

Decentralised Finance (DeFi)

Crime detection and prevention in decentralised finance.



Presenters



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What we will cover



Explain Decentralised Finance



Financial crime risks in DeFi



Trends in blockchain analytics for DeFi

DeFi Core Principles

- Democratises financial services through increase accessibility
- Immutable / censorship resistant
- Publicly available
- No central entity



Virtual Asset Service Provider (VASP)

“Natural or legal person... as a business conducts one or more of the following... for or on behalf of another natural or legal person:”

- Exchange between
 - virtual assets and fiat currencies
 - one or more forms of virtual assets
- Transfer of virtual assets
- Safekeeping and/or administration of virtual assets
- Financial services related to... offer and/or sale of a virtual asset

Virtual Assets

“...digital representation of value that can be digitally traded, or transferred, and can be used for payment or investment purposes.”

- ✓ Stablecoins
- ✓ Certain non-fungible tokens (NFTs)
- Security tokens
- Central Bank Digital Currencies (CBDC)



Centralised



Individual or legal entity with *control over the flow of funds*;

- Management of services or infrastructure
- Receive compensation
- Significant governance

Decentralised



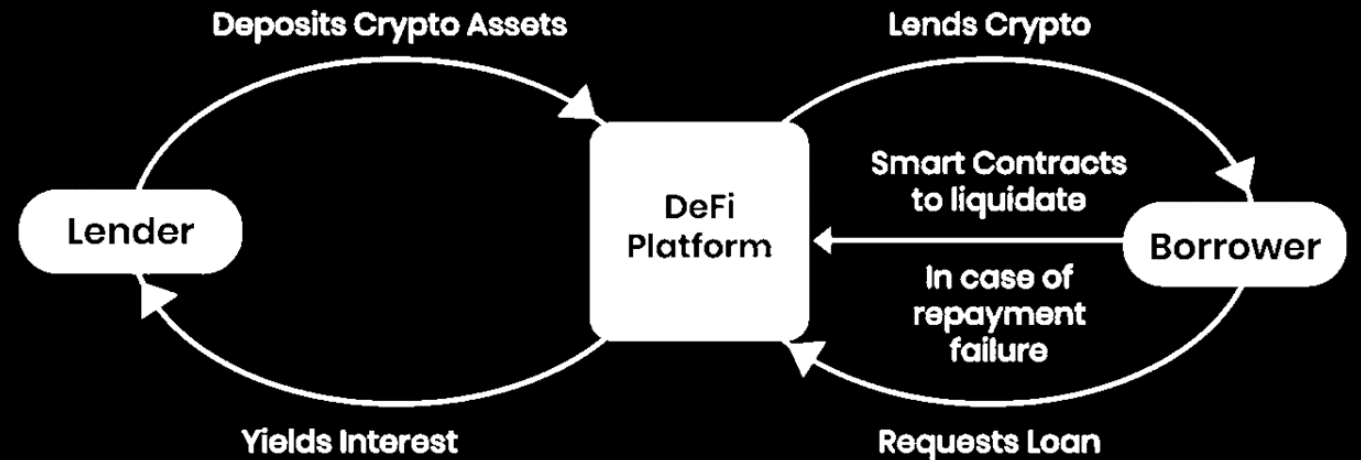
- Automated financial services (via smart contracts)
- Network Operators (w/o VASP activities)
- Un-hosted / Non-Custodial Wallets
- Miners / Validators
- Internet / Computing Resources



DeFi Services





















- Exchange virtual assets
- Lending and borrowing
- Investing or yield farming
- Peer-to-peer payments
- Insurance
- Asset management

How does Yield Farming work?



Source: Blockchain Simplified

Decentralised Exchanges (DEX) / Trading

#	Exchange	24h Volume	Num Coins	Num Pairs	Visits	Most Traded Pair
1	 Uniswap (v3) Decentralized	\$3,484,336,824	475	941	7,483,667.0	 USDC/ETH \$1,498,489,820
2	 PancakeSwap (v2) Decentralized	\$1,667,313,500	3326	6199	24,969,574.0	 WBNB/BUSD \$278,135,840
3	 Trader Joe Decentralized	\$654,894,926	98	872	2,471,134.0	 USDC/0XB31... \$140,360,791
4	 Uniswap (v2) Decentralized	\$577,231,812	1826	3195	7,483,667.0	 USDC/0XC02... \$68,494,861
5	 Sushiswap Decentralized	\$495,142,949	399	764	249,486.0	 USDC/0XC02... \$79,450,562
6	 Curve Finance Decentralized	\$398,779,567	23	55	1,139,377.0	 MIM/USDT \$154,110,774
7	 Spookyswap Decentralized	\$309,309,029	43	638	1,405,231.0	 USDC/0X21B... \$96,562,103
8	 Compound Finance Decentralized	\$260,634,973	15	17	480,000.0	 CUSDC/USDC \$156,152,245
9	 Raydium Decentralized	\$235,820,140	241	484	4,037,615.0	 MSOL/USDC \$40,002,232
10	 Orca Decentralized	\$226,258,410	57	78	1,274,150.0	 SOL/USDC \$55,819,374

