

La DeFi

Marché, acteurs et perspectives

Philippe Redaelli, Managing Director Strategic Initiatives, Kaiko

3 avril 2026



ABOUT



New York - London - Paris - Singapore

Kaiko empowers businesses with actionable and reliable crypto data solutions.

Since 2014, we've solved complex data challenges to provide the highest-quality services, powering use cases across the investment lifecycle.



iosco



Data Feeds

Market data feeds for trading, risk management, and research.



Analytics Solutions

Proprietary data solutions for risk management, asset valuation, and compliance.



Monitoring Solutions

Market-level and blockchain solutions for surveillance, AML/CFT compliance, and research.



Kaiko Indices

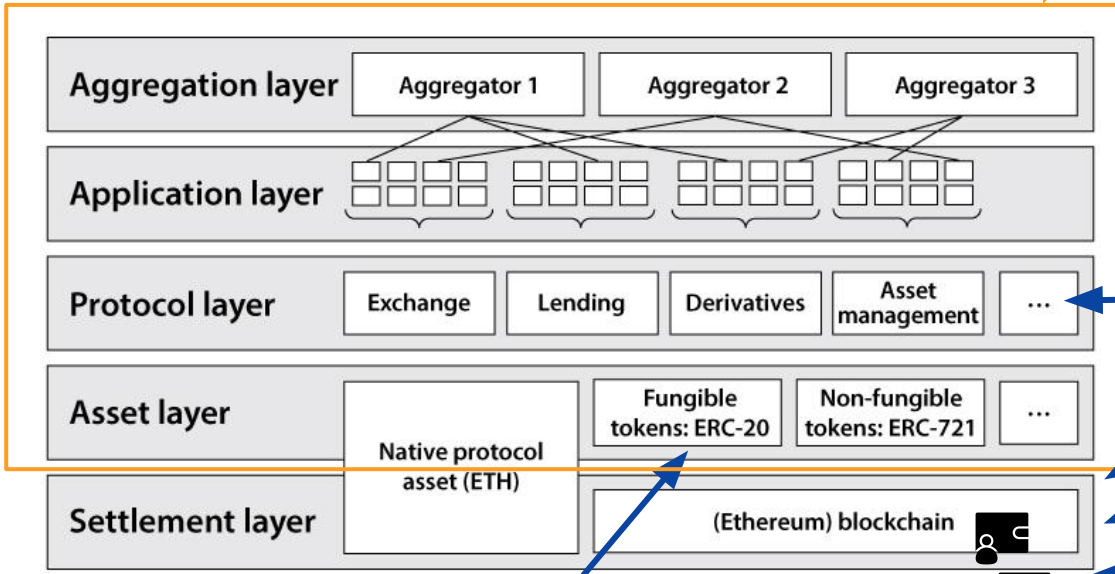
Crypto benchmarks built on enterprise-grade data with 24/7 infrastructure and support.

smart data

I. DeFi

Blockchain Layers

Smart Contracts are here



DeFi Protocols are here

Data Providers are here

Oracles are here

Blockchain & Bridges are here

People's wallets (accounts) are here



Source: Schär, F. (2021). Decentralized finance: On blockchain- and smart contract-based financial markets. FRB of St. Louis Review.



Tradable Cryptocurrencies are here

DeFi is a Blockchain Use Cases

Blockchain



Decentralized Finance

A network diagram icon with a central node and several peripheral nodes connected by lines, representing a decentralized system.

Traditional Finance, Tokenized

Centralized Finance (trading)

Other (Gaming, Ticketing, more)

From Bitcoin to DeFi

	Bitcoin	Smart Contracts	Protocols	Composability
Date	2009	2015	2018–2020	2020–today
Capability	Transfer value	Encode rules	Deploy functions	Combine protocols
How	Without a bank	In code	On-chain	Like building blocks
Example	BTC transfer	Ethereum / Solidity	Uniswap, Aave, Curve	"Money legos"



DeFi is an evolution of finance

Financial markets utility centralized > decentralized

DeFi is a space in which several classic financial functions are reorganised within open and programmable architectures. These mechanisms are explicit, interconnected, and observable.

Financial Function	Traditional Form	DeFi Form
Transfer value	Bank wire / SWIFT	Stablecoin / on-chain transfer
Organise exchange	Centralised exchange (NYSE, Euronext)	DEX / AMM (Uniswap, Curve)
Price discovery	Order book / market makers	Liquidity pool / algorithmic formula
Allocate capital	Bank credit / bond markets	Lending protocol (Aave, Compound)
Manage collateral	Central counterparty (CCP)	Smart contract / on-chain collateral
Redistribute risk	Insurance / OTC derivatives	Insurance protocol / on-chain options

DeFi is an evolution of finance: Physical market places > digital market places

18th Century

Coffee Houses

19th & 20th Century

Exchanges

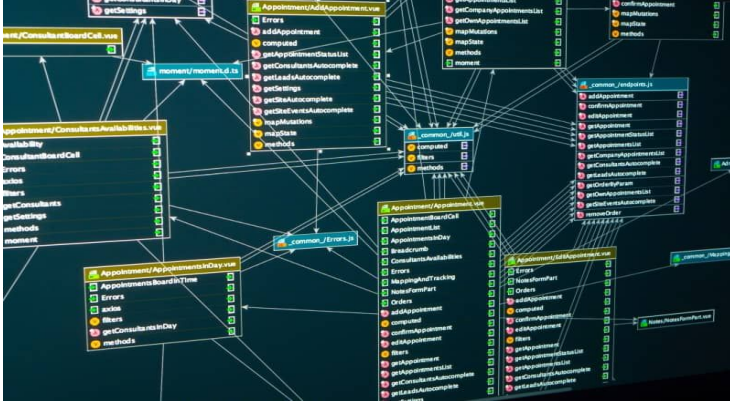
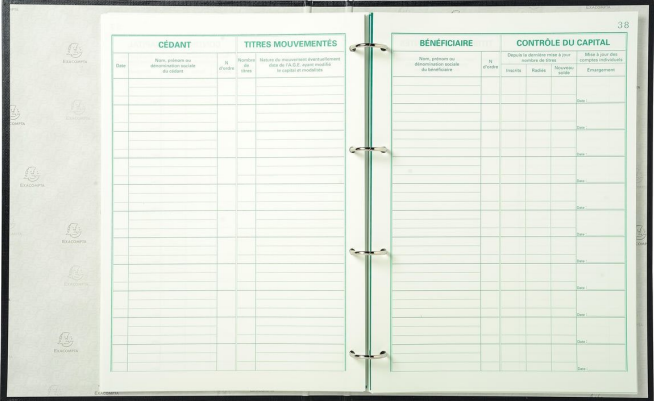
21st Century

