

**CRYPTO-ASSETS: RECENT REGULATORY DEVELOPMENTS AND FUTURE OUTLOOK**

The foundations of the crypto-asset ecosystem were based on a decentralised consensual decision-making process, enabled by sophisticated cryptographic blockchain technology giving rise to a decentralised ledger.<sup>1</sup> Many national and international authorities have issued warnings about the risks to financial stability posed by this unregulated ecosystem,<sup>2</sup> particularly if crypto-assets were to replace bank deposits as a means of saving or become a dominant means of payment.

These warnings and the European and international regulatory initiatives described in this box (MiCA Regulation and the Basel Committee's prudential standards) have been borne out by a number of factors. These include their high volatility, implied by the recent abrupt corrections in value (with a concurrent loss of liquidity) and subsequent recovery of some instruments in the crypto-asset markets, and their interconnections with banks that have been revealed by the difficulties experienced by some medium-sized entities in the United States since 2023 Q1. However, these initiatives do not fully cover this ecosystem, and the authorities continue to work to protect individual investors and to limit the externalities for the financial system as a whole, given the high levels of risk the crypto-assets sector continues to pose.

**MiCA Regulation**

The Markets in Crypto-Assets (MiCA) Regulation defines crypto-assets as a digital representation of value or rights which may be transferred and stored electronically, using distributed ledger or similar technology. However, not all instruments that meet this definition are covered by the Regulation.<sup>3</sup>

The crypto-assets subject to MiCA are classified as follows:

- a) Electronic money tokens (EMTs) are a type of crypto-asset that purports to maintain a stable value by reference to the value of one fiat currency. They are considered as electronic money. Any person in the EU that offers EMTs to the public or seeks their admission to trading must be the issuer of the EMTs and authorised as a credit institution or as an electronic money institution, publish a crypto-asset white paper and notify the competent authority.
- b) Asset-referenced tokens (ARTs) are a different kind of crypto-asset that aim to preserve a stable value by reference to another value or right, or a combination of both, such as one or several official currencies of a country. Any person that offers ARTs to the public in the EU or seeks their admission to trading must be the issuer of those ARTs and a legal person or undertaking established in the EU that has been duly authorised by the competent authority, or a credit institution that has produced a white paper which has been approved by the competent authority.
- c) All crypto-assets other than those described above, included in the sphere of the Regulation. A person intending to offer these crypto-assets to the public in the EU or that seeks their admission to trading in the EU will not be subject to authorisation, but is required to comply with several obligations. Among other requirements, it must be a legal entity, draft a white paper (which it must notify to the competent authority) and publish it.

As regards the issuers of these crypto-assets, MiCA contains various provisions on their authorisation, supervision, operations, organisation and governance.

MiCA also regulates the provision of crypto-asset services in the EU. These services may be provided either by authorised crypto-asset service providers or by certain entities already subject to prevailing legislation (credit institutions, investment firms, electronic money institutions, etc.). The Regulation does not, however, apply to fully

1 The ledger technology used by most crypto-assets is called blockchain, which is a specific kind of distributed ledger technology (DLT). The term DLT is broad and refers to decentralised databases that are managed by several users and employ various technical resources (e.g. cryptography) to implement the desired features, such as levels of transparency and security. Further details on the technological characteristics of crypto-assets can be found in C. Conesa. (2019). "Bitcoin: a solution for payment systems or a solution in search of a problem?". Occasional Papers, Banco de España, No 1901.

2 See, for example, the [Joint Statement](#) of 3 January 2023 by the Federal Reserve System and other US authorities on crypto-asset risks to banking organisations. For Europe, see, for example, the [ESAs' warning to consumers on the risks of crypto-assets](#) of 17 March 2022. For Spain, see, for example, the [Special Chapter](#) on these instruments in the Spring 2022 FSR.

3 The Regulation does not apply, inter alia, to crypto-assets that qualify as financial instruments, funds or other products that are already regulated in the legislation on financial services. Nor does it apply to crypto-assets that are unique and not fungible with other crypto-assets. Lastly, the Regulation does not apply to the European Central Bank or to national central banks of the EU Member States when acting in their capacity as monetary authority (i.e., it would not apply to a central bank digital currency).

