



Crypto-asset activities and markets in the European Union: issues, challenges and considerations for regulation, supervision and oversight

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Accepted: 10 March 2023 / Published online: 6 April 2023
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Abstract

Crypto-assets are rapidly becoming a mainstream phenomenon in the global financial system. This is owing to developments in technology, an increase in token issuances and the existence of tens of thousands of old and emerging crypto-asset projects around the world. There is consensus that the financial sector stands to gain from crypto-assets, for example in terms of cost reductions, increased effectiveness and openness. The rapid expansion of cryptocurrencies' ecosystem has intensified the attention of regulatory communities. Regulators are increasingly being challenged to respond fast and appropriately to protect customers, investors and populations from crypto-related risks, address the risks themselves and still promote technological advancement in this area. Currently, there are notable crypto regulatory loopholes in many jurisdictions of the world, not the least of which are those in the European Union. These gaps have helped to add to legislative ambiguity and weak protection of investor and property rights as regards to cryptocurrencies. Several European countries have made proactive attempts to develop domestic regulatory frameworks for crypto-assets. Many national, regional and international supervisory and regulatory institutions have participated in the crypto discourse which is demonstrated by issuance of various reports, analyses and policy statements highlighting risks and providing regulatory proposals. Following thorough consultation and review of the cryptocurrency ecosystem, the European Commission has recently asserted its authority over these very dynamic virtual assets and launched a framework for a regulation on Markets in Crypto-assets to address the risks germane to the crypto-asset markets within the context of the European Union. This research paper evaluates the European Union's present regulatory approach to cryptocurrencies. Particularly, the paper focuses on the issues, challenges and consideration of these approaches. The paper synthesizes extant research findings, expert opinions and institutional reports of the major regulatory, supervisory, oversight and advisory bodies, as well as those of relevant national and international agencies within the European Union.

Keywords Blockchain · Crypto-assets · Regulation · MiCA · Markets in crypto-assets · TFR · Transfer of funds regulation · Supervision · European Union

Introduction

The twenty-first century is marked by rise of digitalization, the Internet and the Internet of Things (IoT), as well as the smartphone revolution [22, 57]. Since the turn of the millennium, the Internet has increasingly evolved into, perhaps, the single most important driver of change, ushering in a profound transformation in technologies and people's everyday

lives across societies [3, 54]. The Internet, which was invented as an open and decentralized network of computers and communication system, has become the foundation for a plethora of digital applications and innovations that accelerate and strengthen globalization, integration, communication and interconnectivity [2, 53].

The Internet—and its attendant technologies—has helped to remove time and space barriers not only creating a permanently connected global village, but also becoming the backbone of national and international economies [32]. The spillover effect of Internet-driven disruption is today apparent in pretty much every industry sector, not the least of which is the global financial services and innovative financial technology (FinTech) sector [1, 26, 29]. Eventually,

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digital and technological advances have affected how society stores monetary value and conducts financial transactions [6, 33, 51].

On 31 October 2009, an anonymous author using the assumed pseudonym Satoshi Nakamoto published an online white paper proposing a system in which all monetary transactions would be recorded digitally and managed by a decentralized network of computers [46]. This idea came to fruition on 3 January 2009, when Bitcoin, the first known cryptocurrency, was created [45]. Since its inception, Bitcoin has been at the forefront of ushering in a whole new era for crypto-assets [22, 57]. The current trend focuses on eliminating centralized intermediaries in favour of decentralized networks and platforms that employ cryptography, a public ledger, and peer-to-peer (P2P) file sharing and storage, cloud computing, banking and other transactions among Internet of Things (IoT) tools and devices [1, 26].

As argued by Ferreira and Sandner [23], the rapid pace of technological advancement, the rising popularity of crypto-assets, the exponential growth in token issuances which have come to be referred to as Initial Coin Offerings (or ICOs) and the plethora of other related projects have thrust crypto-assets from the fringes of the tech niche and marginal territory onto the international regulatory agenda, attracting and intensifying the attention of governments and financial institutions around the world. Today, slightly over a decade since the inception of Bitcoin, institutions, authorities and companies across the globe are all debating the rise of crypto-asset activities and markets secured by decentralized finance (DeFi) tokenization, blockchain technology (BCT) and distributed ledger technology (DLT), non-fungible token (NFT) and Play-to-Earn (P2E) revolution [6, 23, 33, 37, 56].