Electronic
trading

AMMs



DeFi is an evolution of finance: Paper > databases > blockchain



Account based

UTXO

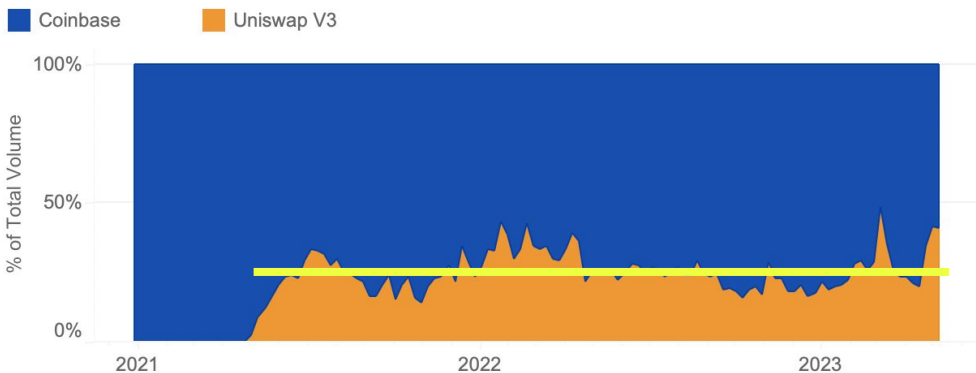


Assets

Tradable universe

Coinbase vs. Uniswap V3

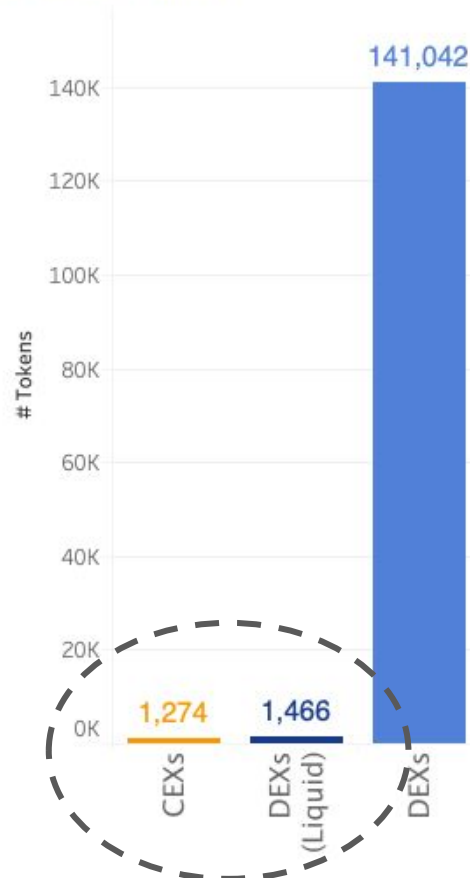
Weekly Volume Market Share



Source: Kaiko DEX Data, All Pools.



Number of tokens available for trading on CEXs and on DEXs



98% illiquid alt coins

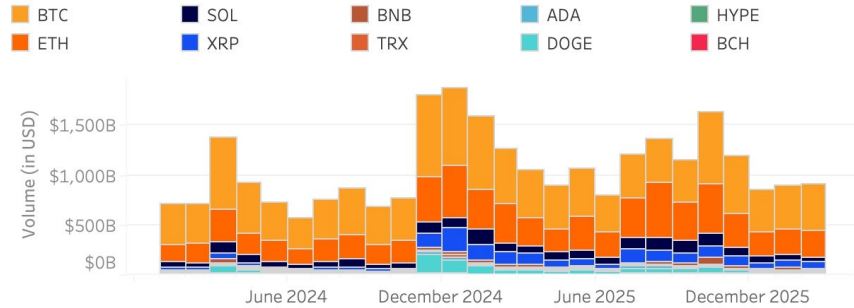
2% liquid coins

Assets

Crypto assets > high volumes

Crypto Volumes Per Asset

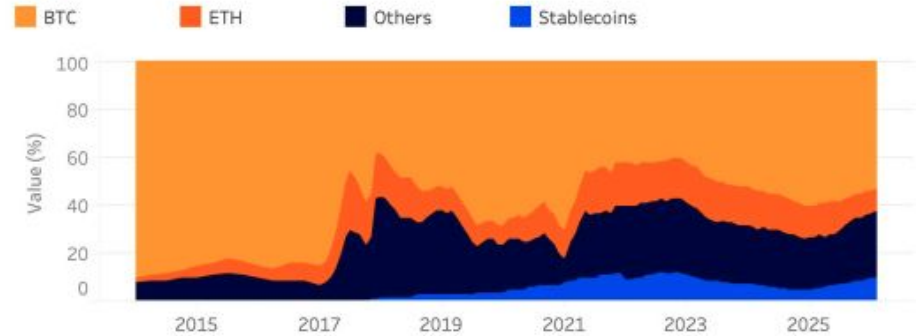
Since 2024, Monthly



Source: Kaiko Asset Metrics



BTC vs. ETH vs. Stablecoin Dominance

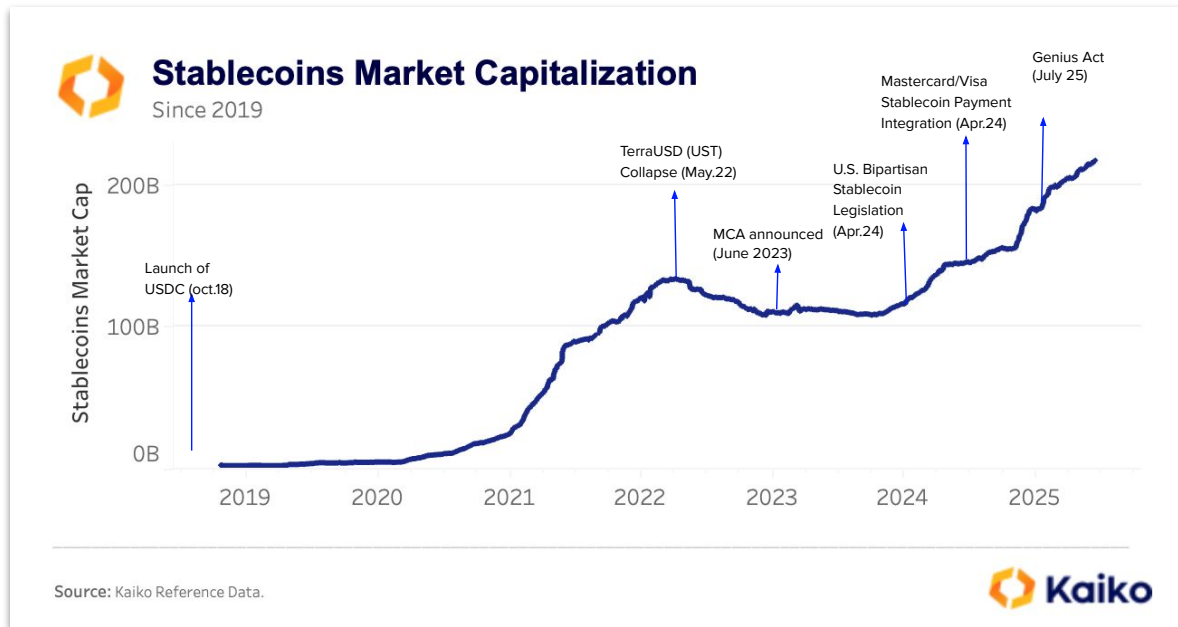


Source: Kaiko Supply and Market Cap Data



Assets

Stablecoins > high volumes



> Explosive growth:
\$300 billion market capitalization in October 2025 (>50% growth YTD)

> Driven by:

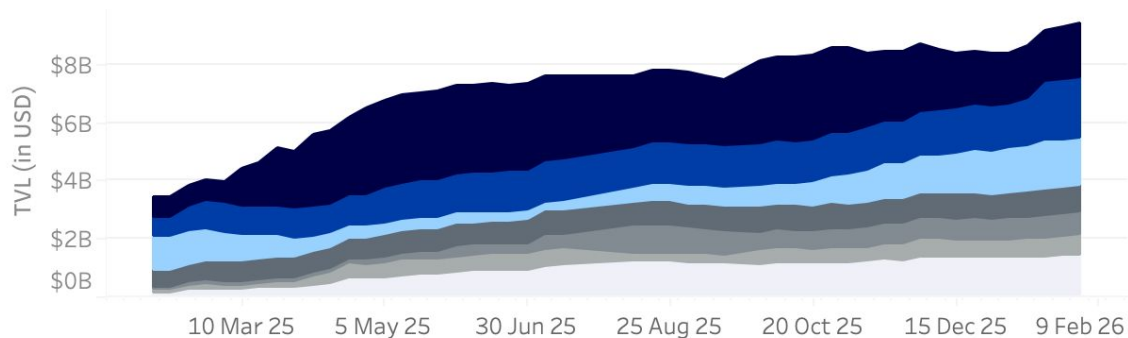
- fundamental shifts in **regulatory frameworks**
- **Macroeconomic** Conditions Driving Adoption

