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Financial stability and crypto-assets

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*English translation of the original speech in Spanish.

Good morning. Allow me to begin by thanking the organisers for inviting me to participate, once again, in the El Español newspaper's "Observatorio de las Finanzas". I would like to focus my address today on the topical and important issue of crypto-assets.

So-called "virtual currencies" have been with us now for more than a decade. However, a series of recent factors is raising the prospect of crypto-assets ultimately playing a significant role in the financial system. Looking beyond their potential benefits in terms of, for instance, efficiency gains in payment transactions or as catalysts for the development of new functionalities and value propositions for investors, I would like to underscore the risks that they could pose to financial stability, at least if they are not accompanied by effective regulation and supervision, as emphasised in the G20 communiqué of 18 February.[1]

I will begin my speech by describing the defining characteristics of the phenomenon and recent developments, before turning to the specific risks to financial stability that they may pose. I will end by highlighting some of the main elements shaping the current response of regulators and supervisors and the challenges that lie ahead.

The complex universe of crypto-assets

The term crypto-assets is used to refer to a range of highly heterogeneous assets whose common denominator is the digital representation of value or a set of contractual rights. Further, in contrast with other digital assets already in circulation, they rely on distributed ledger technology (DLT) to be transferred, traded and stored. In addition, unlike central bank digital currencies (CBDCs), they are not backed by a central bank or other public authority.

To simplify somewhat, they can be said to share certain standard technical features, such as (i) a decentralised ledger, (ii) the use of encryption for security on more or less open online networks, and (iii) the use of protocols to automatically execute different types of transactions.

However, the commonalities end there. The more than 16,000 undertakings in existence[2] (ten new crypto-assets are launched every day on average) give a good indication of the virtually boundless nature of this universe and its enormous functional and operational disparity.

Classifying the instruments by their apparent main purpose may help us to understand the phenomenon. Broadly speaking, three different groups may be distinguished.

The first group comprises assets whose primary objective is to serve as a medium of payment or exchange. These are often loosely termed "virtual currencies". Most operate outside of prevailing regulatory structures, except where a specific framework has been established, such as in Germany and France.[3]

[1] https://g20.org/documents/

[2] According to information at Coinmarketcap.com.

[3] Bitcoin is the most famous example of this group.

The second group covers instruments designed to help raise capital from investors. Specific procedures are organised to this end, known as Initial Coin Offerings.[4] In these operations investors receive tokens substantiating their legal claim to participate in any potential increase in the value of, or returns on, businesses or specific projects. Alternatively, these may be structured to confer rights equivalent to those of other financial instruments. Here, the comparison with marketable securities is inescapable and, needless to say, the sectoral regulations already in place apply.

The third group is utility tokens, which act as electronic coupons that can be exchanged for future services, products or benefits marketed through the issuer's own platform. The very capital raised from the sale of these tokens will then be used to fund the development of the future products or services. In principle, provided their amount remains limited, these will be subject to regulations relating to consumer protection, online trading, data protection and others pertaining to business operations, but not to financial regulations.

Beyond this classification, we should also distinguish between traditional crypto-assets and "stablecoins". The latter are instruments that, in an effort to reduce their volatility, are backed by assets as a means of collateral, be they fiat currencies or other types of commodities.

"Non-fungible tokens" are also worth singling out. These tokens are unique and indivisible, making them particularly appealing to represent artwork or immovable property, for example.

Lastly, mention should be made of decentralised finance, which aims to replicate the dynamics of the provision of financial products and services, but in a decentralised and fully automated environment, removing the need for intermediaries.

Regarding developments in the crypto-asset market, total capitalisation has grown very markedly in recent years, although it still only represents around 1% of the global financial system. Trading volumes for the most representative assets (including bitcoin, ether and tether) have at times been comparable with those of the New York Stock Exchange (between 70% and 95% of those levels), while their aggregate capitalisation has reached $3 trillion, three times higher than the previous all-time high of 2017. In any event, their high volatility is striking, as borne out by a cumulative loss of value of close to 40% in recent months.

In tandem, interconnections with the rest of the financial system have increased significantly. For instance, the number of crypto-asset investors (both institutional and retail) has risen markedly. The range of sophisticated products around crypto-assets has also expanded, with a growing offering of exchange-traded funds (ETFs),[5] investment funds and futures contracts referenced to crypto-assets, which has been key to attracting new investor

[4] A couple of years ago the connected cars platform Next became the first company authorised to undertake such a round of financing in Spain.

