

A Framework for Monitoring, Regulation and Oversight of Crypto-Assets: EU approaches

ICOs, Blockchain and DLT

15 July 2022



Topics covered today



Recent crypto market developments



Taxonomy of so-called stablecoins and recent fragilities



Initial Coin Offerings (ICOs)



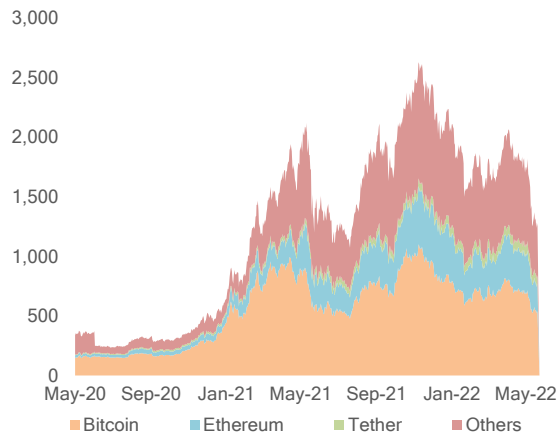
A new EU regulatory framework for unregulated crypto assets (MiCA)



EU vs international perspective

Recent crypto market developments

A constantly and fast-evolving market




Note: Market capitalisation of Bitcoin, Ethereum, Tether and other crypto-assets, in EUR bn.


Sources: CoinMarketCap, ESMA.

Market cap	No. of crypto of assets	No. of CASPs	DeFi total value locked
EUR c1 tn	19,000+	1,000+ authorised in the EU (under AMLD5)	EUR c. 100 bn


- Highly **volatile and speculative**
- Aggressive promotion to the public, incl. through social media and influencers
- Growing complexity of products and services offered
- Numerous **scams and exploits**
- But technology has **potential** to bring certain benefits to financial sector
- **ESAs Warning** in March to re-alert consumers of the high risks of many CAs



European Securities and Markets Authority



European Banking Authority



European Insurance and Occupational Pensions Authority

ESA 2022 15

EU financial regulators warn consumers on the risks of crypto-assets

The European Supervisory Authorities (EBA, ESMA and EIOPA – the ESAs) warn consumers that many crypto-assets are highly risky and speculative. These are not suited for most retail consumers as an investment or as a means of payment or exchange.

Consumers face the very real possibility of losing all their invested money if they buy these assets. Consumers should be aware of the risks of crypto-assets, especially those that are promoted on social media and through influencers, and should be aware of the risks of crypto-assets, especially those that are promoted on social media and through influencers, and should be aware of the risks of crypto-assets, especially those that are promoted on social media and through influencers.

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ESMA - EU Securities Markets Regulat... @ESMACom... - Mar 17

• #CryptoAssets are highly risky and speculative. ESAs set out steps consumers can take to make informed decisions → europa.eu/jjxC9Jq. #BeCryptoAware

ESAs welcome @EUCouncil clarification on measures against and entities + individuals regarding crypto-assets