Assets

Tokenized Funds > growing



Tokenized U.S. Treasuries



Source: Kaiko Market Cap & Supply Data, Rwa.xyz



Assets

Other Assets > nascent

Equities

- Public Equities
- Equity Indices
- Equity ETFs
- Private Equity & Venture

Fixed Income & Credit

- Bonds
- Private Credit

Commodities

- Precious Metals
- Gold
- Industrial Metals
- Oil
- Natural Gas
- Agricultural Commodities
- Commodity Baskets

Alternatives & Real Assets

- Real Estate
- Reinsurance
- Carbon Credits

Digital Assets

- Digital Assets

Multi-Asset / Blended

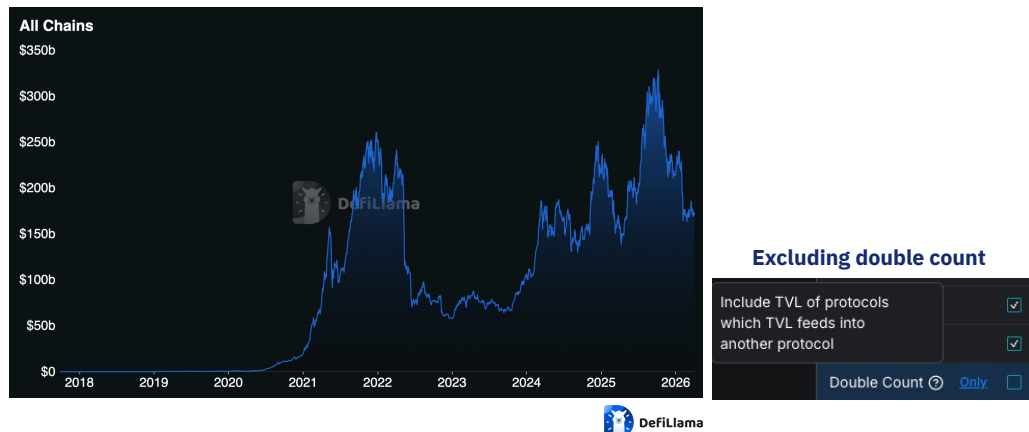
- Mixed Public Markets

Name	Asset Group	Active Marketcap	Or
1 Tether Gold XAUT	Precious Metals	\$3,254b	
2 BlackRock BUIDL BUIDL	Bonds	\$2,802b	
3 US Yield Coin USYC	Bonds	\$2,685b	
4 PAX Gold PAXG	Precious Metals	\$2,29b	
5 Franklin OnChain U.S. Gove... BENJI	Bonds	\$930.55m	
6 BlackRock USD Institutional... BUIDL-I	Bonds	\$731.82m	
7 WisdomTree Treasury Mon... WTGXX	Bonds	\$615.59m	
8 Superstate USTB USTB	Bonds	\$408.7m	
9 Ondo OUSG OUSG	Bonds	\$391.88m	
10 Fidelity Digital Interest Tok... FDIT	Bonds	\$157.64m	
11 OpenEden T-Bills TBILL	Bonds	\$149.28m	
12 Theo Network thBILL thBILL	Bonds	\$147.26m	
13 OnRe Tokenized Reinsuran... ONyc	Reinsurance	\$135.47m	
14 Circle Internet Group (Ond... CRCLon	Public Equities	\$132.73m	
15 Mantle Index Four Fund MI4	Digital Assets	\$120.68m	

