

# Defi and Tradfi

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## Defi: Things We Missed

- ▶ Options
- ▶ Futures, synthetic assets
- ▶ Miner Extractable Value
- ▶ Privacy

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All (mostly) acceptable areas for class projects!

# Options

- ▶ Off-chain options on crypto fairly widely available: Binance, Deribit, FTX. . .
- ▶ However, liquidity is an issue
- ▶ Many projects trying to build on-chain options. A few classes of approaches:
  - ▶ Standard options: **Premia**
  - ▶ “Power perpetuals”, gamma exposure through convex futures: **Oryn Squeeth**
  - ▶ Replicating options through AMM LP positions: **Panoptic**
- ▶ Application layer:
  - ▶ Structured products: **Ribbon Finance, Friktion**
- ▶ Some other projects: **dopex, Lyra, rysk, Primitive**

## Others

# Futures, Synthetic Assets

- ▶ Create an on-chain derivative to track price of some index or asset. Goal:
  - ▶ Leverage
  - ▶ Access (US stock exposure for non-US residents)
- ▶ See [dYdX](#), [Synthetix](#), [GMX](#), [Mycelium](#)
- ▶ Interesting (off-chain) innovation: the [perpetual contract](#), a never-expiring futures contract
  - ▶ See [Dave White's guide](#)

## Others

# Miner Extractable Value

- ▶ See Dan Robinson, Georgios Konstantopoulos, [Ethereum is a Dark Forest](#)
- ▶ See [Flash Boys 2.0](#)
- ▶ Transaction ordering matters! Miners have power over this
- ▶ [Flashbots](#) quite dominant player in this space protocol-wise
- ▶ Many very profitable “MEV funds”, like crypto HFTs. See

See [here](#)

# Privacy

- ▶ Some efforts to make defi more private
- ▶ Most successful project is **Tornado Cash**
  - ▶ **WARNING: Tornado cash is sanctioned by the US treasury! DO NOT INTERACT WITH TORNADO CASH!**
- ▶ **Aztec Network** is another project
- ▶ If I were you I'd lean away from class projects in this area. . .

## Bridges, Cross-Chain Defi

- ▶ With rise of multiple L1's, “bridging” assets across chains becoming more important
- ▶ Binance, **Wormhole**, **Ronin** some examples
- ▶ All 3 subject to > \$100*mil* hacks!



# Insurance

- ▶ **Risk Harbor**: automated on-chain op risk insurance
- ▶ **Nexus Mutual**: “DAO court” system

# Oracles

- ▶ **Chainlink** very dominant on Ethereum
- ▶ **Pyth** on Solana

## Other Stuff

See Thread

## Defi Summary

- ▶ **Automated market makers** let you trade coins for other coins on-chain
- ▶ **Stablecoins** let you trade USD-valued assets on chain
- ▶ **Borrowing/lending protocols** let you lend for yield/borrow against your collateral
- ▶ **Airdrops/Yield Farming** let you raise equity for your projects easily

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But. . . what useful activities does defi let society do???

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**What we got:**

- ▶ “All of the above”, but. . .
- ▶ Where are the mortgages???

# Defi

- ▶ Many of the pieces are there, in some ways they work better, but. . .
- ▶ Nobody is doing any useful finance with them!



# Defi

- ▶ Many of the pieces are there, in some ways they work better, but. . .
- ▶ Nobody is doing any useful finance with them!
- ▶ Instead, most of the TVL of defi seems driven by speculation:
  - ▶ Some people want to lever up crypto
  - ▶ Some people want to lend to people who want to level up crypto
- ▶ Defi is currently a big “securitization machine”
  - ▶ “Tranches” moderately risky crypto, into very risky levered crypto, and less risky crypto-backed loans
- ▶ Is this socially useful???

## Defi: Other Issues

Besides not doing anything useful:

- ▶ It's not simpler!
- ▶ High hack risk, no recourse
- ▶ Lots of outright scams, consumer protection concerns
- ▶ No “lender of last resort”, no monetary policy

## Defi: The Bright Side

- ▶ But despite not doing anything useful, we got a lot of technical innovation!
- ▶ AMMs, stablecoins, lending, etc. moving at extremely fast pace!
- ▶ Wall street, at the pace of Silicon Valley
- ▶ Illustrates how much regulation/access barriers are decreasing pace of innovation in finance

## Defi: Future Directions

- ▶ Payments, value storage basically works already! But isn't really defi. . .
- ▶ RWA efforts, if successful, have potential to finance useful stuff
- ▶ Undercollateralized lending has potential
- ▶ Perps/futures potentially useful for risk-sharing

Important lesson: what real-world problem does this solve?

## Defi: Summary

- ▶ Most commercially successful application of web3 so far: massive TVL, lots of builders, funding
- ▶ But it's basically a giant speculation game so far
- ▶ However, lots of very smart people
- ▶ And real use cases may come soon. . .