Crypto-assets are an emerging investment strategy that has been widely seen as potentially advantageous to the financial sector due to its ability save costs, increase efficiency, increase trust and improve the standard of and access to financial services [12]. Tokenization of assets through DeFi, NFT, P2E, BCT and DLT technologies is shaping up to be a major development in the next few years, both in the financial markets and in the economy at large, and the growing significance of crypto-assets cannot be ignored [37, 51, 56]. In some circumstances, unbacked crypto-assets such as cryptocurrency (e.g. Bitcoin) are already being used to pay for goods and services [1]. Some cryptocurrencies (e.g. Tether) are now even asset-backed by being pegged or tied to a stable reserve asset like a fiat currency, commodity or financial instrument to make them less volatile, provide a high level of usability and liquidity, and enhance their use in trading [31].

Crypto-assets have the potential to be used for the purpose of capital raising through the usage of security tokens or ICOs [44]. McDonald [44] contends that this has the dual benefit of reducing barriers to investment while also

improving access to capital. Last but not least, crypto-assets may serve a plethora of additional purposes, including the storing of information useful in fields as diverse as identification and insurance, loyalty tracking, the modelling of non-fungible assets and health records [1, 12, 33]. Crypto-assets represent a major paradigm shift because they allow an endless number of different financial transactions to be made in a virtual or digital form that is globally recognized and in a transactional environment that is harmonious and fully unified [23]. Improvements in asset tradability and liquidity, streamlined clearing and settlement, and increased automation, disintermediation and transparency are just some of the advantages and efficiency improvements that may result from using technologies like DeFi, NFT, P2E, BCT and DLT [26, 37, 38, 56].

Ferreira and Sandner [23] argue that crypto-asset activities and markets have the potential to unleash economic value and define the future of the digital/virtual, token-based economy. However, crypto-assets lack inherent economic value or backing reserve assets [31], are frequently used as economic speculative tools [11, 28], are extremely volatile [31, 49] and energy-intensive due to the process of mining [5] and have huge potential to finance illicit activities [14, 50]. All these issues render crypto-asset highly risky instruments. The use of crypto-assets for leverage and lending activities, together with the fact that these assets are increasingly being interwoven with conventional financial assets to a very large extent, all contribute to elevated levels of systemic risk [31].

Regulators have a difficult balancing act in trying to keep up with the rapid speed of innovation while also protecting investors and consumers and reducing risk [14]. Innovations in financial technology (FinTech) sectors, like DeFi, NFT, P2E, BCT and DLT, and cryptocurrencies [37, 56] necessitate the establishment of innovative regulatory mechanisms, the modification of current regulatory frameworks and the creation of novel regulatory measures [52]. These innovations also present novel possibilities for rethinking the structure and operation of existing financial systems, as well as for recasting the legal taxonomies and corresponding responsibilities that have traditionally governed the financial markets [50]. Even though crypto-asset markets make up less than 1% of the global financial system, they still pose serious risks [31]. The phenomenal growth, volatility and innovation in the crypto-asset ecosystem, as well as the increasing participation of financial investors and institutions, demonstrate how critical it is to recognize the potential threats crypto-assets could pose to financial stability if current crypto-asset trends persist [10, 39, 42].

A regulatory gap exists in crypto-asset activities and markets, which leads to further legal ambiguity, inadequate investor and consumer protection, market integrity, financial stability, fraud and other illegal activities [31, 57]. To reduce



systemic risks, it is crucial to bridge gaps in the crypto-asset ecosystems [22]. Questions have been raised concerning the most appropriate supervisory, regulatory and oversight framework [14], as well as the capacity of the existing and emerging regulatory architecture to effectively respond to the ever-dynamic conditions occasioned by the rapid expansion of crypto-asset activities and markets both globally and within the European Union [31].

It should not be lost for regulators that developers and users of crypto-assets are particularly interested in solving the inherent weaknesses of a centralized, global and trust-based digital banking system that appear to cause distrust and disillusionment among customers and investors, as witnessed at the height of the recession caused by the Global Financial Crisis (GFC) [46]. Proponents argue that the digital model for commerce on the Internet that relies exclusively on banks and other financial institutions serving as trusted third parties in facilitating and processing electronic financial transactions can be anything but fully trustworthy [6, 12, 30, 46]. They advocate adoption of an alternative system that is based on cryptographic proof as opposed to trust and that is decentralized as opposed to the conventional centralized system centred around financial institutions [25, 46, 52].