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decentralised services that are provided with no intermediaries.<sup>4</sup>

The following crypto-asset services are regulated in MiCA:

- a) The custody and administration of crypto-assets on behalf of clients.
- b) The operation of a trading platform for crypto-assets.
- c) The exchange of crypto-assets for funds or other crypto-assets.
- d) The execution of orders for crypto-assets on behalf of clients.
- e) The placing of crypto-assets.
- f) The reception and transmission of orders for crypto-assets on behalf of clients.
- g) The provision of advice on crypto-assets.
- h) The management of crypto-asset portfolios.
- i) The provision of crypto-asset transfer services on behalf of clients.

As regards the providers of these services, MiCA regulates certain aspects relating to organisation, information to clients, the safeguarding of funds, conflicts of interest and outsourcing. The Regulation also contains various provisions on the prevention of market abuse involving crypto-assets.

The supervisory powers of the competent authorities include the possibility of performing on-site inspections, requesting information and suspending activities, as well as the possibility of temporarily prohibiting or restricting the marketing of certain crypto-assets.

The Regulation is expected to enter into force on the 20<sup>th</sup> day following that of its publication in the *Official Journal of the European Union*. It will be applicable 18 months after the date of entry into force, except for the regulation on ARTs and EMTs, which will become applicable 12 months after it enters

into force. Within that time, the European Banking Authority will need to complete the implementing regulations at the second level (regulatory technical standards, or RTS, and implementing technical standards, or ITS) and third level (guidelines). Moreover, MiCA provides for an additional 18-month period (that Member States may extend or reduce) for crypto-asset providers that already operated under pre-existing national legislation to adapt to the requirements established in this Regulation. An immediate assessment of this new regulatory framework will therefore not be possible, as time will need to elapse for its effective application and, subsequently, for all its effects on this sector to be realised.

**Basel Committee prudential standards on banks' exposures to crypto-assets**

In December 2022 the Basel Committee on Banking Supervision (BCBS) published the final standard on the prudential treatment of banks' exposures to crypto-assets.<sup>5</sup> The standard is applicable to all crypto-assets, except for central bank digital currencies (CBDCs), whose treatment will be addressed in the future, as they are issued. The Committee has agreed to implement the standard by 1 January 2025.

The prudential treatment is established on the basis of a set of conditions determining the classification of crypto-assets into two groups. Crypto-assets that meet in full the conditions are classified in Group 1; otherwise, they are classified in Group 2, which entails more stringent prudential requirements. Each group is in turn divided into two sub-groups (see Figure 1).

Group 1 includes tokenised traditional assets and stablecoins whose issuer is supervised and regulated and is also subject to prudential capital and liquidity requirements.<sup>6</sup> Tokenised traditional assets must pose the same level of credit and market risk as traditional assets. For stablecoins, the standard stipulates that they must have a stabilisation mechanism that is effective in linking their value to the traditional (reference) assets (e.g. the dollar). The effectiveness of the mechanism will be assessed, among other criteria, through a redemption risk test that seeks to ensure that the reserve assets backing the stablecoin are sufficient to enable the crypto-assets to be fully redeemable at all times for the peg value.

<sup>4</sup> One example being crypto lending through the use of applications that are completely decentralised.

<sup>5</sup> BCBS. (2022). "Prudential treatment of cryptoasset exposures", December.

<sup>6</sup> Tokenised traditional assets are defined in the standard as representations of traditional assets using cryptography, DLT or similar technology to record ownership. Stablecoins are defined as crypto-assets that aim to maintain a stable value relative to a specified asset or a pool or basket of assets.

