



# LIMITS OF DEFI FOR FINANCIAL INCLUSION

## Lessons from ASEAN

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16 November 2023



# DeFi at the OECD Committee on Financial Markets

- [Why Decentralised Finance \(DeFi\) Matters and the Policy Implications \(Jan 2022\)](#)  
[OECD Report](#)
- [Institutionalisation of crypto and DeFi/TradFi interconnectedness \(May 2022\)](#)  
[OECD Report](#)
- [Lessons from the crypto winter: DeFi versus CeFi \(2022\)](#)  
[OECD Report](#)
- [Environmental impact of digital assets \(2022\)](#)  
[OECD Report](#)
- [The limits of DeFi for financial inclusion \(forthcoming\)](#)



## OECD work on CBDCs and Tokenisation of Assets

- [The Tokenisation of Assets and Potential Implications for Financial markets \(2019\)](#)  
[OECD report](#)
- [Regulatory approaches to the tokenisation of assets \(2020\)](#)  
[OECD report](#)
- [CBDCs and democratic values \(2023\)](#)  
[OECD Report](#)





# Decentralised finance (DeFi and crypto) activity: State of play

## Sharp contraction in markets for crypto-assets

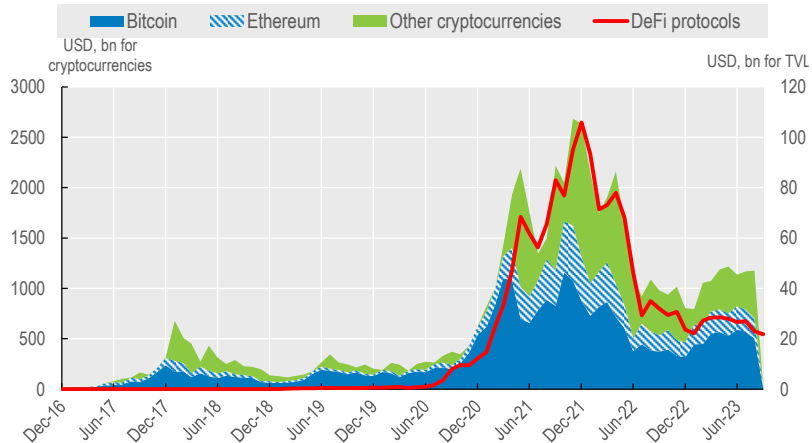
- 56% drop since peak of USD 2.7tn (Nov 2021)
- Crypto-winter failures; regulatory efforts; enforcement action

## Similar drop in volume of crypto-assets locked in DeFi protocol activity

## Importance of Asian region in markets for crypto-assets

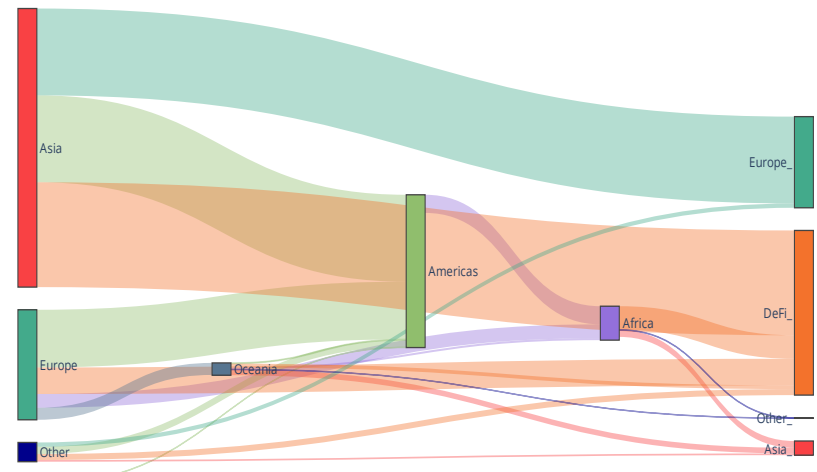
- Tech-savvy, young demographics
- Diversity in policy approaches (from pro-crypto to bans)
- Lured in by FOMO, speculation, but also *financial inclusion narrative of proponents*

Global decentralised finance activity (in USD bn)



Source: Thomson Reuters Refinitiv, DeFi pulse, as of 28 September 2023.