The Size of DeFi

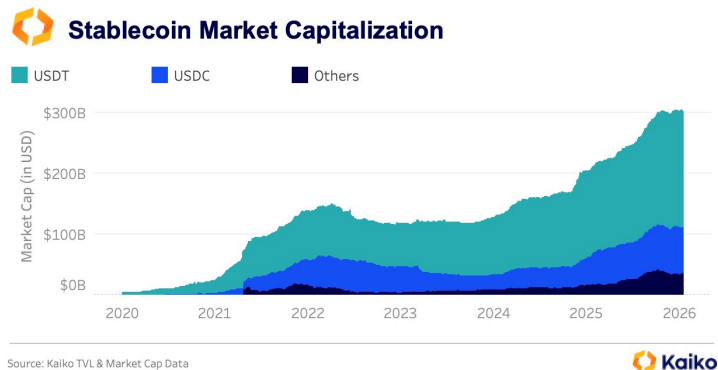
~\$180B

Total Value Locked



~\$300B

Stablecoin market cap



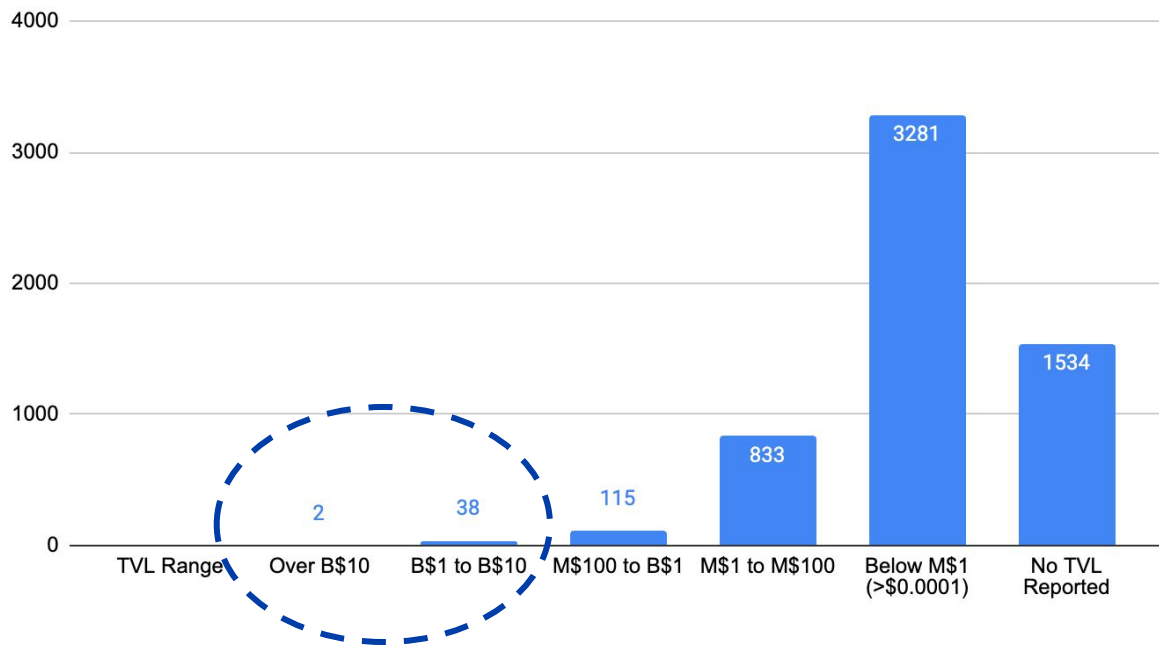
Volume is concentrated on few protocols

Top 5

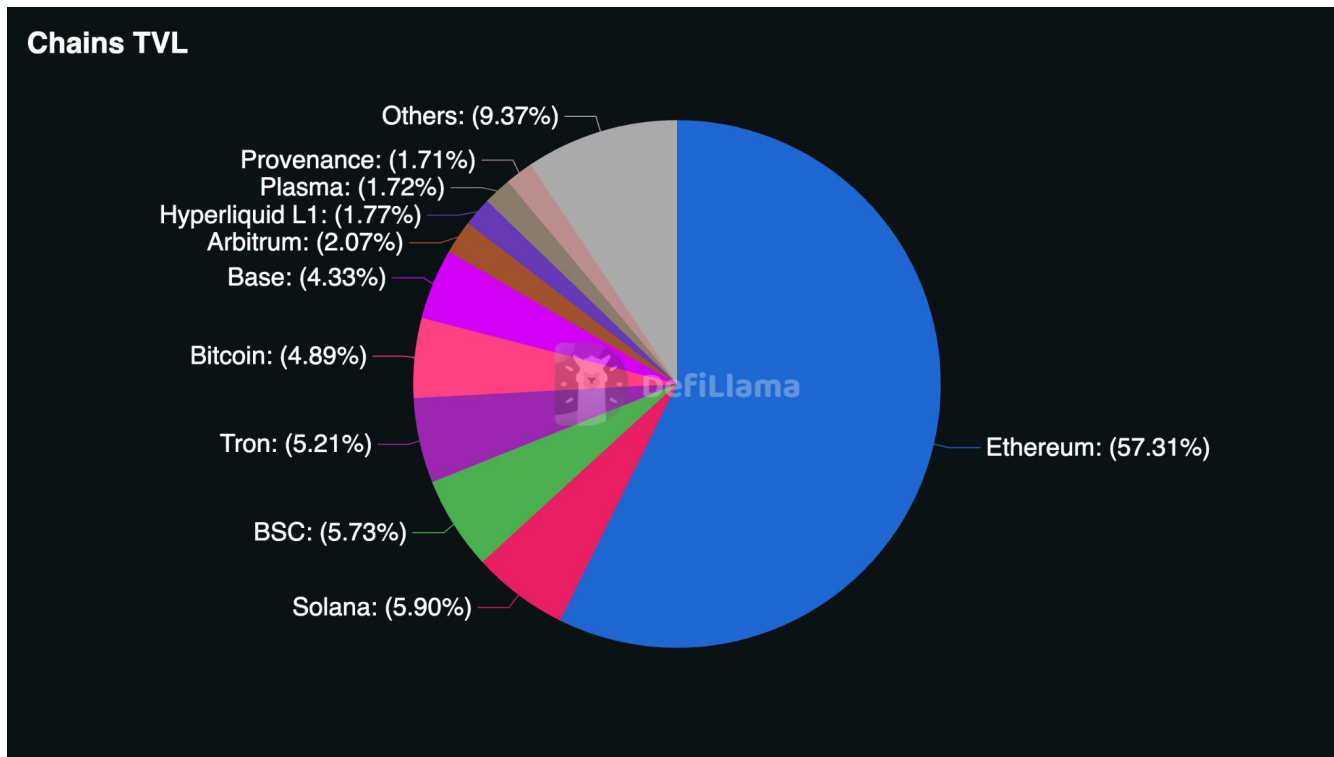
Name	Category	TVL
1 Aave 21 chains		\$23,771b
2 Lido 5 chains	Liquid Staking	\$18,952b
3 EigenCloud 1 chain	Restaking	\$8,704b
4 Binance staked ETH 2 chains	Liquid Staking	\$7,55b
5 Morpho 34 chains	Lending	\$6,699b

Name	Category	TVL
15 Uniswap 43 chains	Dexs	\$3,03b

5804 protocols



DeFi mainly runs on 6 blockchains



DeFi is still nascent



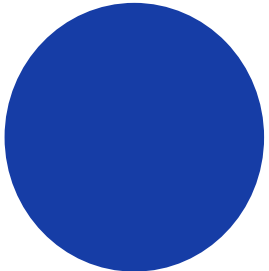
DeFi



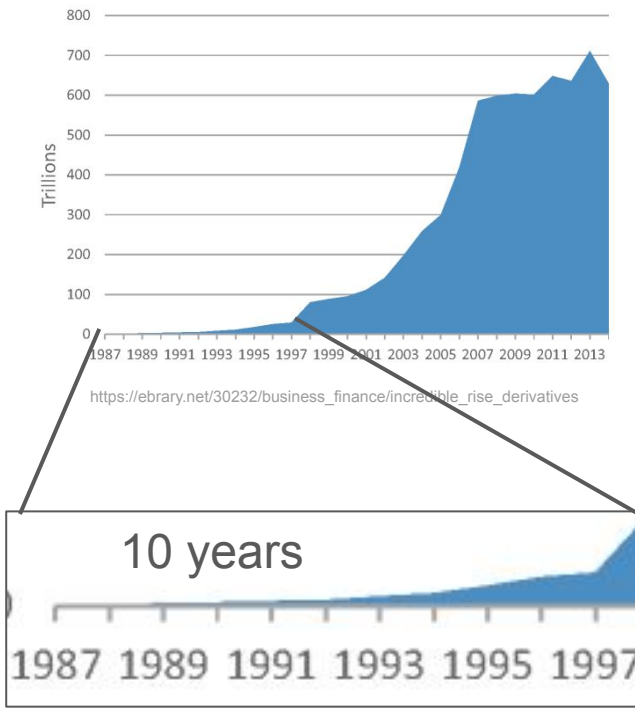
Global M2
Money
Supply



Global Debt



Global
Derivatives



So what is DeFi

General definition

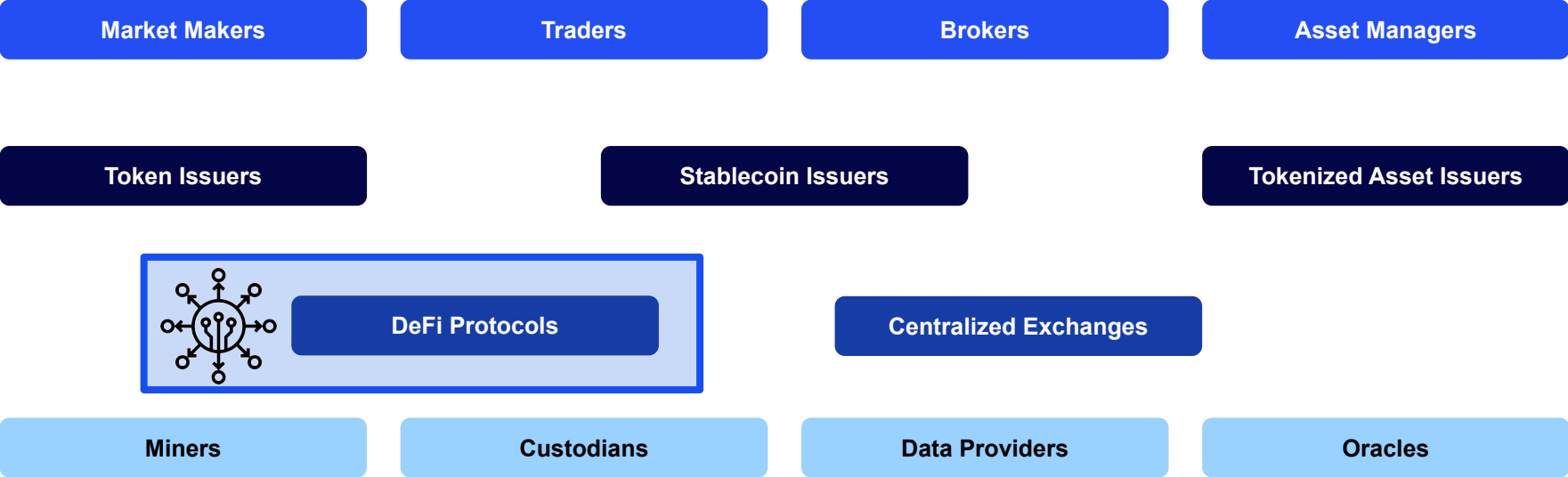
DeFi brings together blockchain-based protocols that perform financial operations, exchange, lending, borrowing, asset issuance, derivatives, and collateral management, **through automated rules**.