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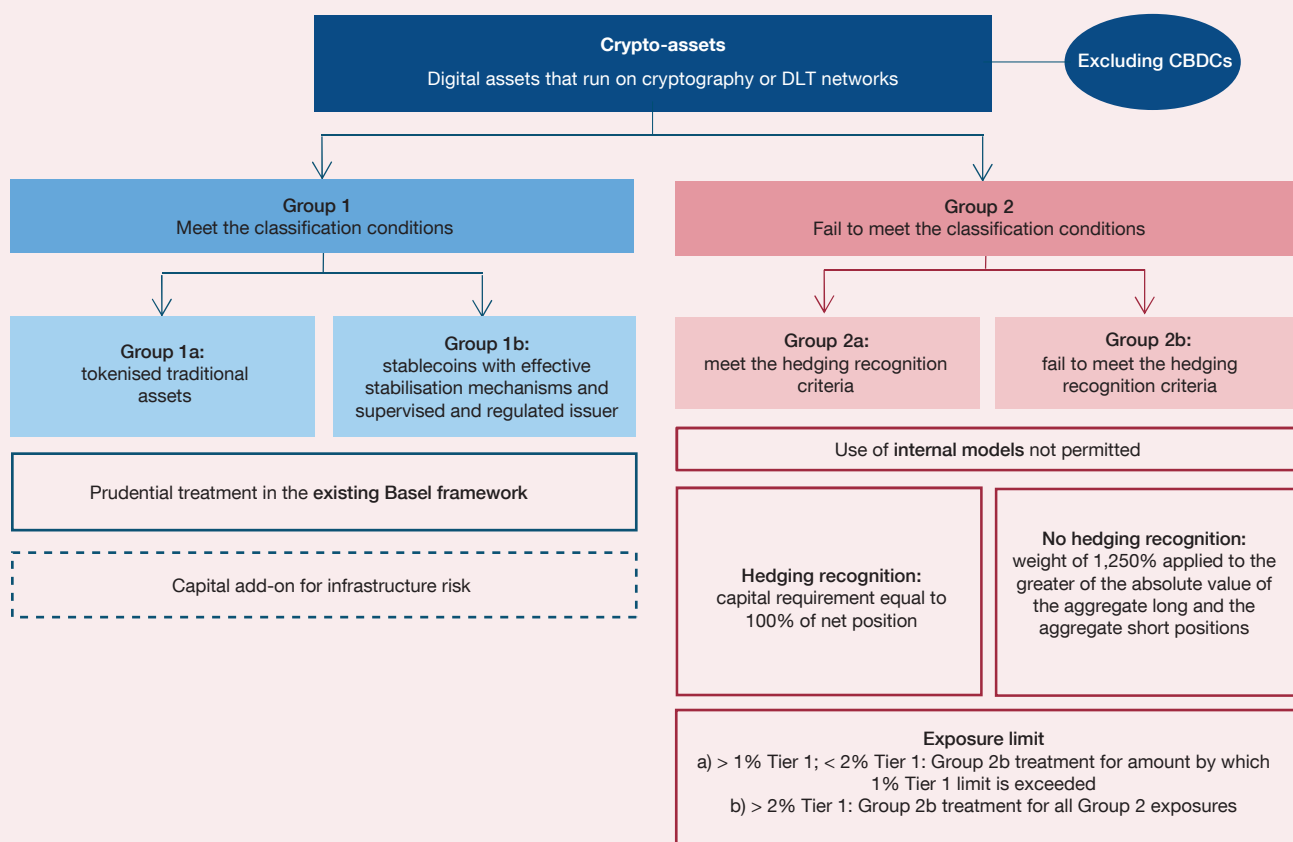
Moreover, in order for a tokenised traditional asset or a stablecoin to be classified in Group 1, it must meet other requirements relating to the definition of legal aspects, network security and the regulation of participating agents.<sup>7</sup> In practice, these requirements will exclude crypto-assets traded on public or permissionless networks.

The capital requirements for crypto-assets that meet the Group 1 classification conditions will essentially be based on the existing Basel framework. Thus, in the case of tokenised traditional assets, the requirements will be

equivalent to the Basel requirements for traditional financial assets. In the case of stablecoins, the standard takes account of their unique characteristics, and the risk weight calculation considers the risks associated with the issuer, from the reference asset, from the reserve assets and the risk of the redeemer, as well as those arising from any intermediaries involved.

Tokenised traditional assets and stablecoins that fail to meet any of the Group 1 classification conditions, as well as all unbacked crypto-assets, will be classified in Group 2. As

Figure 1  
BCBS CLASSIFICATION OF CRYPTO-ASSETS FOR PRUDENTIAL TREATMENT OF BANKS' EXPOSURES



SOURCES: BCBS and Banco de España.

7 All the rights and obligations arising from the crypto-asset must be clearly defined and legally enforceable in all jurisdictions where the asset is issued and traded; all transactions and participants must be traceable, and the entities executing key functions (e.g., issuance, validation, redemption and transfer) must be subject to appropriate risk management policies and procedures. Moreover, entities that execute functions related to redemptions, settlements, transfers, storage or reserve asset management, including node validators, are also required to be regulated and supervised, or subject to appropriate risk management standards.