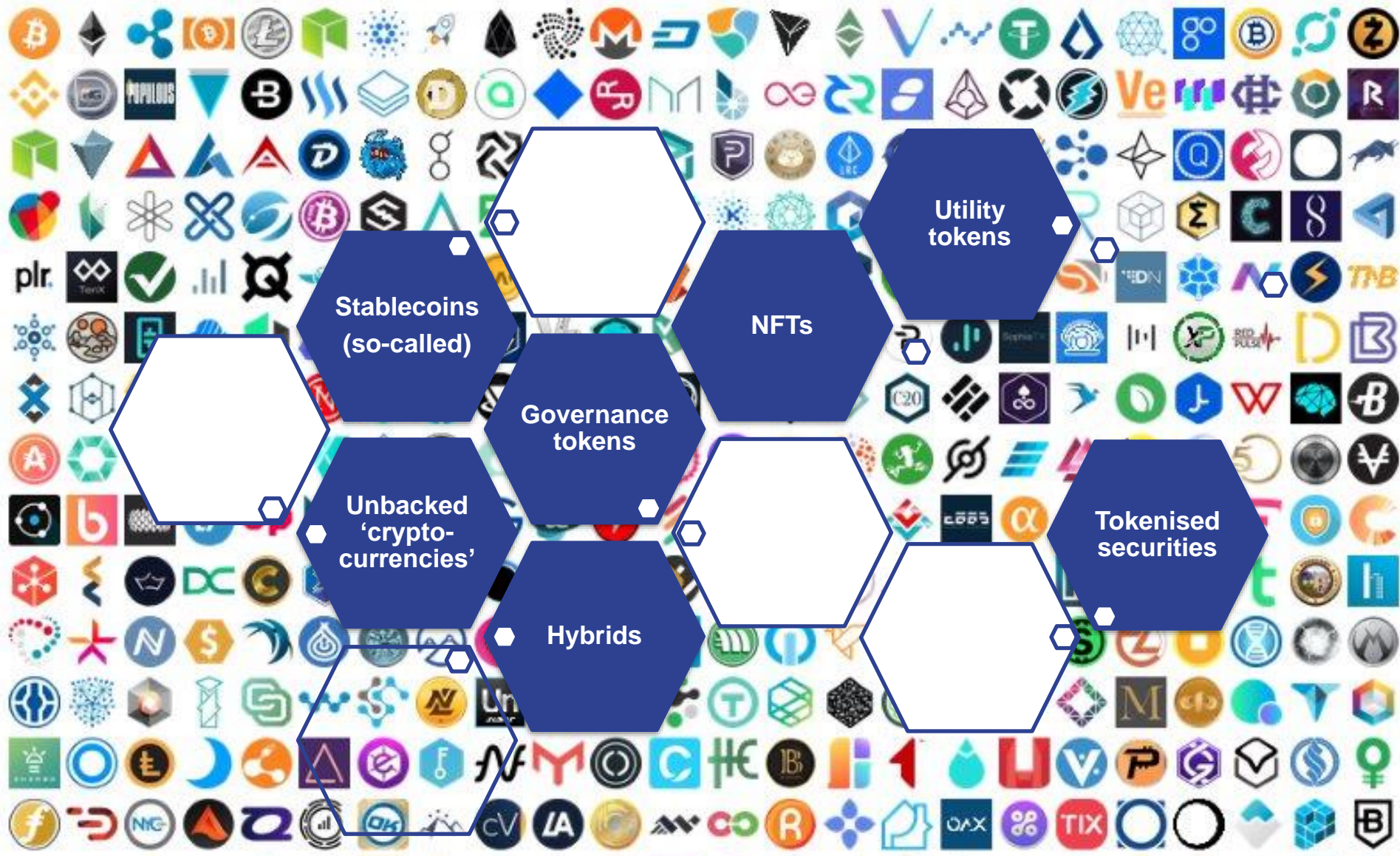
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- you may lose all the money you invest
- prices can fall and you may fall victim to fraud
- you are unlikely to get your money back

If you are thinking about buying crypto-assets, ask yourself the following questions:

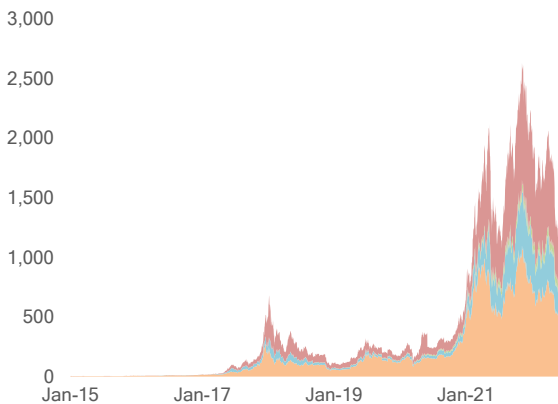
- can you afford to lose the money you invest?
- are you ready to lose the money you invest?
- do you understand the risks of crypto-assets?
- are the firms/participants in the crypto-assets market authorised by the ESAs?
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- are you able to protect effectively the devices you use for buying, storing or transferring crypto-assets, including your private keys?