[5] ETFs are investment instruments that function as a hybrid between funds and shares. Their defining characteristic is that they can be traded and settled in straightforward stock exchange transactions much like shares.

cohorts to digital assets.[6] Some large firms have publicly announced using crypto-assets as part of their cash management, while others are even campaigning for them to be accepted as a means of payment.[7] Some major financial players, such as global banks and international card service providers, have expanded their portfolio of ancillary services around digital assets (including custody and trading services) or have allowed them to be used directly as a medium of exchange in their networks.

Turning to decentralised finance, while this remains an emerging phenomenon, it has quadrupled in size in just one year,[8] which is reflected in other parts of the crypto-asset ecosystem. For instance, it has spurred demand for certain classes of digital assets that can be used as collateral in this environment. This trend has also been furthered by investment strategies based on the automated trading of crypto-assets loaned out by investors with a view to providing liquidity to these markets.[9]

Risks to financial stability

These developments explain the concern shown by the financial authorities. For instance, the Financial Stability Board (FSB) has recently stressed that, if not properly regulated and supervised, these markets could reach a point where they represent a threat to global financial stability[10].

Such risks are diverse in origin. First, they spring from the **limited understanding** of the features and implications of these assets on the part of investors.[11] By way of example, according to recent research from the UK's Financial Conduct Authority (FCA), around 20% of crypto owners assume that they enjoy the same level of protection as against traditional banking products.[12] An OECD study reached similar conclusions for the Asian market.[13]

In this regard, initiatives such as the recent publication of a Spanish National Securities Market Commission (CNMV) Circular regulating the advertising of crypto-assets, which emphasises the need to highlight the associated risks, including the possible loss of the entire investment, have a particularly important role to play in mitigating this risk.[14]

A second source of risk stems from the potential repercussions for the functioning of **financial markets**. Broadly speaking, wild swings in the prices of such assets may sway

[6] A case in point is the Chicago Mercantile Exchange, which in October 2021 became one of the first to launch a bitcoin ETF. It passed the $1 billion mark in just two days, making it the fastest growing ETF in history.
[7] For instance, Expedia, Tesla and Microsoft.
[8] See "Understanding digital bubbles amidst the COVID-19 pandemic: Evidence from DeFi and NFTs". Y. Maouchi, L. Charfeddine and G.E. Montasser (2021), *Finance Research Letters*.
[9] This is known as yield farming. The aim is to incentivise investors to lend their crypto-assets to a pool that helps provide liquidity to decentralised finance systems, while offering potential investors the highest possible returns at all times. To simplify somewhat, this strategy is structured around smart contracts that select which environment each of the pooled assets will be sent to at any given moment to optimise economic returns for their rightful holders.
[10] See *"Assessment of Risks to Financial Stability from Crypto-assets"*. FSB (2021).
[11] This extends to all matters concerning compliance with the tax obligations associated with investing in these markets. With this in mind, Spain has announced new reporting obligations that are expected to enter into force in 2023. The treatment of such assets for the purposes of the various different taxes has to date been resolved in the form of requests for binding rulings from the Directorate General of Taxation.
12 See "*Research Note: Cryptoasset consumer research 2021*". FCA (2021).
[13] Specifically, even though half were university graduates, almost two thirds of the crypto owners interviewed admitted to having limited or zero understanding of the most basic features of the associated risks and rights. See "*Cryptoassets in Asia: consumer attitudes, behaviour and experiences*". OECD (2019).
[14] CNMV Circular 1/2022 of 10 January 2022.

investor sentiment, triggering an overreaction that spills over into other forms of trading. Equally, the need to respond to such volatility with frequent adjustments to the necessary collateral could precipitate sales of other asset classes. Indeed, the IMF has recently warned of a notable increase in the positive correlation between crypto-asset and capital markets, which has in certain cases increased by a factor of 35.[15]

These effects may be further aggravated in the event that alternatives such as stablecoin take root. Specifically, an accumulation of requests for redemptions resulting from, for instance, widespread panic around such assets, could put the money markets under strain and, by extension, could spread to the institutions acting as custodians of the hedging assets.

Further, these tensions could spill over into payment systems, as they would be forced to handle a very significant rise in transactions that, in certain circumstances, could lead to delays in execution or even bring services to a standstill.

A third source of vulnerability has to do with the impact on the **banking sector**. Crypto-assets represent a new competitive factor facing the sector's transactional services, with some variants (such as stablecoins) also affecting deposit-taking, their aim being to become a store of value. Moreover, any rise in banks' direct and indirect exposure to the crypto-assets sector would also increase both their financial and reputational risks[16]. While currently limited, exposures relating to the provision of ancillary services, the retail of third-party products or support for clients operating in the crypto sphere are on the rise.