Coingecko.com/en/dex

Lending & Borrowing: Benefits

Sub Saharan Africa: Infrastructure open to decentralised payments

- Fastest growing region for mobile phone growth (Forbes, 2021)
- 900% increase in mobile banking since 2011 (Finextra, 2020)
- 81% broadband 3G coverage in sub-Saharan Africa (GSMA, 2021)

Example: M-Pesa (Kenya)

- Banking on old tech phones through SMS
- \$140 million transacted daily between January and December 2020

Liquidity Pools

AIM:

- Global marketplace
- Provide DeFi liquidity 24/7 without the need for a middle man



Stable Coins

Why valuable in DeFi?

- Minimise volatility
- Trade or save assets
- Promote transparency, and interoperability within different ecosystems

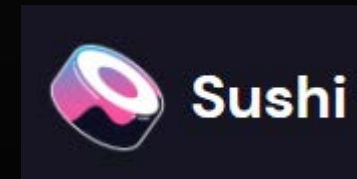
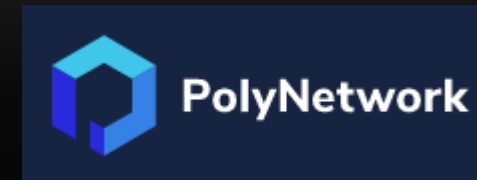


compared with..

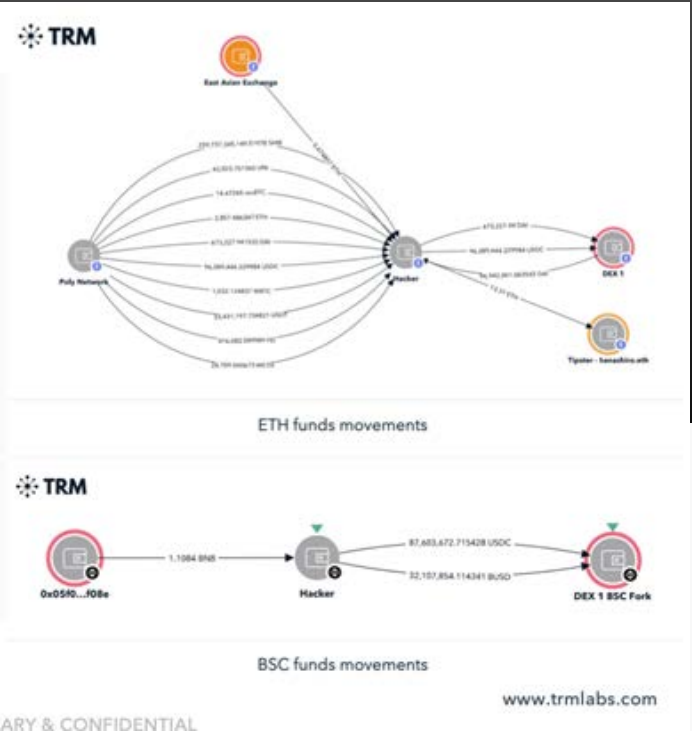


Financial Crime Risks in DeFi

- Money laundering / terrorism finance
- Hacks
- “Rug pull” / theft
- Fraud & market manipulation
- Exploits: flash loans, vampire attacks
- Malicious oracles