A wide variety of CAs... a few examples



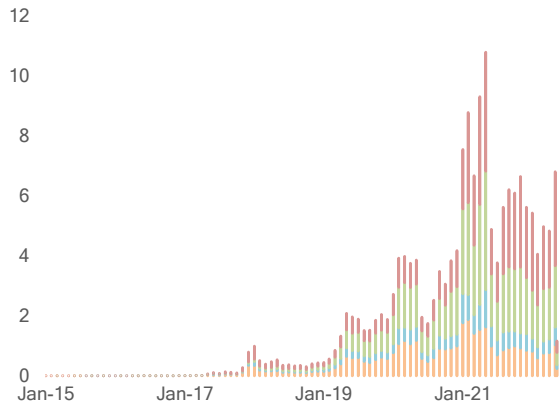
Market developments: market cap, volume, volatility (since 2015)

Market capitalisation **down -60%** from a high in Nov-21



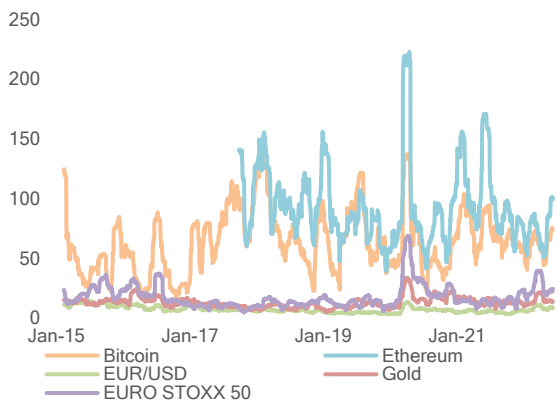
Legend: Bitcoin, Ethereum, Tether, Others
 Note: Market capitalisation of Bitcoin, Ethereum, Tether and other crypto-assets, in EUR bn.
 Sources: CoinMarketCap, ESMA.

Trading volume peaked in Apr-21 and has since levelled off



Legend: Bitcoin, Ethereum, Tether, Others
 Note: Trading volumes of Bitcoin, Ethereum, Tether and other crypto-assets, in EUR tn.
 Sources: CoinMarketCap, ESMA.

Elevated volatility compared to traditional assets



Legend: Bitcoin, EUR/USD, EURO STOXX 50, Ethereum, Gold
 Note: Annualised 30-day historical volatility of EURO STOXX 50, EUR/USD spot rate returns and USD-denominated returns for Bitcoin, Ethereum and gold, in %.
 Sources: Refinitiv Datastream, ESMA.

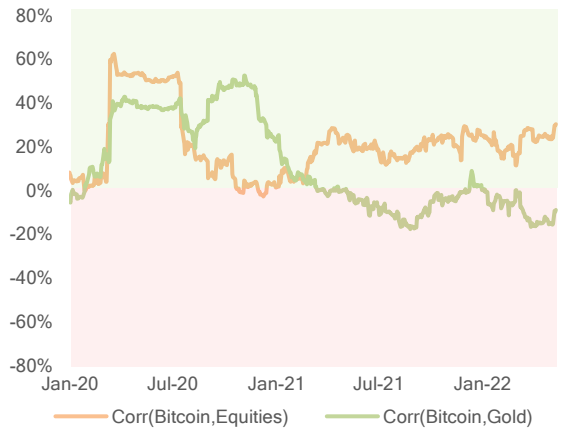
Bitcoin dominates the market, other crypto assets are highly correlated



Dominance: Bitcoin market cap represents **46.5%** of the entire **EUR c.1 tn** market for crypto assets. Most other crypto assets are highly correlated