Fourth, the potential consolidation of crypto assets as an alternative payment method threatens to create **parallel value transfer systems.** For as long as such assets remain untouched by central bank oversight, the authorities will be hard pressed to contain the emergence of possible systemic risks. In certain circumstances (particularly in emerging markets), there may be a risk of what is known as "cryptoisation", or the replacement of the national currency and other financial assets denominated in that currency with a crypto alternative.[17] Among other aspects, these types of processes compromise monetary autonomy and undermine the ability to exercise effective control over international capital movements.[18]

Fifth, we should also be mindful that some crypto-assets could increase **the financial sector's climate transition risk**, given that some of the consensus mechanisms used require a significant amount of energy, leaving the institutions that sell or invest in such assets more exposed to this risk. These mechanisms currently account for around 80% of the capitalisation of a market that, in certain cases, pollutes as much as 15.5 million petrol cars in a year.[19]

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[15] See "*Cryptic Connections: Spillovers between Crypto and Equity Markets*". Iyer, T. (2022), IMF Global Financial Stability Notes, No. 2022/01.

[16] Investment in or proprietary trading of crypto-assets or the purchase of structured products in which they are an underlying asset would appear to be the most common means by which they are incorporated onto banks' balance sheets.

[17] In certain cases (e.g. El Salvador), this state of affairs is deliberate.

[18] See "Cryptoassets as National Currency? A Step Too Far". T. Adrian and R. Weeks-Brown (2021), IMF blog, 26 July.

[19] See "*Hearing on Cleaning Up Cryptocurrency: The Energy Impacts of Blockchains*". US House of Representatives Committee on Energy and Commerce (2022).

Lastly, mention should be made of the risks deriving from the possible use of crypto assets for **unlawful activities, including money laundering**. Such risks are particularly high in this market given its greater anonymity and the fact that transactions are performed through non-standard payment systems. Thus, the Financial Action Task Force (FATF) has worked and continues to work on adapting the framework of international standards in this area. Nonetheless, since the initiative is a relatively new one, the number of countries effectively implementing the framework remains small.[20]

Designing an appropriate response

These risks call for an urgent response on the part of the regulatory and supervisory authorities. Given the global nature of such initiatives and the sheer number of agents involved, this response must be coordinated both internationally and across sectors. Allow me to mention a few of the initiatives currently under way.

At a **global level**, what started out with the regular monitoring of such initiatives became, in 2020 and at the behest of the G20, a multilateral regulatory response from the FSB.[21]

The FSB has released a report setting out high-level recommendations for the regulation and supervision of so-called "global stablecoins" (i.e., those operating across multiple jurisdictions and in widespread use). Flexible and proportionate to the risks, this approach seeks to minimise the possibility of arbitration while adhering to the "same business, same risk, same rules" principle. The FSB recommends using the existing international rules and standards, albeit adapted in practice to the services provided and the features and risks of global stablecoins. It highlights the importance of ensuring suitable governance and proper transparency around these products for users and the market, including, in particular, whether or not users enjoy redemption rights against the issuer or the reserve assets. It also stresses that the authorities should not allow such arrangements to be launched before confirming that all of the relevant requirements have been met.

In any event, the FSB continues to work both on identifying and resolving possible regulatory gaps relating to global stablecoins and on regulatory approaches relating to unbacked crypto-assets, such as Bitcoin.

Also globally in the banking sector, the Basel Committee on Banking Supervision (BCBS) launched a consultation last year on a proposal for the prudential treatment of banking exposures to crypto-assets.[22]

The proposal classifies these exposures taking into account their risk, based on certain conditions that include the existence of value stabilising mechanisms and redemption rights, the security of the technological platform where they operate and regulatory requirements for network agents performing critical functions.

Specifically, two groups are distinguished, resulting in different capital requirements. The first one includes certain tokenised traditional assets, which would be subject to the same

[20] See "*Supervising cryptoassets for anti-money laundering*". R. Coelho, J. Fishman and D. Garcia Ocampo (2021), FSI Insights on policy implementation, No 31.
[21] https://www.fsb.org/2020/10/regulation-supervision-and-oversight-of-global-stablecoin-arrangements/
[22] https://www.bis.org/bcbs/publ/d519.pdf

prudential treatment that applies to traditional assets insofar as they confer the same legal rights, and stablecoins, whose requirements would be set on the basis of the risk of valuation differences in the reserve assets and the risk of failure to comply with redemption commitments. The second group comprises assets that generate a greater risk. These would be subject to a new conservative prudential treatment, which establishes a weighting of 1,250%, the most penalising one within the Basel framework, not allowing the recognition of hedging to calculate their exposure.
After analysing the comments received, the Committee is currently revising the proposal and will foreseeably publish a second consultation document in mid-2022. This review takes into account the importance of developing a conservative risk-based minimum standard at international scale.