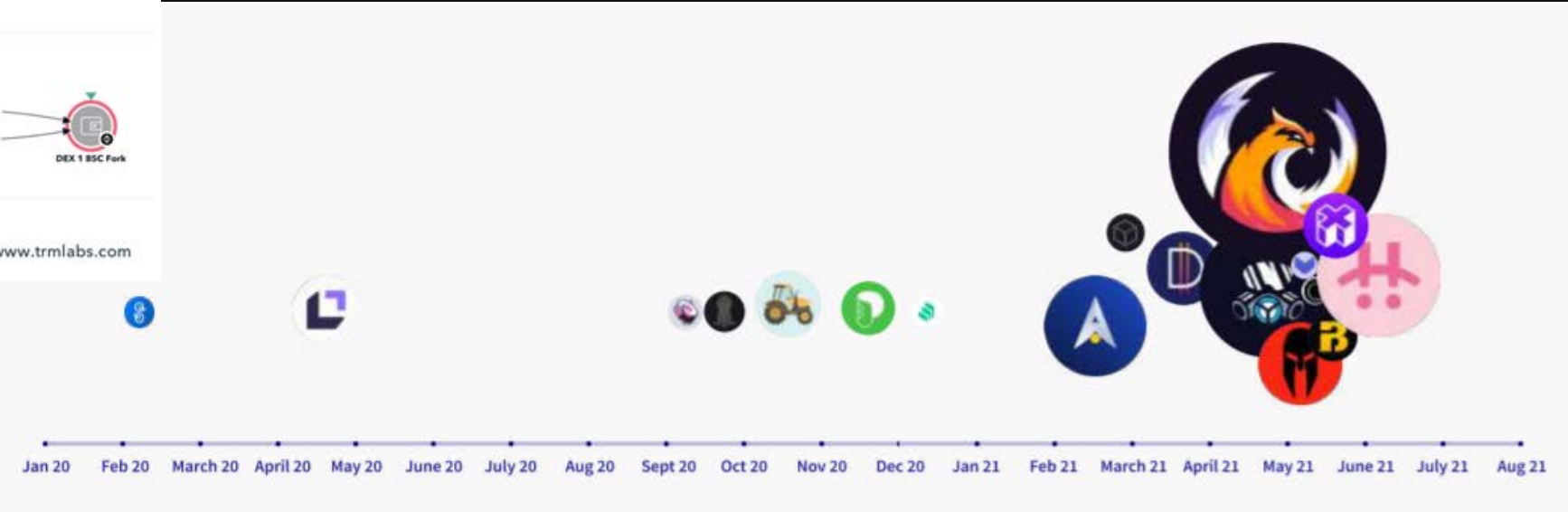
DeFi hacks above \$10 million



TECH

Hacker behind \$600 million crypto heist returns final slice of stolen funds

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Source: Merkle Science

DeFi Risk Prevention

- Oracle Sanction Compliance
- Liquidity pool risk rating
- Smart contract & AML

CIPHERTRACE



Final Thoughts

- Regulations and enforcement increasing
- Private / public cooperation & education
- DeFi risks & opportunities



Thank you!



Source: Moralis Academy

Questions & Answers

The following questions were raised via Slido throughout the presentation provided on 7.12.2021.

For additional information or follow-up questions, please don't hesitate to contact us via LinkedIn!

Question 1

How can regulations be enforced in DeFi?

Prior to enforcement, regulators must identify VASPs that fall under their jurisdiction. Certain DeFi platforms that engage in financial intermediation, or otherwise provide centralised financial services, may fall into this category. Once identified, DeFi services that are actually VASPs, will be required to obtain authorisation from their local authority.

➤ For more information on the FATF guidance for VASPs (i.e. identifying centralised vs. decentralised services) see:

<https://www.fatf-gafi.org/publications/fatfrecommendations/documents/guidance-rba-virtual-assets-2021.html>

➤ For more information on how to determine jurisdictional scope, see:

[https://www.fatf-gafi.org/publications/virtualassets/documents/virtual-assets-fatf-standards.html?hf=10&b=0&s=desc\(fatf_releasedate\)](https://www.fatf-gafi.org/publications/virtualassets/documents/virtual-assets-fatf-standards.html?hf=10&b=0&s=desc(fatf_releasedate))

Question 2

Defi is built in blocks. The front end may be centralised but the back end is decentralised. Front ends can continually be replaced. Who would be targeted?

The service as a whole is looked at when deciding if it falls within the definition of a VASP. Natural or legal persons that exercise control over Virtual Assets belonging to a 3rd party will likely be a VASP (e.g. developing and/or maintaining a smart contract that enables the receipt and transfer of assets in a liquidity pool). Whether this happens through front or back-end functionalities is not relevant.

- For more information on which services are centralised vs. decentralised, please see the FATF Updated Guidance for a Risk-Based Approach VASPs (in particular, paragraphs 50 – 97):

<https://www.fatf-gafi.org/publications/fatfrecommendations/documents/guidance-rba-virtual-assets-2021.html>

Question 3

How can the private sector comply with all the regulatory obligations without investing in tech/blockchain analytics?

Private sector services (e.g. VASPs) that are subject to AML/CFT legislation in their local jurisdiction must usually identify the asset origins (source of wealth, source of funds) at onboarding. They must also conduct ongoing transaction monitoring. If the transacted assets are blockchain-based Virtual Assets, such due diligence may be facilitated through blockchain analytics services.

Blockchain analytics can be conducted via a number of free online services for simple track & tracing activities.

➤ For a list of free analytics services, see: <https://sourceforge.net/software/blockchain-analysis/free-version/>

Question 4

Would providing liquidity to a liquidity pool smart contract for a fee constitute being a VASP?

The FATF clarifies that a VASP is a “natural or legal person who is not covered elsewhere under the Recommendations and as a business conducts one or more of the following activities or operations for or on behalf of another natural or legal person...”

“As a business... is meant to exclude those who may carry out a function on a very infrequent basis for non-commercial reasons from coverage as VASPs. To satisfy this portion of a definition, the entity must carry out this function for or on behalf of another natural or legal person as opposed to on behalf of itself, for commercial reasons, and must do so on at least a sufficiently regular basis, rather than infrequently.”

Therefore, an individual transferring assets to a liquidity pool for its own investment purposes is not a VASP.

➤ For more information on the FATF guidance for VASPs (i.e. identifying centralized vs. decentralized services) see:
<https://www.fatf-gafi.org/publications/fatfrecommendations/documents/guidance-rba-virtual-assets-2021.html>