	BTC	ETH	BNB	ADA	XRP	LTC	XMR	DOGE	SOL	DOT
BTC	1									
ETH	0.77	1								
BNB	0.64	0.64	1							
ADA	0.63	0.65	0.57	1						
XRP	0.58	0.57	0.61	0.57	1					
LTC	0.8	0.83	0.68	0.68	0.66	1				
XMR	0.61	0.58	0.6	0.5	0.53	0.63	1			
DOGE	0.45	0.47	0.3	0.38	0.34	0.48	0.29	1		
SOL	0.45	0.57	0.49	0.5	0.5	0.5	0.4	0.35	1	
DOT	0.7	0.73	0.62	0.69	0.63	0.75	0.62	0.4	0.54	1
LUNA	0.13	0.16	0.11	0.15	0.14	0.15	0.16	0.1	0.18	0.1
AVAX	0.53	0.57	0.56	0.67	0.52	0.57	0.46	0.37	0.51	0.59
GOLD	-0.07	0.02	0.04	0.07	0.02	0	-0.01	0.05	-0.02	0.05
SP500	0.34	0.32	0.24	0.33	0.26	0.28	0.23	0.15	0.28	0.34
DOW	0.29	0.25	0.18	0.24	0.18	0.24	0.2	0.12	0.17	0.25

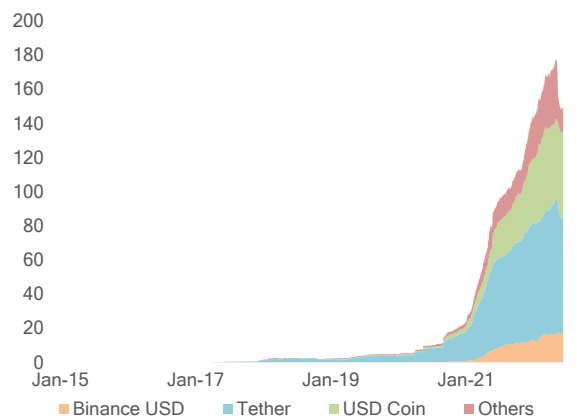
Bitcoin also shares a **moderate positive correlation (40%)** with **European equities** in the Stoxx 600 Index



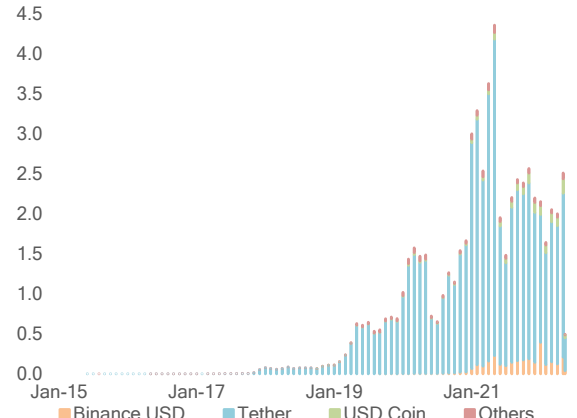
Note: 90d price return correlation (measured daily) between Bitcoin and the Stoxx Europe 600 index. Sources: Refinitive, ESMA.

Powering the growth: so-called stablecoins and DeFi

So-called Stablecoins – supply in circulation & volume



Note: Market capitalisation of Binance USD, Tether, USD Coin and other stablecoins, in EUR bn.
Sources: CoinMarketCap, ESMA.