8 Specifically, (i) the crypto-asset must be a direct holding of a spot crypto-asset where there exists, at least, a derivative, an exchange-traded fund (ETF) or an exchange-traded note (ETN) that solely references the crypto-asset and is traded on a regulated exchange; a derivative, ETF or ETN that references a Group 2 crypto-asset that is traded on a regulated exchange or has been approved by the markets regulators for trading or, in the case of a derivative, that is cleared by a qualifying central counterparty (QCCP); a derivative or ETF/ETN that references a derivative that meets the criterion described; or a derivative or ETF/ETN that references a crypto-asset-related reference rate published by a regulated exchange; (ii) the average market capitalisation must have been at least USD 10 billion over the previous year, and the 10% trimmed mean of daily trading volume must have been at least USD 50 million over the previous year; and (iii) there must have been at least 100 price observations over the previous year, and sufficient data on trading volumes and market capitalisation of the crypto-asset.

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Group 2 crypto-assets pose greater risks, the standard provides for a more stringent specific treatment. Moreover, a set of criteria (relating, inter alia, to trading volume and the availability of valuation data)<sup>8</sup> have been established for Group 2 crypto-assets, which, if met, permit a certain degree of hedging recognition (Group 2a). The standard does not permit the offsetting of positions in other cases (Group 2b).

Thus, Group 2a crypto-assets will be subject to a capital requirement equal to 100% of the net exposure, i.e. between the aggregate long and short positions for each type of crypto-asset.<sup>9</sup> In the case of Group 2b crypto-assets, a weight of 1,250% will be applied to the greater of the absolute value of aggregate long positions and the absolute value of aggregate short positions. Consequently, positions may not be offset.

Lastly, the standard includes two further specific aspects, namely:

- a) a potential add-on for infrastructure risk applicable to Group 1 crypto-assets, to be decided by the competent authorities, to reflect possible risks stemming from the underlying technological infrastructure. This add-on will initially be set at 0% and may be activated (with no limit foreseen) based on ad hoc assessments by the authorities; and
- b) a limit on (direct and indirect) exposures to Group 2 crypto-assets.<sup>10</sup> Banks should generally keep their aggregate exposures to Group 2 crypto-assets below 1% of their Tier 1 capital, although a margin of up to 2% is allowed, with different associated penalties. If these limits are breached, the capital requirements will increase.

**Future outlook**

The BCBS will continue to review some aspects of the prudential standard, given the lack of extensive experience

Chart 1  
PRICE OF SOME CRYPTO-ASSETS AGAINST THE DOLLAR

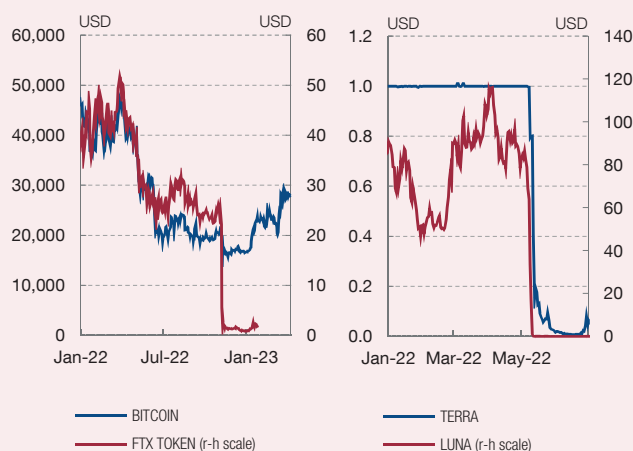
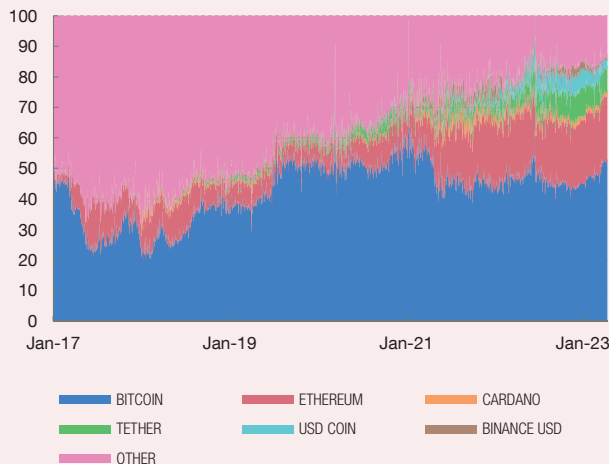