The Committee on Payments and Market Infrastructures (CPMI) of the Bank for International Settlements, headquartered in Basel, and the International Organization of Securities Commissions (IOSCO) have also been addressing this issue for some time now. For instance, a consultative report has been recently published which reinterprets the standards applicable to the traditional financial market infrastructures to allow for stablecoins that might be systemically important.[23]

At European scale, a regulation known as Markets in Crypto-Assets (MiCA) is under development, to establish a regulatory framework and a common supervisory architecture[24] applicable to both issuers and providers of crypto-asset services. In essence, MiCA, which would not apply to the monetary authorities, aims to regulate those crypto-assets which, owing to their characteristics, cannot be equated to other financial products for which there is already legislation.[25]

Thus, there are three types of crypto-assets whose issuance is regulated: e-money tokens,[26] asset-referenced tokens[27] and other crypto-assets. The first two aim to maintain a stable value by reference to an official currency or another asset, respectively. They are similar to stablecoins and may be classified as significant when certain criteria are met or certain thresholds are exceeded. To regulate their issuance, rules are introduced for each of them in connection with their authorisation, organisation, governance and supervision and the drafting of the white paper. The proposal includes different rules for crypto-asset service providers,[28] including rules on prudential (own funds, insurance policy), organisational and

[23] In essence, this exercise largely equates the transfer mechanisms of stablecoins to those used by payment systems and proposes that they be subject to a subset of principles that the latter must already comply with. In particular, it places emphasis on ensuring an adequate governance model and on the effective management of the risks which the particularities of stablecoins might pose to their function as a payment infrastructure.
[24] As regards the supervisory architecture, it is proposed that the issuer authorisation, the white paper or reporting document that the issuer must submit and the authorisation to provide crypto-asset services fall under the remit of the national competent authorities (NCAs). NCAs also supervise issuers, unless the e-money tokens and asset-referenced tokens are considered significant, in which case the EBA and a college of supervisors have supervisory responsibilities. Lastly, NCAs are responsible for supervising crypto-asset service providers.
[25] Neither does it apply to non-fungible crypto-assets, i.e. basically those with unique characteristics or functions that cannot be immediately exchanged with other crypto-assets and whose value cannot be determined with reference to an existing market or other equivalent assets.
[26] Crypto-assets that are used as a medium of exchange and aim to maintain a stable value by referring to the value of a country's official currency. They are considered electronic money.
[27] Crypto-assets other than e-money tokens, which aim to maintain a stable value by referring to any other value or right, or a combination thereof, including one or several official currencies.
[28] They may provide the following services: custody and administration of crypto-assets on behalf of third parties, operating a trading platform, exchange of crypto-assets for funds or other crypto-assets, execution of orders, placement, reception and transmission of orders relating to crypto-assets on behalf of third parties, providing advice and managing crypto-asset portfolios.

customer information matters, and on fund safekeeping, conflicts of interest and outsourcing.

These examples are a sample of the initiatives which are under way at international and European scale. In any event, beyond the difficulties inherent to any work involving international coordination, the task at hand is, for different reasons, particularly complex.

First, the buoyancy of this market makes it difficult to provide a regulatory response. Our work schedules already envisage dedicating specific time in the coming months to, for instance, decentralised finance or non-fungible tokens.

Second, the decentralised nature of the initiatives sometimes makes it difficult to identify a contact to whom the measures may be communicated or who can be designated as a counterparty. This problem is exacerbated by the absence of a clear jurisdictional framework.

Third, given the complexity of these assets and their associated risks, it is difficult to identify and coordinate the different relevant (not only financial) regulators and supervisors, even within each country.

Finally, there are important information shortcomings, not only in quantitative terms, but also in terms of reliability and consistency, deriving from (i) the global nature of the issue, (ii) the fact that a large part of the activity takes place outside the regulated environment, and (iii) the growth of off-chain operations,[29] which limits the level of detail to which the platform itself has access.

Conclusions

In short, given the recent buoyancy and potential risks of the crypto-assets market, as public authorities we are required to monitor, regulate and supervise it more closely, providing warnings and ongoing information to users about the associated risks. In order for it to be effective and efficient, this must be done in very close cooperation with international and inter-institutional players, to avoid the fragmentation and arbitration that would ultimately lead to insufficient mitigation of the risks and vulnerabilities associated with these markets.

[29] Off-chain transactions are conducted outside the blockchain, often to make them faster and reduce associated costs, as they use different validation procedures. In some cases, they return subsequently in aggregate form to the decentralised ledger.