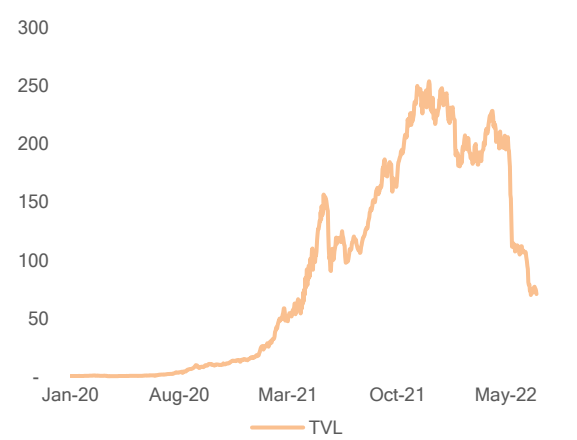


Note: Trading volumes of Binance USD, Tether, USD Coin and other stablecoins, in EUR tn.
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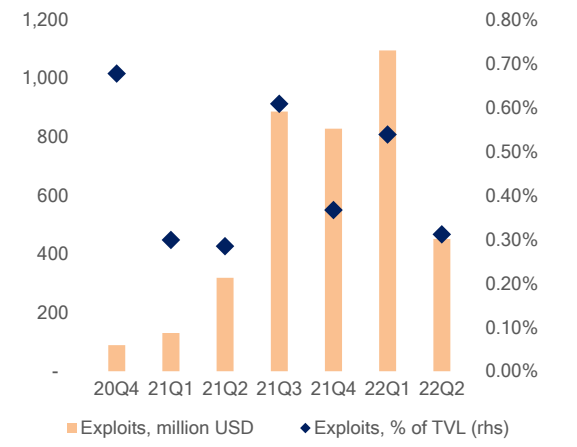
Trading Volume (24hr)	
EUR 38 bn	
EUR 63 bn	

*Tether (USDT) daily trading volume is **nearly 2x** Bitcoin (BTC) volume*

Decentralised Finance (DeFi) – total value locked & exploits



Note: Total value locked (USD bn) in DeFi protocols since 2020 (as of June 2022)
Sources: DeFiLlama, ESMA



Note: Monthly losses from DeFi protocol exploits (in million USD) and relative to the size of the overall DeFi-ecosystem (% of TVL) Figures are notional at the time of the exploit.
Sources: Rekt, DeFiLlama, ESMA




DeFi TVL – Ethereum dominance	
60% of TVL (EUR 46 bn)	




Losses to DeFi exploits in 1H 2022	
EUR 1.45 bn	

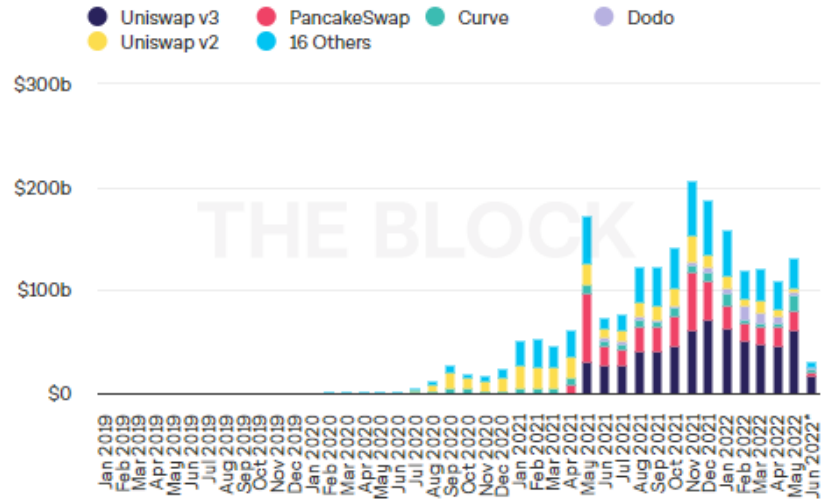
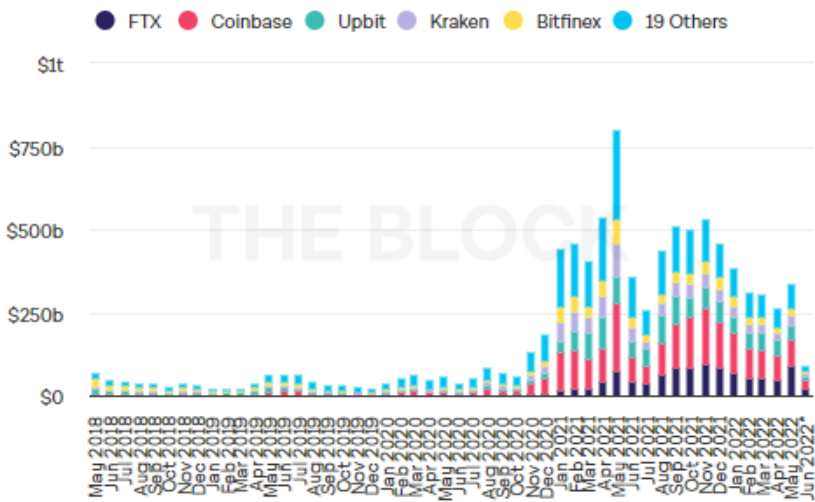
Trading crypto-assets: two venue types