Estimated aggregate crypto-flows (2020-23)



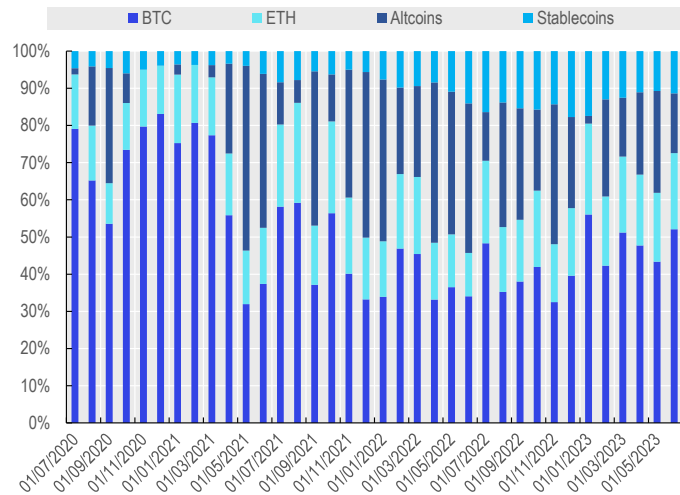
Based on net flows measured in USD. Source: OECD calculations based on Chainalysis data, as of 31 July 2023.



# Characteristics of crypto-asset market activity

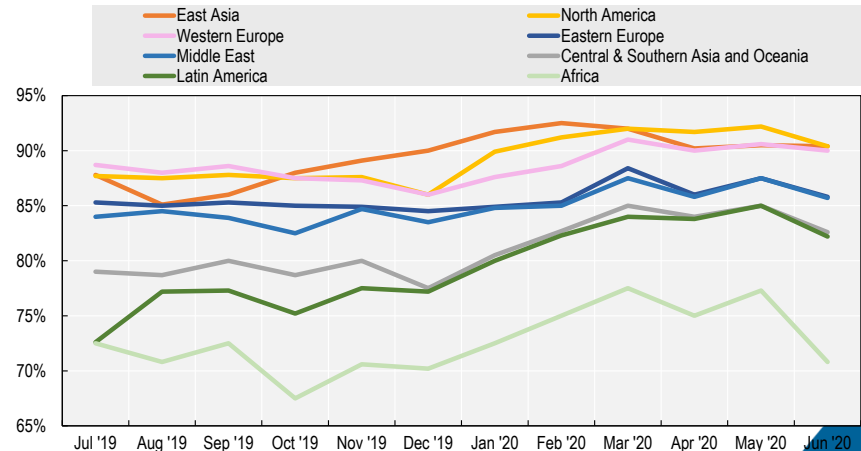
- **Bitcoin, Ether and stablecoins dominate crypto-activity**
  - In line with global trends and institutionalisation of crypto
- **Large wallets and Professionals** account for lion's share of activity
  - c.75% of all volume of crypto-assets are above USD 10,000 (period 2019-20)

**Breakdown of activity by type of crypto-assets  
(in % of total)**



Source: OECD calculations based on Chainalysis data, as of 31 July 2023.

