volatile, our Dapp would act like the others

- <u>3 scenarios:</u> Steady Growth (BTC 2k -> 140k), Steady Decrease (BTC 140k -> 2k), and Flat
- Starting TVL: \$10M, each quarter 50 BTC puts are backed by our liquidity pool.



- **<u>Steady Decrease</u>**: All puts are exercised, no additional liquidity is provided => every Dapps is vulnerable
- Flat: No put is exercised, TVL coming from the premiums cashed in
- <u>Steady Growth</u>: No put is exercised, TVL coming from the premiums cashed in and the mark-to-market increase of BTC

In all 3 scenarios, our Dapp acts like all the current AMM options Dapps.

These figures are given as an indication and do not constitute a commitment of the project leaders

Product - First prototype developed in Solidity/Truffle/NodeJS/React

> An easy-to-use platform, enabling users to buy/sell options and to deposit/withdraw eligible coins to the liquidity pool:



You can test our prototype here: https://mgh-protocol-testnet.herokuapp.com

Favourable trend for Options Protocols

► The need for option protocols is strongly increasing and this has resulted in the launch of several ones (about 40 today). As evidenced by this thread from Messari, January 11, 2022:

MESSARI





1/2022 is off to a hot start. The entire crypto market cap is down -11% in the first week of the year.

DeFi's top 100 tokens are down even more at -12%.

However, options protocols have massively outperformed with market caps collectively increasing 66% to start the year.





2/ There are 2 types of on-chain options protocols: Marketplaces & Structured products

Marketplaces create the actual option contract and facilitate the buying/selling of options.

Structured products sit on top of option marketplaces and offer vaults for users to deposit funds.

Market Validation of Options Protocols – Ribbon Finance

Ribbon Finance was launched in January 2021. It combines options to improve a portfolio's risk-return profile

According to Messari :

« In September, the protocol released its V2 version of vaults and has recently fully migrated all funds to the V2 versions. Like V1, V2 vaults conduct weekly options selling strategies. What changes with the V2 is a move to decentralizing the strike selection of the vault, a change to the fee structure, and enabling metavaults (fee sharing for protocols who build strategies on top of Ribbon vaults). »



- **Ribbon was initially built on top of Opyn and Hegic.** This shows the potential of options protocols.
- **•** One of our objectives is to collaborate with this kind of protocols, using Ethereum's composability.

Market Validation of Options Protocols – Dopex

Dopex was launched in 2021 and it is the biggest option Dapp in terms of TVL

According to Messari :

« Instead of using deposits to underwrite options on another protocol, Dopex sources liquidity and underwrites options all on the same protocol. Its main product is SSOV (Single Staking Options Vaults) which acts as a sort of structured option. On a monthly basis, users can deposit funds into vaults and select the strike prices they want to provide liquidity towards».



It is very encouraging for our niche to have such successful protocols. It means that our market is not at a hypothetical stage, but really promising.
The most important thing we're doing differently is that we're adding a new feature to incentivize LPs : we have a proper recovery process in place, that does not rely on artificial means such as usage tokens.

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