1 Centralised exchanges (off-chain):

2 Decentralised* exchanges (on-chain):

# ▲	Name	Volume(24h)
1	 Binance	\$18,308,533,838 ▲ 25.29%
2	 FTX	\$2,221,645,433 ▲ 5.02%
3	 Coinbase Exchange	\$2,111,065,154 ▲ 6.94%

# ▲	Name	Volume(24h)
1	 Uniswap (V3)	\$1,496,344,161 ▲ 25.77%
2	 dYdX	\$1,105,499,687 ▼ 26.38%
3	 PancakeSwap (V2)	\$560,190,548 ▼ 10.12%



*Decentralised means there are no intermediaries (e.g., brokers). Settlement is near instant with users taking direct custody of traded assets into their private wallets (i.e., no withdrawal necessary)

Sources: CoinMarketCap, The Block

Taxonomy of so-called stablecoins and recent fragilities

Types of so-called stablecoins

Fiat-collateralised (off-chain)



- Issuers resemble 'narrow banks' (i.e., hold 100% reserves in short-term assets against their liabilities (e.g., US treasuries, commercial paper)
- Deposits and redemptions limited to large financial institution
- Collateral is held by the issuer 'off-chain'

Tether Assets		Liabilities
Commercial paper	30B	USD Tethers 59B
Deposit	11B	
Secured loans	8B	
Bonds	6B	
Other	4B	

Crypto-collateralised (on-chain)



- Users mint / redeem the stablecoin by depositing crypto assets as collateral (i.e., Ether or other stablecoins)
- Often overcollateralised (see: DAI)
- Collateral is held by the issuer 'on-chain' (in smart contracts)

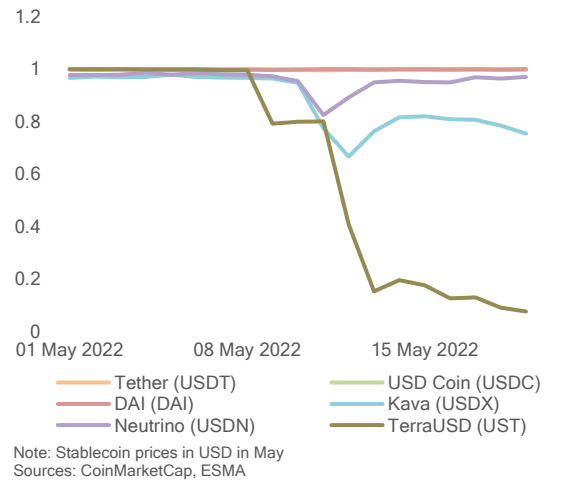
Algorithmic (on-chain)



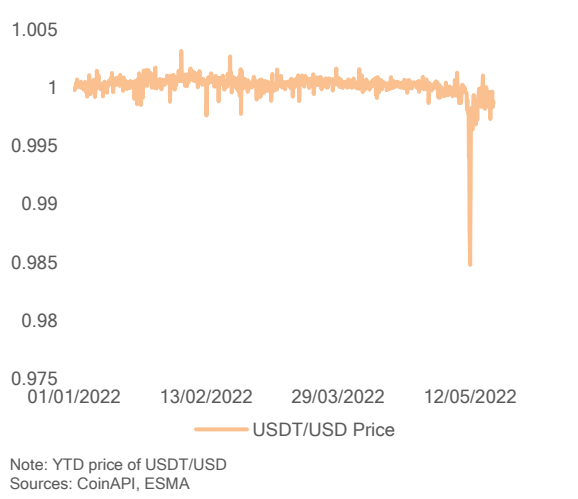
- Variation in the incentive structures to maintain peg stability:
 - i. Maintain peg through open market making and arbitrage (no mint / redeem)
 - ii. Under-collateralised minting (to enhance capital efficiency)