**Professionals dominate crypto-flows in all regions  
(In % of total crypto-asset flows received)**



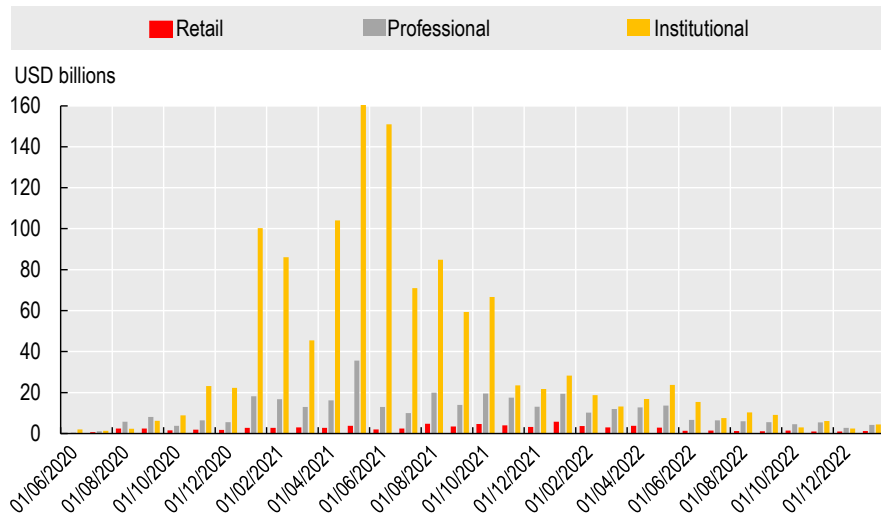
Professional defined as above USD 10,000 transfers. Source: OECD calculations based on Chainalysis data, 2019-20.



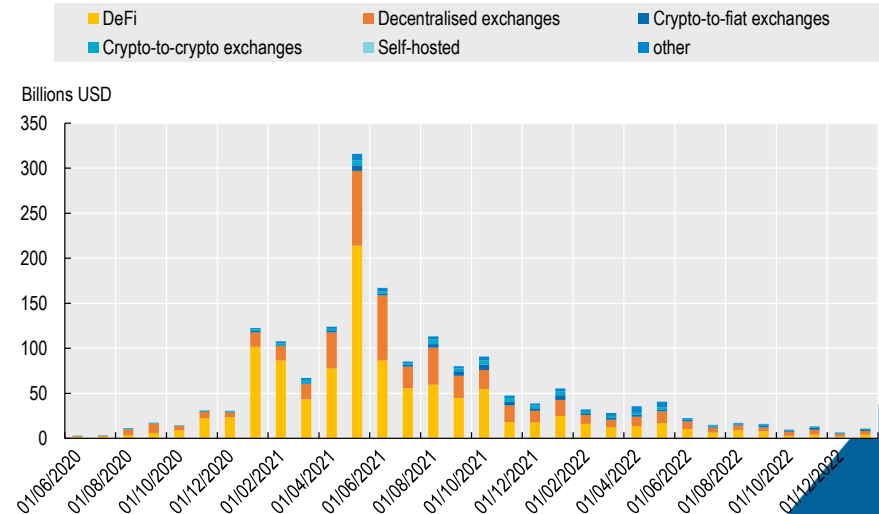
# Professionals dominating DeFi activity globally

- Professionals and institutionals dominate DeFi protocol activity globally in any given month
- More than half of fund inflows to DeFi come from DeFi in any given month (leverage)

Negligible minority of DeFi transactions come from retail investors (below USD 10K)



Inflow of funds to DeFi by type of investor



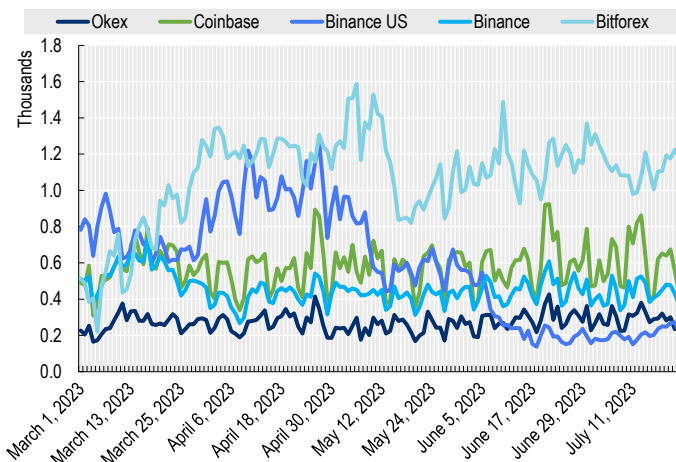
Note: Institutional transactions representing those above USD 1 m, professional between USD 10K and USD 1 m, retail representing those below USD 10K. Crypto-to-crypto exchanges are venues for the trading of cryptocurrencies primarily for other cryptocurrencies, either via a central limit order book or peer-to-peer via a centralised escrow. Crypto-to-fiat exchanges are venues for the trading of cryptocurrencies primarily for fiat, either via a central limit order book or peer-to-peer via a centralised escrow. Source: OECD based on Chainalysis data as of 31 July 2023.