As elucidated by Motsi-Omoijiade [45], the societal risks and external shocks from volatility are reduced by effective regulation of financial services, which also improves long-term pecuniary stability. [14] assert that despite any design issues, the same fundamental regulatory principles should ideally be applied to newly developed financial products and services based on innovative and state-of-the-art technologies. As a direct consequence of all of these activities, regulatory bodies all over the globe are finding it difficult to keep up with the rapid development of the cryptocurrency industry [38]. Independent oversight organizations in the financial sector and government authorities tend to adopt a reactionary strategy, and their responses sometimes give the impression of being arbitrary and imprecise [26]. Consequently, despite the fact that market players have made attempts to adhere to the regulations imposed by supervisory, oversight and regulatory agencies, they are still often left unsure about how they should proceed [47]. Of particular interest is the question of the risks that continue emerging from the use of DLT and cryptos, and whether regulatory measures could effectively address those risks [7, 29]. How national and international governments and other relevant institutions approach the cryptocurrencies sector as it progresses will have a direct impact on their success and the likelihood that the sector develops into a mature financial industry [27, 48]. This will also present important implications for competing, centralized digital payment and commerce systems such as PayPal, Skrill, Wise, credit-issuing companies and financial institutions such as banks [41, 58].

As noted by Werner [57], current regulation is still considered opaque with different national governments and supranational organizations (e.g. the European Union) around the world adopting different legislations. Many researchers (e.g. [1, 10, 25, 26, 36, 43, 50]) agree that the timeliness of regulation of cryptocurrencies as an emerging topic creates and explicitly high degree of scientific, theoretical and practical relevance. [4] p.1 noted that the financial services and the technological context in which it operates are “dynamic and changing at such a pace that it can be quite challenging to track the emergence and applications of new technologies” to the business of financial and related services.

On 24 September 2020, the European Commission unveiled the Markets in Crypto-Assets (MiCA) Regulation, a new Digital Finance Strategy, in which it proposed a comprehensive and innovation-friendly legislative framework attempting to provide answers to an otherwise undefined and unregulated crypto-asset-related market in the European Union [20, 55, 59]. The European Parliament approved its MiCA negotiating stance on 14 March 2022 [15] and, together with the European Council, reached a provisional agreement on 30 June 2022 [13, 16]. EU Member States formally endorsed the final text of MiCA on 5 October 2022 [55]. The European Parliament is expected to complete the remaining steps required to formally adopt MiCA into regulation in December 2022, at which point the legislation will come into effect in the first quarter of 2023 and thereafter go through a phased implementation [15, 16]. In addition to ensuring financial stability and safeguarding investors, MiCA intends to foster innovation and capitalize on the potential of crypto-assets [8, 9]. By reaching the MiCA agreement, the EU is positioning itself to become the first major supranational jurisdiction to promote innovation and establish regulatory standards for the FinTech sector among its member states [17, 40]. The introduction of MiCA has reignited the debate on crypto-assets against the backdrop of misgivings, warnings and dismissals by crypto-asset proponents, financial institutions and regulatory bodies [18] with some interpreting it as a gradual acceptance of the pervasiveness and importance of the novel technology in finance [55, 59].

Background

Crypto-assets are part of the blockchain technology ecosystem that has garnered increasing attention from major national and international regulators, policymakers and legislators, with practically all of them issuing reports, warnings, studies or recommendations on various aspects of blockchain technology's use in financial markets.



A brief review of the literature quickly reveals that there is yet to be a universally accepted definition of a crypto-asset. This observation is supported by [14] p.1 who assert that “the definition of a crypto-asset is far from globally uniform”. The difficulty in defining and classifying crypto-assets raises concerns among national governments worldwide over their legal nature and whether, how or when they should be subject to existing financial regulations [21].

As elucidated by Chakravarty et al. [12], the term crypto-asset has frequently been used interchangeably with the term cryptocurrency, or simply crypto. Ferreira and Sandner [23] observe that in many suggested definitions, cryptography is mentioned as a feature of crypto-assets. For instance, the European Parliament defines crypto-assets simply as “digital assets maintained on a distributed ledger and safeguarded using encryption” [23, 34]. For their part, the Financial Stability Board [24] and the European Banking Authority [19] appear to use the same approach in defining a crypto-asset as “a form of private virtual asset anchored on cryptography and distributed ledger or equivalent blockchain technologies as part of their perceived or intrinsic value” [19, 24].