It does not eliminate intermediation, but redistributes it across code, interfaces, oracles, liquidity providers, developers, and governance mechanisms.

DeFi for communities of practices

1. For the **Trader**, DeFi is a set of on-chain **liquidity pools**
2. For the **Risk Manager**, DeFi is a system of collateralised **smart contracts**
3. For the **Regulator**, DeFi is a **disintermediated** financial infrastructure operating without licensed entities
4. For the **Researcher**, DeFi is a transparent, **new market microstructure**

DeFi Stakeholders



Risk in DeFi

Market risk

Volatility, leverage, liquidation losses

Liquidity risk

Slippage, pool imbalance, withdrawal stress

Collateral risk

Margin shortfall, collateral shocks, cascading liquidations

Operational risk

Execution failure, interface errors, key management

Technology risk

Smart contract bugs, oracle failure, bridge exploits

Governance risk

Voting capture, parameter changes, admin control

Systemic risk

Contagion, composability shocks, network effects

Incentive risk

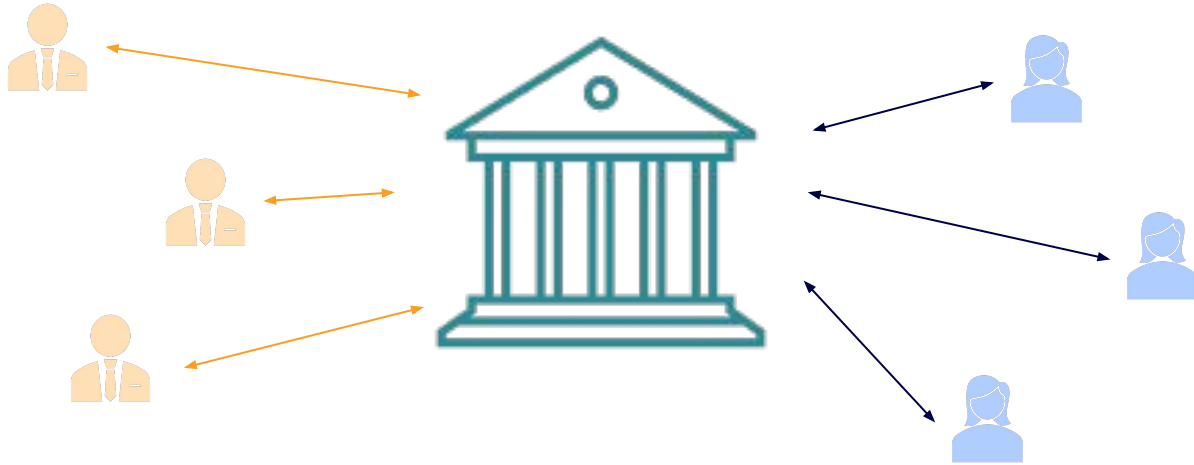
MEV, arbitrage races, strategic behaviour

II. DeFi protocols



Centralized exchanges

Trading against a counterparty



Order Books



Market Making

How to ensure the liquidity?

MAKE

liquidity

VS

TAKE

liquidity

Market Making

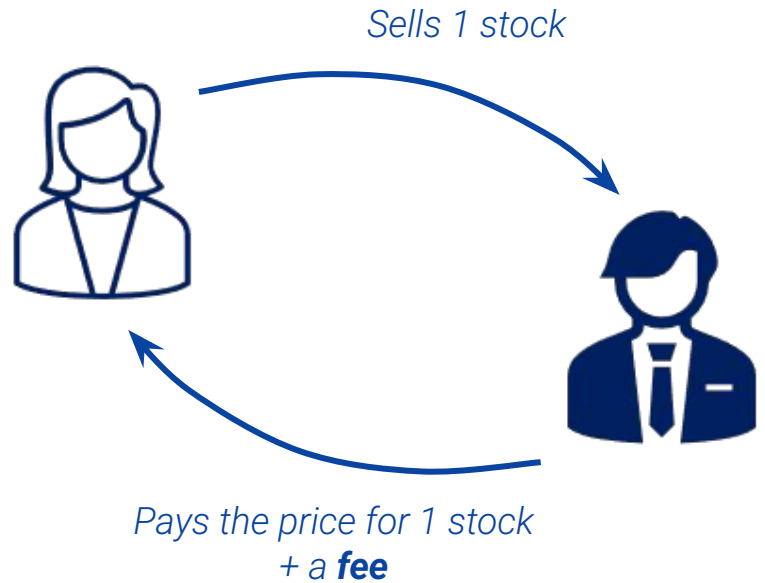
Market Makers Provide Liquidity



Position: Market Maker

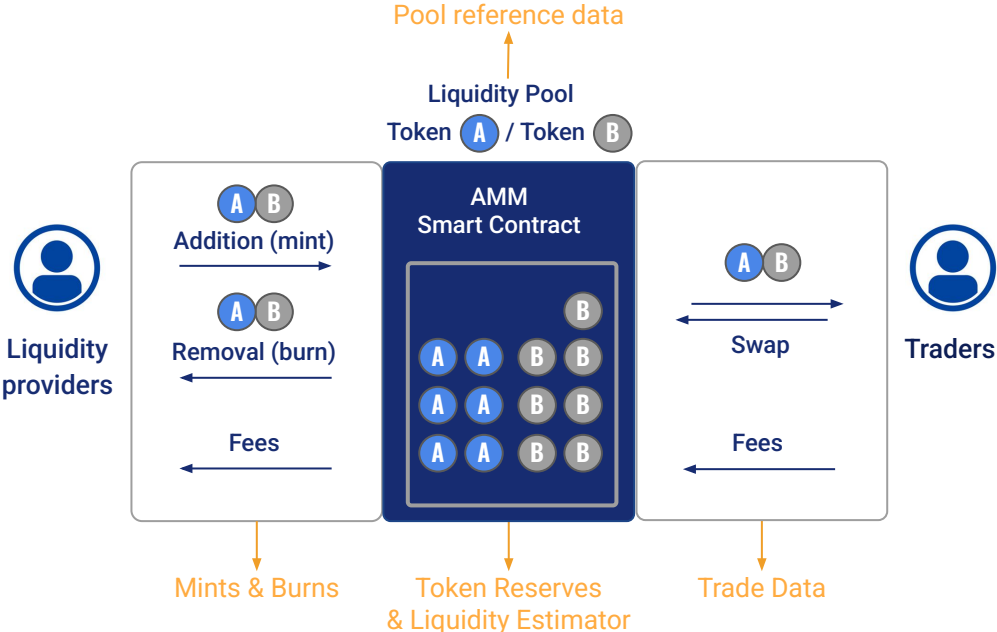
Mission: Continuously publish bid and offer prices.

Objective: Ensure the liquidity of the market.