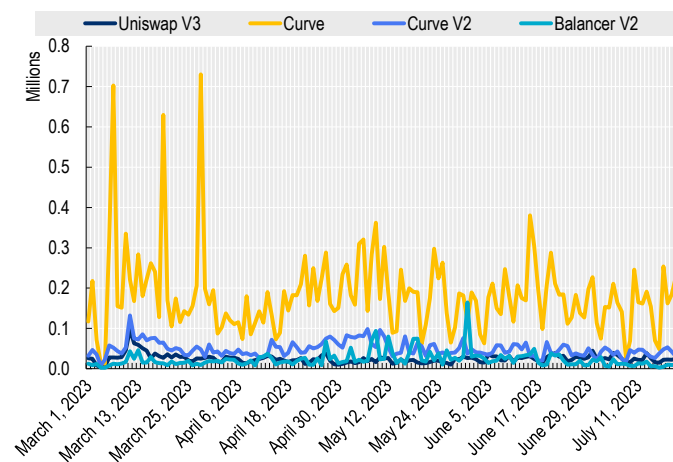
# Similar trends observed at crypto-exchange trading

- **Particularly evident in decentralised exchanges**
  - Average trade size on DEXs is 10x – 100x higher than the average trade size on CEXs
  - Particularly in the case of stablecoin trading
- Differences could also be attributed to structural differences

Average trade size at centralised crypto-exchanges (CEXs) (in USD thousands)



Average trade size at decentralised crypto-exchanges (DEXs) (in USD millions)



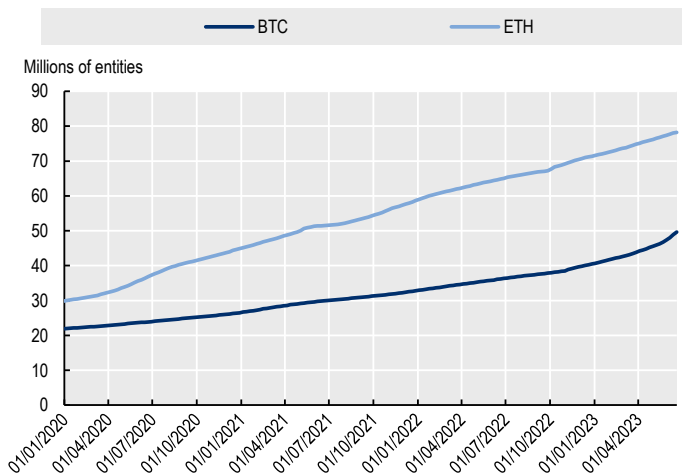
Source: OECD based on Kaiko data as of 31 July 2023.



# Yet, global retail crypto-activity is growing

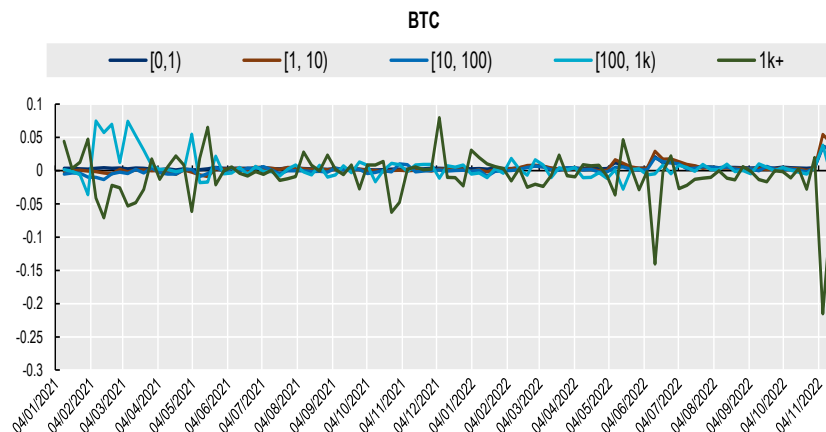
- Despite prominence of professionals, **retail participation is growing**
  - Exposed to important losses without recourse
- Retail investors disproportionately particularly in the aftermath of the crypto-failures
  - Net buyers against larger wallets offloading crypto-assets post collapses