According to the International Organization of Securities Commissions [35], a crypto-asset may be a derivative of an asset, such as a currency, commodity or security; alternatively, it may be an asset in and of itself. According to the European Securities and Markets Authority [21], a distinction should be made between digital assets issued by the central bank (CBDC) and decentralized virtual cryptocurrencies offered by independent developers.

Regulation

For more than a decade, cryptocurrency has existed as digital Wild West. Bitcoin, on its own, has created thousands of millionaires in the last 13 years, and a trillion-dollar industry has emerged to serve cryptocurrencies, which enthusiasts consider the future of financial markets [50]. Simultaneously, fraudsters, scammers and other criminals have taken advantage of this technology and to engage in illicit and illegal activities [14].

The growth of cryptocurrency from speculative investment to a new asset class has prompted governments around the world to explore ways to regulate it.

It has been a concern for financial regulators around the world for a considerable long time already to define an appropriate regulatory response to the challenges created by crypto-assets; however, it has only been in the recent months that we have started to witness real advancement in this front. Until recently, we have not been able to see any real progress in this area. Facebook made the announcement of the establishment of a blockchain network with its own currency, Libra, in June of last year. This development

has exacerbated the financial stability viewpoint of the issue posed by crypto-assets, given the potential systemic relevance of this network. This action has not only prompted authorities all over the globe to evaluate the potential dangers that this market may provide, but it has also brought to light the need of coordinating a regulatory and supervisory response on a worldwide scale.

The Group of Seven (G7) marked the first significant step in the development of this reaction in October 2019 when they pointed out that the so-called global stablecoins might potentially generate dangers both inside and outside of the financial arena. After taking this first step, the next stage was for many international organizations, under the direction of the Financial Stability Board, to collaborate on defining an acceptable regulatory response to global stablecoins [14].

This global coordination is in fact essential not only because crypto-asset arrangements have a global nature, but also because they show a greater fragmentation of roles and responsibilities among independent service providers. This is the case because of the global nature of crypto-asset arrangements. The technology behind blockchain enables complicated ecosystem interactions, creating innovative schemes with functions and liability distributions that earlier laws was unable to anticipate. In order to avoid regulatory arbitrage or gaps in the application of mismatching frameworks, it is essential to ensure that liabilities within the various parties are appropriately allocated and that the regulatory and supervisory approach is harmonized globally. It is also essential to ensure that the appropriate allocation of liabilities occurs within the different parties [14].

Also, some challenges that traditionally fall outside of the remit of financial authorities, such as data protection or fair competition, require a globally coordinated approach in order to avoid regulatory arbitrage and ensure a level playing field. This is necessary in order to ensure a level playing field. Competition characteristics in digital marketplaces, such as data access and network effects, might, for example, lead to a stablecoin arrangement being the pre-eminent payment method for certain market sectors (e.g. cross-border payments). The concentration of the market on a single infrastructure, a single reserve management system and a limited number of service providers might all have an effect on the economy's overall steadiness under this hypothetical situation.

In addition to this endeavour to coordinate globally, the authorities in a variety of countries have also made significant strides ahead in this domain. As part of its planned Digital Finance Strategy, a new road map to stimulate financial innovation in the area, the European Commission is due to issue a legislative proposal on the legal framework for crypto-assets [17, 40]. This will specifically apply to Europe. Building on the responses obtained to a public consultation that was launched earlier this year, the Commission is



adopting a comprehensive approach in targeting both crypto-assets that might qualify as existing financial instruments as well as crypto-assets that now fall outside the regulatory perimeter. This strategy is in response to the fact that the Commission is targeting crypto-assets that could qualify as existing financial instruments. And just as in the discussion taking place on a worldwide scale, stablecoins have a prominent place on this agenda [14].