Chart 2  
MARKET VALUE SHARES OF THE MAIN UNBACKED CRYPTO-ASSETS AND STABLECOINS (a) (b)



**SOURCES:** FSB, Refinitiv and CoinMarketCap.

- a Each area of the chart depicts the share of each crypto-asset in the total market value of the crypto-assets represented. Bitcoin, ethereum and cardano are unbacked crypto-assets, and Tether, USD Coin and Binance USD are stablecoins.
- b The total market value of the crypto-assets is estimated drawing on data from an FSB report (*Assessment of Risks to Financial Stability from Crypto-assets*) and considering changes in the MVIS CryptoCompare Digital Assets 100 Index.

9 Only products traded on a regulated exchange or cleared by a QCCP can be used to calculate the net position. Moreover, positions may only be offset in the case of products that are traded on the same exchange or platform. Also, under the Simplified Standardised Approach, coverage is limited to 65% of the smaller of the absolute value of the long position and the absolute value of the short position.

10 For the purposes of the limit, the exposure will be calculated as the aggregate of the higher of the gross long and gross short position for each crypto-asset represented in the portfolio.

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with these instruments and how swiftly they have evolved. In addition, the BCBS's work programme envisages further assessments of bank-related developments in crypto-asset markets, including their role as stablecoin issuers, their risk management practices as custodians of crypto-assets and potential interconnections. Moreover, the Committee will continue to collaborate with other international standard-setting bodies and with the Financial Stability Board (FSB) to ensure a consistent global treatment of crypto-assets.

Other national and supranational authorities are also working to expand the scope of other relevant regulations. Thus, the successive crisis episodes within the crypto-asset ecosystem during 2022 have not only borne out the regulatory impulse described above, but they have also stimulated the initiatives under way (for example at the FSB and the European Systemic Risk Board), to monitor the risk posed by crypto-conglomerates and that of decentralised finance (DeFi) protocols.

The bankruptcy of FTX was particularly revealing of the agency and fraud risks of opaque centralised and interconnected contract structures. FTX operated both an exchange platform and a crypto-asset fund within the same business group. The lack of segregation and scrutiny of the two activities allowed for client funds to be diverted, until the underlying solvency problems came to light. This prompted a sell-off of FTX native tokens, with the consequent loss of value (see left-hand panel of Chart 1) and, ultimately, a spillover to a range of companies closely connected to FTX.

FTX's collapse has put various crypto-asset service providers in a complex financial situation: crypto-asset lenders (such as BlockFi and Genesis), Gemini (an exchange platform closely linked to Genesis) and, more broadly, a whole range of entities within FTX's ecosystem. This succession of spillovers has not had systemic consequences for the overall banking sector,

which to date has had little exposure to the crypto-asset sector as a whole, thanks in part to the warnings by the authorities.

Some crypto-asset market segments, specifically DeFi, have not been affected by the FTX crisis. Yet DeFi poses its own risks. For instance, the Terra-Luna crash (see right-hand panel of Chart 1) already prompted alarm bells about the risks specific to an ecosystem with novel interconnections and operations. The authorities continue to underscore the risks posed while work progresses on a regulatory solution to address them.

In the short term, the marked downward corrections in crypto-asset valuations in 2022 have reduced the potential systemic risk posed by these instruments. However, these recent developments do not rule out the possibility of there being further growth in the future. Indeed, on the data available for 2023, the valuations of some of these assets are once again seeing rapid increases.

Among the possible scenarios for the crypto-asset market, it is reasonable to believe that concentration in more stable instruments that have a lower risk profile may increase. Based on the time series available, there has been a progressive increase in concentration in a smaller number of instruments (see Chart 2). If this trend were to take hold, it seems likely that the interconnections with the traditional financial system will grow stronger (for example, through stablecoins backed by traditional assets). While certain operational risks will plausibly decrease in this scenario, a potentially larger crypto-asset sector that is more closely interconnected to the traditional financial sector could nevertheless increase systemic risk. Indeed, the crisis at some medium-sized banks in the United States has clearly shown how the bank deposits held in connection with these stablecoins as part of the reserve assets can be a channel of contagion for these vulnerabilities. To avoid such a situation, it is therefore important that the regulation continues to adapt to this and other dynamics in the sector.