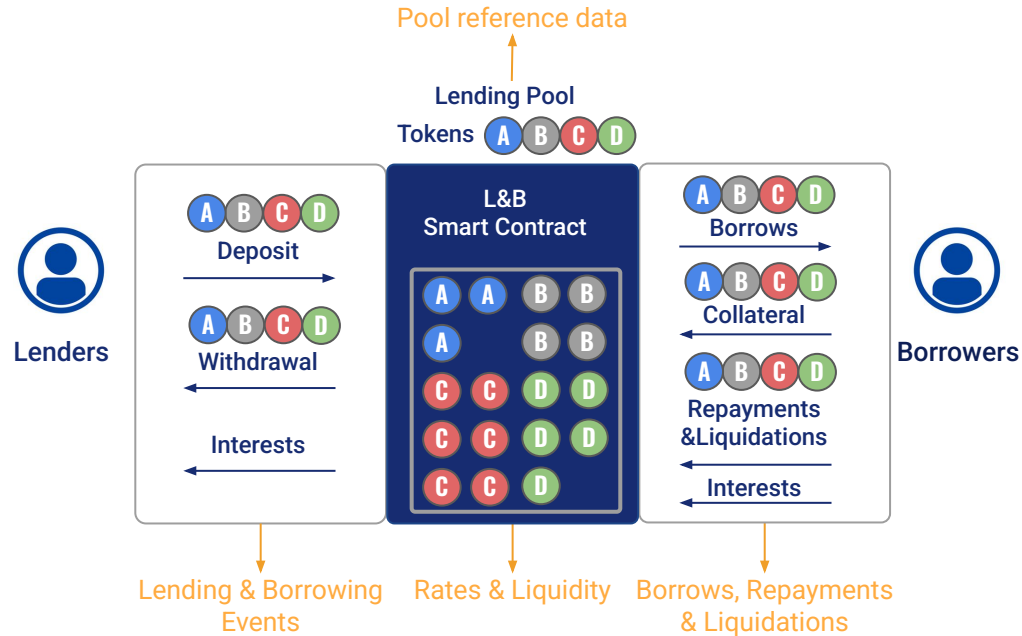
DEXs AMM

Automatic Market Making



Lending & borrowing protocols

Automatic Lending & Borrowing



Why are DeFi Protocols an innovation

Centralized Exchanges (CEXs)

DeFi Protocols

✓ Centrally Managed (Off-chain)	Presence of Intermediaries	On-chain deployed smart contract	✗
✗ By the exchange	Assets Control	By the users	✓
✗ ✓ Depending on the exchange & jurisdiction	Regulated	There is no intermediary to regulate	✗
✓ Both fiat & crypto currencies available	Fiats Allowed	Only cryptocurrencies available	✗
✓ New Market comes under some rules	Listing Fees	Anyone can create a new market	✗
✓ Being a market maker requires \$\$\$	Barriers to entry	Anyone can be a market maker	✗
✓ The exchange can go down	Downtime Risk	The blockchain is always up & running	✗
✓ The exchange can be hacked	Operational Risk	SCs can store value and get hacked	✓
✓ Exchanges are based on Order Books	Order Book	DEXs don't rely on Order Books	✗



We compare a mature market infrastructure with a nascent one

DeFi: What types of protocols

86 DeFi protocols categories on DeFi Llama




Main ones

- ➔ **Lending**: on-chain borrowing and lending
- ➔ **Staking**: locking assets to secure a network
- ➔ **Bridge**: transferring assets across blockchains
- ➔ **RWA**: tokenised real-world assets
- ➔ **DEXs**: decentralised on-chain trading venues




Category	Protocols	Combined TVL
1 Lending	599	\$49,135b
2 Liquid Staking	280	\$38,74b
3 Bridge	156	\$36,924b
> 4 RWA	139	\$25,201b
5 Staking Pool	46	\$16,68b
6 Restaking	15	\$12,867b
> 7 DEXs	1941	\$12,617b
8 Basis Trading	36	\$9,668b
9 CDP	217	\$9,381b
10 Canonical Bridge	85	\$9,166b
11 Onchain Capital Allocator	66	\$8,966b
12 Liquid Restaking	30	\$6,856b
13 Risk Curators	45	\$6,701b
14 Yield	634	\$6,5b
15 Derivatives	403	\$2,506b

DeFi: Top 3 protocols by categories

➔ **Lending:** on-chain borrowing and lending




Name	TVL
> 1  Aave 22 chains	\$40,87b
> 2  Morpho 34 chains	\$11,967b
3  Maple 3 chains	\$4,614b

➔ **Liquid Staking:** locking assets to secure a network

Name	TVL
1  Lido 5 chains	\$18,952b
2  Binance staked ETH 2 chains	\$7,55b
3  Rocket Pool 1 chain	\$1,202b

DeFi: Top 3 protocols by categories

→ **Bridge**: transferring assets across blockchains




Name	TVL ↓
1  WBTC 2 chains	\$7,771b
2  Coinbase Bridge 9 chains	\$4,883b
3  Hyperliquid Bridge 2 chains	\$4,788b

→ **RWA**: tokenised real-world assets

Name	Asset Group	Active Marketcap ↓
1 Tether Gold XAUT	Precious Metals	\$3,287b
2 BlackRock BUIDL BUIDL	Bonds	\$2,802b
3 US Yield Coin USYC	Bonds	\$2,685b

DeFi: Top 3 protocols by categories

→ **DEXs**: decentralised on-chain trading venues

Name	TVL ↓
> 1  Uniswap 45 chains	\$3,03b
> 2  PancakeSwap 11 chains	\$2,05b
3  Orca DEX 2 chains	\$240,03m

What data to process DeFi

L1 shows the top of book and last trade

L2 shows full order book depth.

L1 Aggregations

Trade count

OHLCV

VWAP

L1 Tick-Level

All trades

Best bids/asks (top of book)

All borrows and repayments

All liquidations, deposits, and withdrawals

L2 Aggregations

Market depth

Bid/ask spread

Price slippage

Tokens in a liquidity pool

Interest rates, borrowed and deposited amounts

L2 Tick-Level

All bids and asks on an order book

All mints and burns from a liquidity pool

Why is quality data needed



Front Office

Build powerful trading strategies with highly-granular data.

Middle Office

Ensure best execution in compliance, with real-time liquidity and price optimization solutions.

Risk Management

Adapt portfolio risk with trustworthy quantitative metrics.

Research

Produce unique crypto market analysis covering any crypto asset, stablecoin, or exchange.

Tax & Accounting

Ensure compliance with IFRS, GAAP, and reporting requirements.

Display

Seamlessly integrate data via our APIs into your platform.

III. Perspectives

/Regulation



MiCA

For centralized exchanges

5k+ Crypto Assets



MiCA categorizes assets into 3 categories.

Utility Tokens (Other)



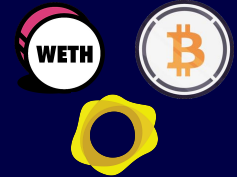
Digital assets intended to provide exclusive access to a good or service provided by their issuers.

E-Money Tokens (EME)



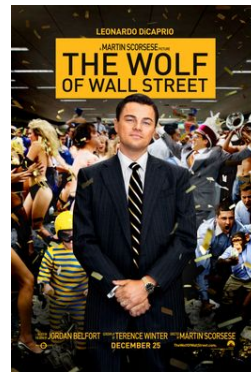
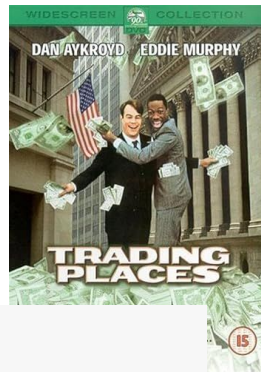
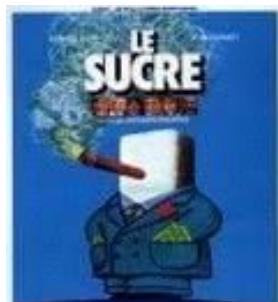
Digital assets that maintain a stable value by referencing the value of an official currency.

Asset-Referenced Tokens (ART)



Digital assets that maintain a stable value by referencing other assets.

Should DeFi be regulated?



GREED

2030
A NETFLIX
serie on
DeFI?....

Is Defi immune?....