In the process of formulating this regulatory response, the authorities should adhere to the principle of "same activity, same risks, same rules", building on previously established regulatory frameworks in which businesses involving crypto-assets lead to similar risks as those performed with traditional ones. This is essential in order to minimize asymmetries between similar services and assets that might potentially fall under separate frameworks owing to differences in technicality [32]. To put this into practice, it may be necessary to clarify how the existing regulatory framework for the securities market applies to tokens that meet the criteria to be classified as securities. Additionally, it may be necessary to evaluate the scope of the rules governing electronic money to determine whether or not they apply to certain stablecoins. This is not in and of itself a trivial task; nonetheless, the difficulty of the situation is amplified by the objective of ensuring a worldwide uniform response on the basis of different jurisdictional frameworks [17, 40].

As a result, regulators and politicians have a lot of work to do in order to guarantee a regulatory response that mitigates risks while also encouraging innovation in the markets for crypto-assets. To our relief, international organizations and European authorities seem to be moving in the right direction by searching for a solution that is both broad and coordinated.

Necessity of regulation

The idea that governments and financial authorities have no place in the cryptocurrency field has been a central tenet from the beginning of Bitcoin and throughout the early days of the cryptocurrency and crypto-asset industry. Since the earliest days of the bitcoin and crypto-asset markets, this misconception has persisted. This is rooted in the decentralized technical basis underlying many crypto protocols, which asserts that no one organization, such as a government or regulator, should have the ability to control an ecosystem involving cryptocurrency [17, 40]. Why even consider regulating cryptocurrencies if decentralization of the industry is a core tenet? Numerous factors have contributed to the quickening pace of regulators' attention in this field. The huge influx of capital into the cryptocurrency market is a major factor in the rise in regulatory focus on the sector. Another factor driving regulators' attention to the cryptocurrency industry is the proliferation of new technology and

organizations catering to retail and institutional investors [14].

The potential for new forms of crypto financial innovation and new crypto product offerings to breach current rules and laws is a third factor driving regulatory attention in this field. Some people see cryptocurrencies as a danger to conventional fiat money, government financial control and central banks, which is why regulators are still interested in the field [23, 34]. The media and government officials have paid more attention to the cryptocurrency market as a result of the increasing perception of risk, which, along with periods of huge volatility, has led to instructions to financial regulators to boost their emphasis on regulating the cryptocurrency market. The many scams that sadly plague the crypto field and have resulted in substantial investment losses is a further reason for the regulatory emphasis in this area. For the sake of preserving the integrity of the financial system and safeguarding investors, financial authorities have begun to focus more closely on this phenomenon as it has grown in frequency and scope [22, 57].

There is a need for bitcoin regulation despite the fact that cryptocurrencies and regulation are at conflict with one another. From the perspective of the government, bitcoin offers ways to avoid paying taxes. Due to the lack of regulation around bitcoin transaction reporting, tax evasion is a major concern. US Internal Revenue Service (IRS) senior litigator Jon Feldhammer claims that if you set up a system of non-reporting, you're making it easier to profit from tax fraud without leaving a paper trail. In addition to the financing of terrorist organizations, this is another major problem that governments use as a foundation for regulation. Neither the buyer nor the seller has to reveal their identities in order to complete a cryptocurrency trade [22, 57].

They are able to fund illegal activities since their system is unmonitored and they protect their identity. According to crypto enthusiasts, stablecoins serve as a bridge between fiat money and the cryptocurrency market. They combine the benefits of both cryptocurrencies and fiat currencies, including minimal transaction costs, quick confirmation times and a high degree of value stability. But there are doubts about stablecoins' ability to restore the value of their fiat currency equivalents. There was early this year, for instance, worry that the reserves backing the widely used stablecoin Tether might run out. Concerns like this help explain why some people want Bitcoin regulated.

At the moment, there are about three primary categories of regulatory frameworks that are in place to monitor initial coin offerings (ICOs): closed, as is the case in China; open and stringent, as is the case in the USA; and open and liberal, as is the case in Switzerland. The protection of consumers is a primary focus for the policies of many nations' governments across the globe, while at the same time, they want to foster the growth of lawful commercial enterprises.



For instance, Gibraltar issues licences to a select number of crypto-companies, while France is focused on developing a system of voluntary licencing.