TerraUSD collapse, stablecoin contagion and the flight to quality

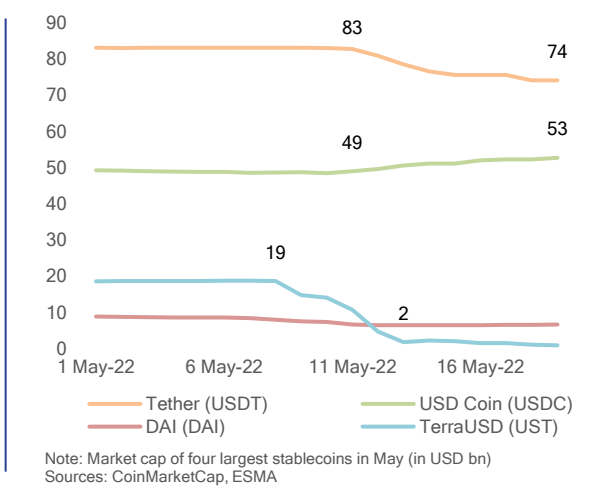
TerraUSD falls to USD 0.01. Other (small) algorithmic stablecoins deviate from their peg



Tether temporarily de-pegs in mid-May falling to a low of USD 0.93 before recovering



USD Coin (USDC) gains market cap at expense of Tether (USDT) and TerraUSD (UST)



Fundraising and public offer of crypto assets – ICOs

ICOs peaked in 2017, then lost popularity

- At its peak from Jan. 2017 to Jul. 2018, cumulative ICO funding hit EUR 16bn
- The largest ever ICO at the time was for the native token of the EOS blockchain, which raised more than EUR 3.5bn
- Since 2018, crypto issuers have used also other methods to fundraise, especially under increased regulatory pressure from securities authorities. Those include:
 - a. Private pre-sales** (often for VCs)
 - b. Airdrops** (free distribution of tokens to loyal users)
 - c. IEOs** (in which the token is offered in partnership with a crypto exchange or a 'decentralised exchange' – also known as a DEX)

Supervisory considerations for ICOs and fundraising

Risks and challenges of ICOs

- **The absence of regulation** → creates opportunities and incentives for unscrupulous actors to launch scam ICOs
- **Information asymmetries between project promoters and investors** → no disclosure requirements, unclear legal obligations to investors (are they covered by bankruptcy law?) is not assured and the risk of money laundering is high.