MiCA II: Regulate, what for?

eba European
Banking
Authority



ESMA75-453128700-1391

EBA/Rep/2025/01

16/01/2025

Joint Report

Recent developments in crypto-assets (Article 142 of MiCAR)

Consultation expected Q2 2026

Consumer protection

services under assessment, the report finds that users may receive insufficient information on conditions in relevant areas such as fees, interest rates paid or yields, changes to collateral requirements, the actions the service provider may take with regard to any assets used as collateral or placed in a staking account, or rights and liabilities in case of dispute or insolvency. The chapter then sets out the existing (limited) evidence of the engagement of EU

but also...

Market risks

Operational and ICT risks

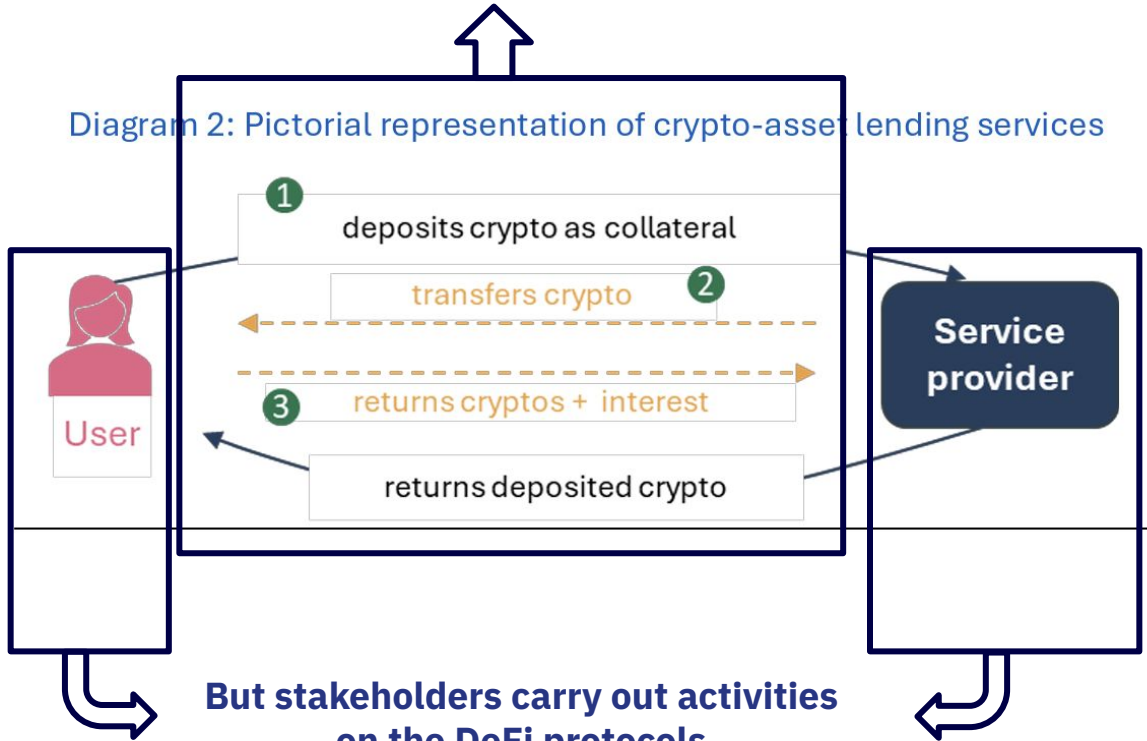
Money Laundering / Terrorism Financing risks



Entity-based vs activity-based regulation

There is no exchange entity to regulate

Diagram 2: Pictorial representation of crypto-asset lending services



But stakeholders carry out activities on the DeFi protocols

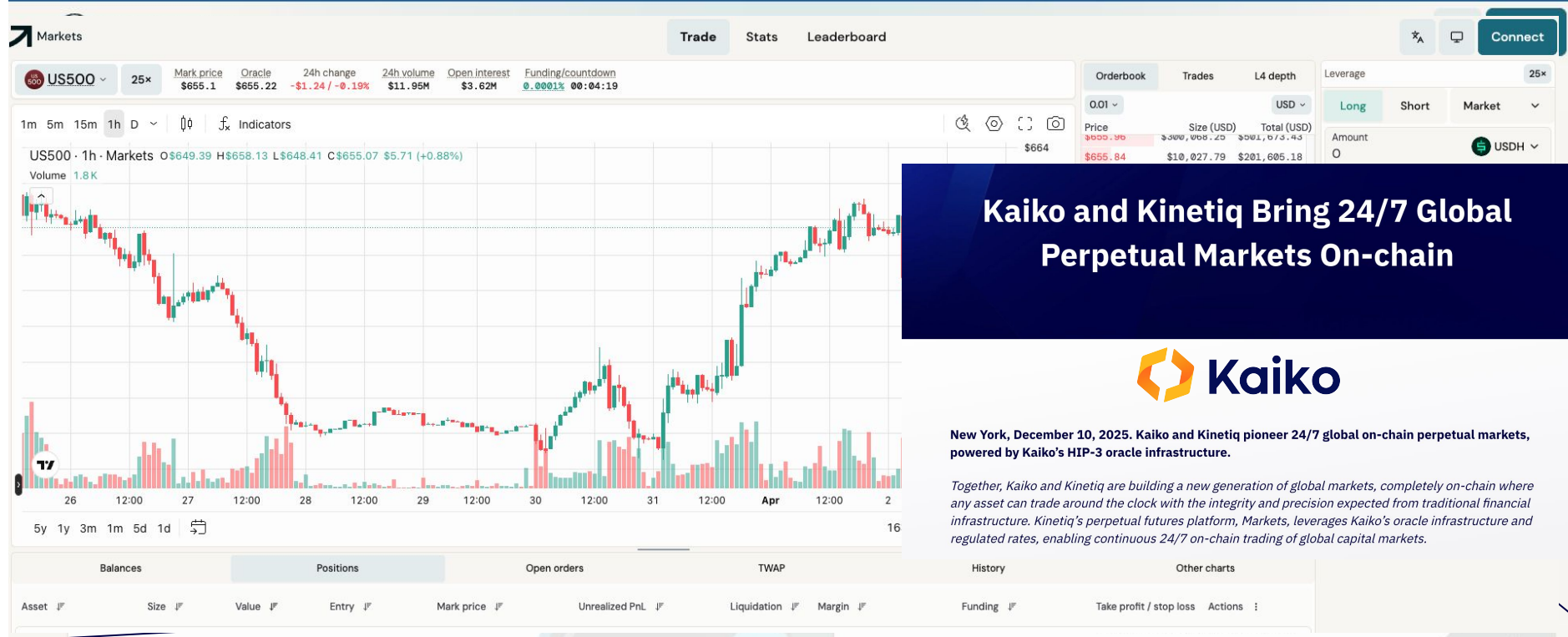


III. Perspectives

/Expansion



DeFi for Equities, Commodities, FX, etc



Kaiko and Kinetiq Bring 24/7 Global Perpetual Markets On-chain



New York, December 10, 2025. Kaiko and Kinetiq pioneer 24/7 global on-chain perpetual markets, powered by Kaiko's HIP-3 oracle infrastructure.

Together, Kaiko and Kinetiq are building a new generation of global markets, completely on-chain where any asset can trade around the clock with the integrity and precision expected from traditional financial infrastructure. Kinetiq's perpetual futures platform, Markets, leverages Kaiko's oracle infrastructure and regulated rates, enabling continuous 24/7 on-chain trading of global capital markets.

perpetual futures on equities, indices, currencies, and commodities, 24/7/365.