Those who invest in cryptocurrencies, those who utilize cryptocurrencies and those who offer services related to cryptocurrencies are all at a significant risk. Not only do investors face a number of substantial risks as a result of the intrinsically high volatility of major crypto-assets, but service providers also face a number of these risks due to the characteristics of the underlying technology and the anonymity it provides. Investors expose themselves to a variety of dangers, including the following: market, credit and default risk of issuers; comingling risk of assets; liquidity risk of issuers as well as service providers; market manipulation; misselling; and fraud. Additionally, crypto-assets are susceptible to being misused for the purposes of money laundering and funding terrorist activities. In addition, crypto-assets may give rise to concerns of contagion and business models, both of which have the potential to become systemic and hence call for a prudential reaction. This section provides a concise explanation of these dangers.

The global regulatory landscape

The regulation of cryptocurrencies is still very inconsistent and fragmented around the world, ranging from a total absence of legislation—or at least clear guidelines—to extreme measures such as an outright and blanket ban on these virtual assets. At the same time, considerable discrepancies—or gaps—relating to cryptocurrencies are witnessed in financial services regulation on the national level, for which many countries in the European Union provide an excellent case study.

USA

In the US Congress during the year 2021, a total of 32 legislation relating to cryptocurrencies were presented for consideration. The aforementioned issues of terrorism and tax evasion were prioritized throughout the development of the regulatory framework for cryptocurrencies in 2021. On the other hand, they advocate for the use of blockchain technology into the operations of the government.

The vast majority of these measures addressed the subject of how cryptocurrencies should be taxed. The Cryptocurrency Act and the Token Taxonomy Act are the two primary pieces of legislation that fall within this category. The Crypto-Currency Act of 2020 discusses the regulation of the economic function of cryptocurrency, while the Token Taxonomy Act concentrates on the technical approach to cryptocurrency regulation.

Cryptocurrency regulations in the USA have been relatively strict compared to some other countries around the

world. Cryptocurrency is classified as a commodity, and it is regulated by multiple government agencies, including the Securities and Exchange Commission (SEC) and the Commodity Futures Trading Commission (CFTC). The SEC has been particularly active in regulating Initial Coin Offerings (ICOs) and has taken a strict approach to ICOs that are deemed to be securities. The IRS has also required cryptocurrency holders to pay taxes on capital gains. The regulatory framework for cryptocurrency in the USA is complex and evolving, and the government has been taking steps to increase oversight and enforce compliance.

Australia

Exchanges of cryptocurrencies are permitted without restriction in Australia. They are subject to the provisions of the Anti-Money Laundering and Counter-Terrorism Financing Act of 2006, which governs financial transactions. This legislation compels digital financial firms to authenticate the identification of their customers, monitor the activity of their transactions and report any transactions that seem to be suspicious. Additionally, the nation levies a tax on the earnings made from the sale of cryptocurrency. Gains or losses in value resulting from the sale of personal assets are ignored. The use of bitcoin to acquire goods or services for one's own personal use or consumption is referred to as "personal assets" under the asset classification system.

Australia has implemented relatively progressive regulations on cryptocurrency compared to some other countries around the world. In 2017, the Australian government passed legislation that required cryptocurrency exchanges to register with the Australian Transaction Reports and Analysis Centre (AUSTRAC) and comply with anti-money laundering (AML) and counterterrorism financing (CTF) regulations. The Australian Securities and Investments Commission (ASIC) also issued guidance on the regulation of ICOs, stating that ICOs that involve the issue of securities may be subject to Australian financial services regulations. Additionally, the Australian Taxation Office (ATO) has issued guidance on the taxation of cryptocurrency, including capital gains tax (CGT) obligations for cryptocurrency investors. Overall, Australia's regulatory framework seeks to balance innovation and risk mitigation in the cryptocurrency industry.

The EU

The European Union is currently investigating potential new laws for cryptocurrencies. A draught paper from the European Union voiced worries about the dangers posed by private digital currencies and indicated that the European Central Bank is mulling over the prospect of launching its very own digital currency. Concurrently, the EBA is



advocating for the implementation of a Single AML/CFT Rule Book, which all member states would be required to adhere to without any exemptions [22, 57].

The European Commission made an announcement on a public consultation exercise in January 2020. The purpose of the initiative was to seek input on where and how crypto-assets fit into the current framework for cryptocurrency regulation in the EU. After that, in September 2020, the Commission came up with a new proposal that was referred to as the Markets in Crypto-Assets (MiCA) Regulation. The plan lays out prospective regulatory measures for cryptocurrencies, some of which include the implementation of a new licencing system for crypto-asset issuers, industry behaviour regulations and additional consumer safeguards.