Addresses holding a maximum of 1 Bitcoin / 10 Ether



Source: OECD calculations based on Chainalysis data, as of 31 July 2023.

Small crypto-holders net buyers in the aftermath of the crypto-winter



Source: OECD calculations based on Chainalysis data, as of 01 December 2022.

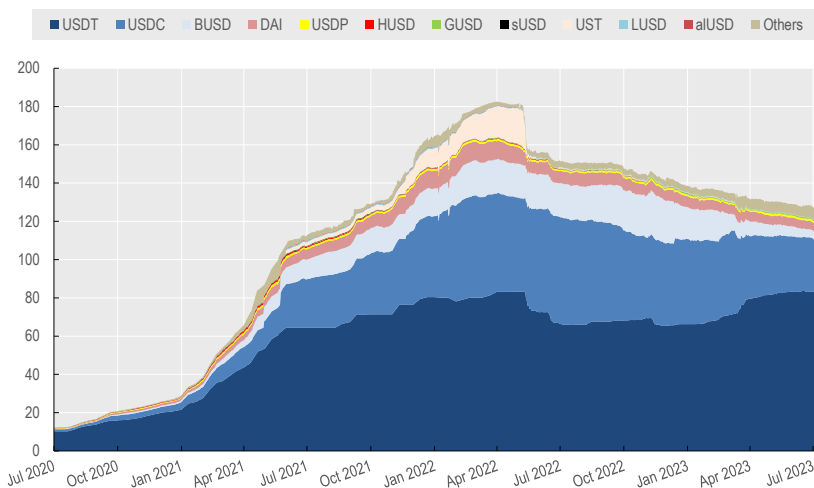


# Stablecoins a prevailing crypto-asset class

## Significant volumes of stablecoins

- Account for 50% of total crypto-asset flows in some regions
- Part of the activity could be associated with remittances
  - *However..*

Stablecoin market issuance (in USD billion)



Source: OECD calculations based on Chainalysis data, as of 31 July 2023.

## Well-established stablecoin risks:

- Concentration, transparency around reserves/credibility, lack of clarity regarding redemption rights of holders
- Operational risks and disruption related to cyber
- Run risk ('breaking the buck', insufficient liquidity of reserve assets)
  - ⇒ Disruption in DeFi markets
  - ⇒ Potential spillovers to traditional markets (e.g. short-term credit)
- Underestimation of collateral ratio when pledged as collateral





# Potential use cases of so-called stablecoins

## MEANS OF PAYMENT FOR RETAIL TRANSACTIONS



- Initial design and stated purpose to be used by retail users for payments
- Claim to address cross-border payment inefficiencies (e.g. international remittances)
- **Today, estimated volume of stablecoins used for retail payments is insignificant**

## VEHICLE CURRENCY / MEDIUM OF EXCHANGE FOR CRYPTO-ASSET TRADING



- **Facilitate trading** between crypto-asset pairs
- **Move** between crypto-assets or crypto-exchanges without having to convert to fiat