Banks and DeFi > still very limited

In
production

FORGE
SOCIETE GENERALE GROUP

MAKER is now Sky

Société Générale-FORGE used tokenized bonds as collateral to borrow DAI from MakerDAO

In
production


AAVE

Aave Horizon was launched as a lending market for institutions with Circle, Superstate, and Centrifuge to be used as collateral to borrow stablecoins in a compliant DeFi framework.

TEST

J.P.Morgan


AAVE

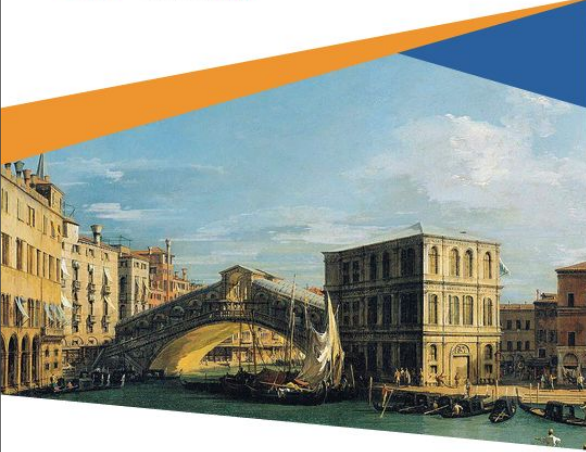
 UNISWAP

Under Singapore's Project Guardian, DBS, J.P. Morgan, and SBI tested institutional DeFi on a public blockchain using modified versions of Aave for lending and Uniswap for trading FX and government bonds, with permissioning and identity controls added for compliance.

AMMs for CBDCs?



BIS Innovation Hub



Project Rialto – Technical report
Improving instant cross-border payments using central bank money settlement

December 2025

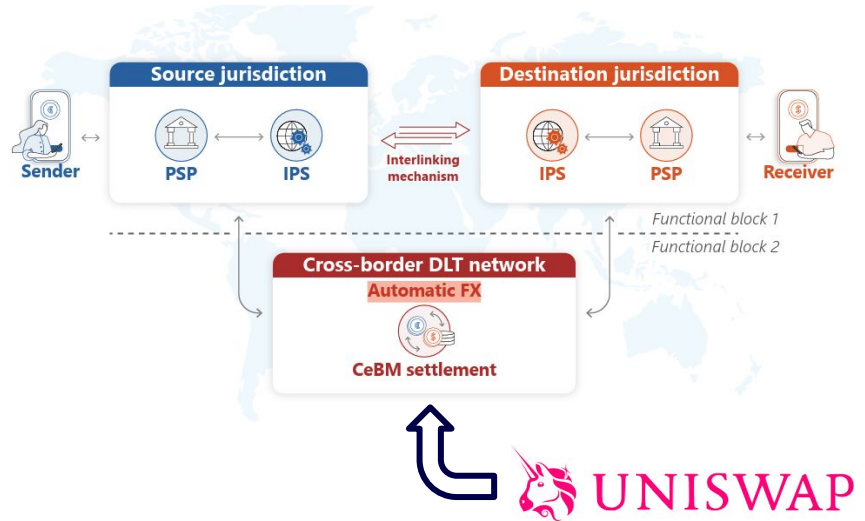


BANCA D'ITALIA
EUROSYSTEMA

BANK NEGARA MALAYSIA
BANK NEGARA MALAYSIA

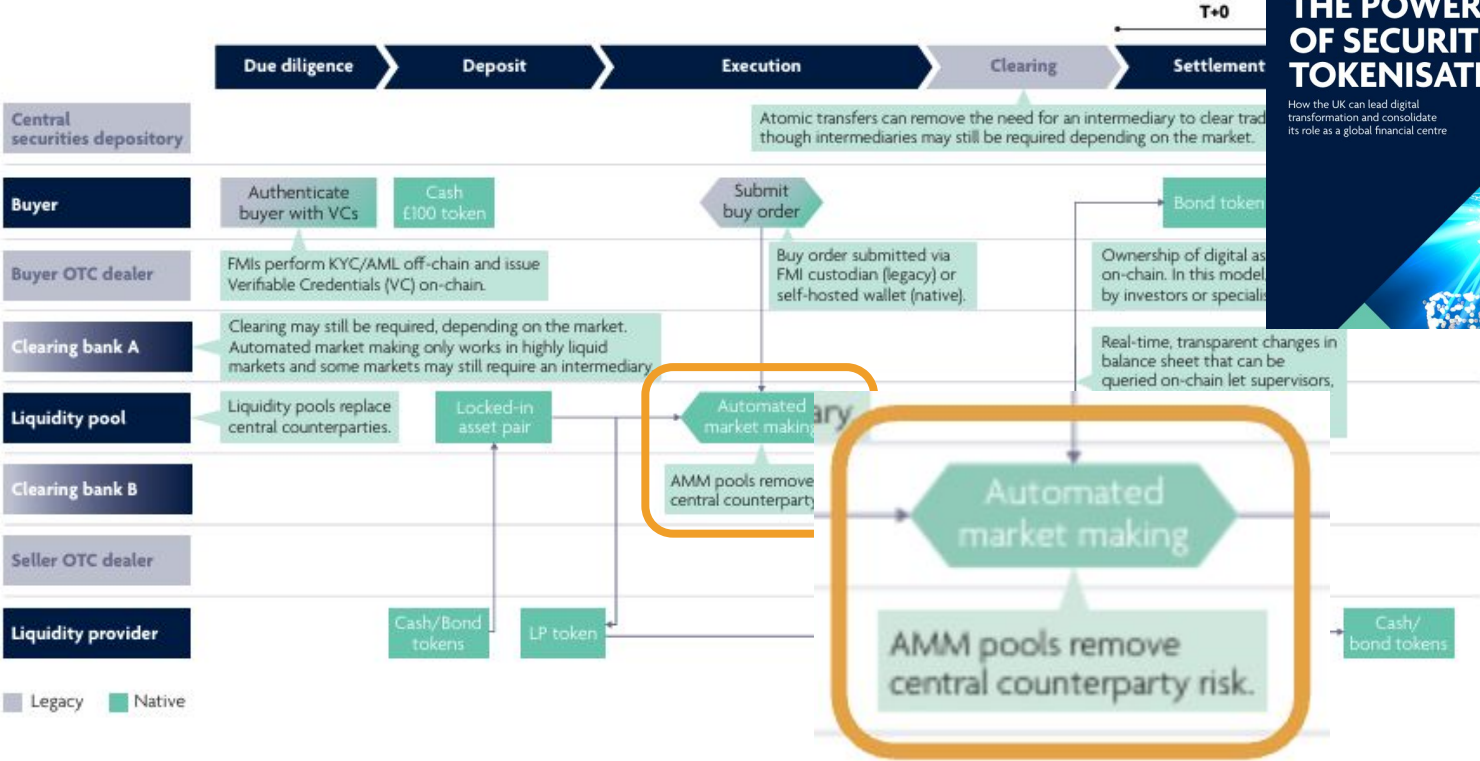
BANQUE DE FRANCE
EUROSYSTEME

BIS
International
Monetary
Fund



AMMs for bonds?

Figure 5: Illustrative process flow for a potential native (tokenised) bond purchase



UNLOCKING THE POWER OF SECURITIES TOKENISATION

How the UK can lead digital transformation and consolidate its role as a global financial centre



III. Perspectives

/Research



DeFi need Maths!



Wilks confidence regions for empirical weighted quantiles

Michaël Allouche, Emmanuel Gobet

► To cite this version:

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<https://hal.science/hal-05391451v2>

Preprint submitted on 6 Jan 2026

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On the simulation of extreme events with neural networks

Michaël Allouche, Stéphane Girard, Emmanuel Gobet

► To cite this version:

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Merci de votre attention

Questions