In 2018, the European Commission proposed the Regulation of Markets in Crypto-assets (MiCA) framework, which aims to bring presently unregulated crypto-assets and their service providers into the purview of EU regulators by 2024 and to create a uniform licencing system for all EU countries.

The European Commission proposed MiCA in September 2020 as a component of a bigger digital finance package with the objectives of promoting technological advancement, preserving financial stability and enhancing consumer protection [22, 57]. In addition to ensuring that the existing legal framework does not place any barriers in the way of the utilization of new digital financial instruments, it also ensures that these instruments are brought within the purview of financial regulation and the operational risk management arrangements of firms that are active within the EU.

Cryptocurrency regulations in the European Union (EU) are relatively strict compared to some other regions around the world. In 2018, the EU implemented the Fifth Anti-Money Laundering Directive (5AMLD), which requires cryptocurrency exchanges to register with national authorities and comply with anti-money laundering (AML) and counterterrorism financing (CTF) regulations. Additionally, the European Securities and Markets Authority (ESMA) has issued guidance on the regulation of ICOs, stating that ICOs that involve the issue of securities may be subject to EU financial services regulations. The EU has also proposed a regulatory framework for crypto-assets, which aims to establish a common set of rules across the EU and address risks associated with cryptocurrencies, such as money laundering and terrorist financing.

Conclusion

Cryptocurrencies will continue to gain importance in the global economy across institutional use cases, as individuals, businesses and banks adopt cryptocurrencies for investment, payment and other utilities. They touch every aspect

of financial activity and regulation, including market conduct, taxation rules and consumer protection. Therefore, it is mandatory that regulators develop tailored regulatory frameworks that create an environment conducive to the adoption of cryptocurrencies and development of crypto-based commerce, alongside mechanisms to protect the integrity, security and stability of the financial system and its actors. Prudent regulation requires an in-depth understanding of the blockchain technology that underpins cryptocurrencies and its power to revolutionize the global financial system as well as its potential to harm such. Cross-jurisdictional cooperation and government–industry collaboration are essential to a pragmatic global regulatory environment for cryptocurrencies. In the end, building an acceptable regulatory framework for this business will need intensive monitoring in conjunction with an approach that is adaptable [22, 57].

Crypto-assets are at the centre of the transformation taking place in the financial technology sector, and new developments will steer the regulatory and supervisory emphasis in a variety of ways until the market reaches maturity. In order for regulators to comprehend the course that advancements in the business will take, the landscape of crypto-assets must be regularly monitored. In this context, initiatives now underway to solve data gaps in order to monitor markets and any contagion effects on the existing financial industry are to be applauded [22, 57]. Regulation shouldn't be perceived as something that stifles innovation; rather, it should be seen as something that builds trust. When it comes to the more conventional aspect of the financial sector, regulation has the potential to build trust in the industry and encourage a more secure growth of the sector by establishing clear standards that eliminate confusion and, as a result, create confidence. Given the significant reputational risks involved, regulators need to adopt a proactive approach to addressing any risks that might possibly emerge from industry advancements and rapidly establish capacity and knowledge in new instruments and new technologies. They also need to do this as quickly as possible. In each individual instance, it will be necessary to conduct an analysis of the capacities and resources of the regulatory bodies, as well as the possible harm to consumers' faith in the economy's financial system. In addition, regulators have a responsibility to effectively convey to the general public the role that regulation and supervision play, with a particular emphasis on the risks that are carried by investors and consumers [22, 57]. This is essential in order to prevent any confusion or excessive faith in any newly implemented regulations or the functions of the authorities. Lastly, the cross-industry and cross-national implications of crypto-assets highlight the need of coordination and collaboration on a local and worldwide level. In certain instances, it may be difficult to ascertain the geographical location of some of these assets and, therefore, the authorities that have jurisdiction over such assets.



A consistent approach and international cooperation will be key to preventing and minimizing speculative trading and great promise inconsistencies in the application of statutes and regulations. This is due to regulation should be tailored to the specific features of each jurisdiction. However, this does not negate the importance of a consistent approach. In light of the fact that crypto-assets can be accessed on a global scale and in multiple countries at once, it is possible that cross-border regulatory arbitrage will become possible as a result of domestic regulatory measures in the USA and overseas regulatory measures in other countries [22, 57].

Declarations

Conflict of interest The author states that there is no conflict of interest.

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