## STORE OF VALUE



- **Hedge** / protect from highly volatile crypto-assets

## KEY INGREDIENT OF DEFI



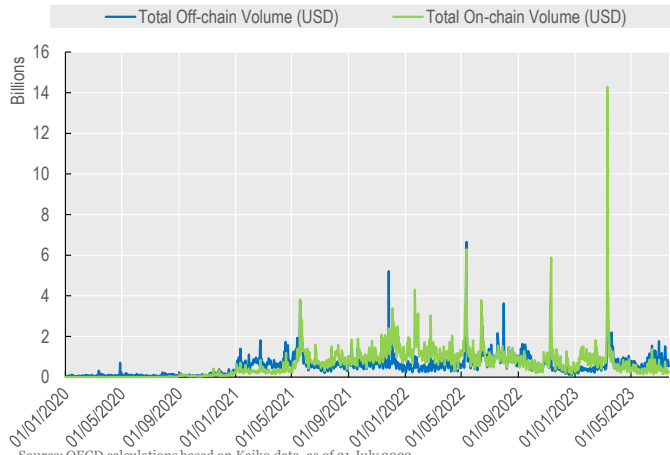
- Used as **collateral** in DeFi lending protocols; as trading facilitators in Decentralised Exchanges (DEXs) or for liquidity mining



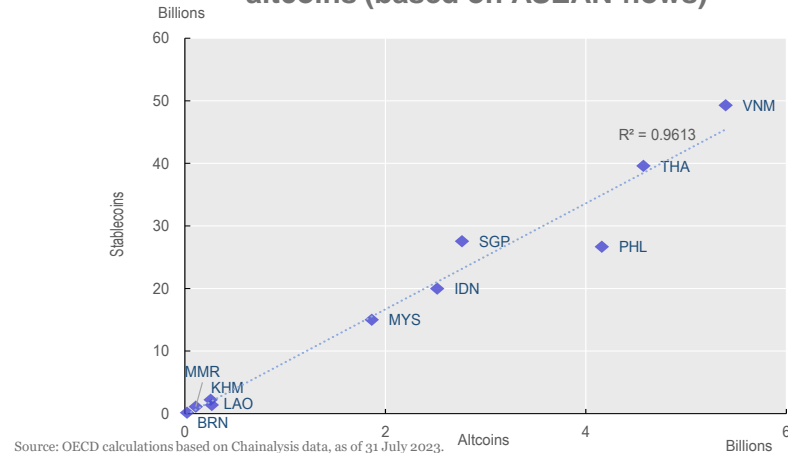
# However, non-payment use cases seem to prevail currently

- **Medium of exchange for alternative crypto-assets ('altcoins')**
  - Exchanges do not allow trading between all non-mainstream crypto-asset pairs
- **Heavy use of stablecoins in DeFi**
  - e.g. USD 10-15bn of USDC is pledged on three DeFi protocols
  - Also, the average retail user does not have the expertise to trade on DEXs (complex, non-custodial)
- **In addition to structural deficiencies**
  - Volatility, operational (e.g. transaction costs on public DLTs), oracles and bridges

### USDC trading on CEXs and DEXs (in USD)



### High correlation between stablecoins and altcoins (based on ASEAN flows)





# Policy considerations: Importance of implementation of global standards for crypto-assets and stablecoins

- Decentralised finance has not delivered on the promise to democratise finance
  - Parts of this market, such as DeFi, can be considered **outright unsuitable for retail investors**
  - Still, may be able to provide value to digital finance (e.g. smart contracts, automation, atomicity)
  - At the **institutional** investor level and **in compliant manner**
- Importance of protecting markets and their participants
  - *FSB high-level recommendations for crypto-assets and stablecoins*
- **Coordination, consistency, capacity**

## Crypto-asset activities and markets



Source: (FSB, 2023).

## “Global Stablecoin” arrangements





## Still, not all bleak..

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- There is merit in examining potential **benefits** of decentralised finance
- What can we learn from DeFi to **capture potential efficiencies** and allow for **productivity gains in financial market infrastructure**?
- Concepts of (compliant) DeFi for TradFi
  - Atomic settlement and/or post-trade
  - Smart contracts and automation
  - Programmability, encryption
  - AMMs to crowdsource liquidity (Pj Marianna)
- **Tokenisation** as the “killer app” , but limited development thus far
  - Limited incentives in highly efficient markets; legal framework limitations (e.g. ownership); liquidity; economics
  - And, until now absence of tokenised form of fiat for payment leg
- New frontiers: emergence of CBDCs and other tokenised forms of money (regulated stablecoins, tokenised deposits)



Thank you!

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