Key factors driving the success of an ICO

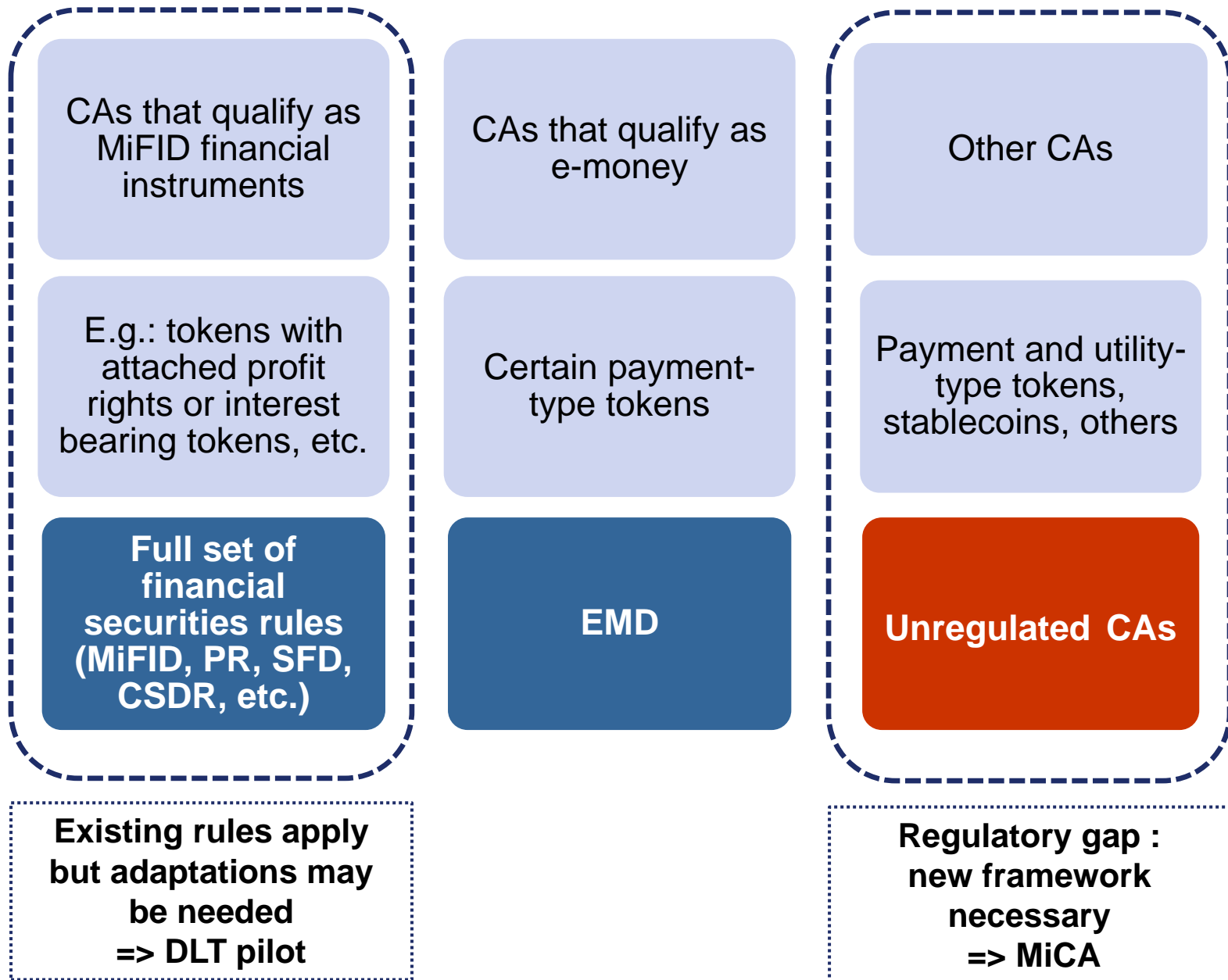
- **Whitepaper** – High technical level and strong voluntary disclosures
- **Financial and human capital** – Strong VC backing and developer team
- **Technological use case** – Does it solve a problem?
- **Use of social media** – A source of legitimacy and customer reach

A role for RegTech? Using machine learning to predict ICO scams

- Aside from ex-ante features of ICOs, nonlinear machine algorithms can help to predict the probability of a scam

A new EU regulatory framework for unregulated crypto assets (MiCA)

Legal qualification defines applicable rules



MiCA: Political agreement reached on 30 June

- In addition to establishing a **comprehensive regulatory framework for crypto assets**, MiCA (as currently drafted) would give ESMA several new mandates, including:
 - Product intervention powers** (inspired by Art. 42 of MiFIR) to prohibit / restrict the provision of services by CASPs, or the distribution and sale of crypto-assets, in case of threats to investor protection, market integrity or financial stability;
 - Coordination**: Information-sharing with NCAs on the supervision of significant CASPs;
 - New policy mandate linked to **environmental issues**: a RTS on the content, methodologies and presentation of information related to principal adverse environmental and climate-related impact;
 - NFTs**: non-fungible tokens will be excluded from the scope except if they fall under existing crypto-asset categories, and the Commission will be tasked to assess the need for a new legislative proposal for NFTs.
 - Issuance of **non-binding opinions** on the legal qualification of crypto-assets; and (together with EBA) issuance of non-binding opinions on the application for authorisation of issuers of ARTs

EU vs International perspective

EU vs International perspective



- MiCA: political agreement on 30 June
- DLT pilot regime agreed, to come into force in about 1 year
- National transposition of AMLD5 + bespoke regimes in France and Malta



- 300 open cases relating to businesses not registered with the FCA
- Measures post-public consultation on rules for crypto promotions by the FCA
- April 2022: UK chancellor announced (at high level) proposals to regulate the crypto sector



- Set of enforcement actions, incl. against unregistered securities offers
- President Working Group report on stablecoins
- Biden administration executive order on crypto-assets



- FSB workstream to support coordination and consistent approach across global regulators. IOSCO and BCBS among others have work underway currently.

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