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The Impacts of Stablecoins and the Risks to Financial Stability

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Abstract

The Crypto-assets ecosystem has probably been the subject that got more attention lately. The technology through it has offered many different possibilities that can impact society in almost any area. What started as an alternative to the inflation with Bitcoin now is a universe of possibilities with the NFTs, Metaverse, Smart contracts, Stablecoin, etc.

The stablecoins came as an option to the volatility problem faced by Bitcoin and other cryptocurrencies. Instead of trying to substitute currencies or assets, they appeared to be a digital alternative to the users who would have the benefits of the cryptography, lower fees, and faster transactions but without dealing with the price fluctuation of the crypto market.

Even though it seems to be a great solution to offer as means of payment and store of value a digital coin that could be pegged to the fiat currencies, commodities, and crypto-assets, some concerns must be addressed. It is undeniable that stablecoins are the result of innovation and freedom, but it does not mean they should remain outside of the scope of the law.

This class of crypto-asset is being adopted by businesses and citizens daily worldwide, thus the lawmakers are under pressure to ensure that offers a safe environment to them and avoid risks to the financial stability.

One of the concerns that lawmakers are facing is the liquidity run that could happen if a stablecoin issuer has a problem that affects its credibility. The thesis aims to give explanations of the causes, risks, and solutions to this problem that could affect the stability of the financial system.

Another situation that could come up is the destabilization of the financial system caused by the massive adoption of stablecoins. The problems could be from scarcity of safe assets to banks funding. These situations are also addressed in the paper and developed in more depth.

Since there is no specific regulation yet, it is necessary to develop an overview of which scope they could fall into and understand the implications on financial stability. This thesis will explain the differences if they are considered in the same legal framework as investment funds, banks, or e-money issuers.

Finally, it will provide a conclusion of what possible solutions the lawmakers could adopt in future regulations to minimize the risks of financial stability due to the creation of stablecoins.

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Preface

The working experience with crypto-assets and the enthusiasm to see the adoption of new technologies to benefit people inspired me to write this thesis about the risks to financial stability.

Also, I would like to demonstrate my admiration for the Master’s Programmes at the Faculty of Law at Lund University. I would like to express my gratitude to Professor Julian Nowag for his guidance during the work of this paper.

Abbreviations

BTC	Bitcoin
CBDC	Central Bank Digital Currency
DeFi	Decentralized Finance
DLT	Distributed Ledger Technology
ECJ	European Court of Justice
EFTA	European Free Trade Association
EMD	Electronic Money Directive
EU	European Union
MEP	Member of the European Parliament
MiCA	Markets in Crypto-Assets Regulation
MMF	Money Market Funds
NBA	National Basketball Association
NFT	Non-Fungible Token
PAXG	Pax Gold
TRUST	Transparency of Reserves and Uniform Safe Transactions
UCITS	Undertakings Collective Investment in Transferable Securities
UK	United Kingdom
UN	United Nations
US	United States of America
USDC	USD Coin
USDT	Tether
UST	TerraUSD
VAT	Value Added Tax

1 Introduction

With the advent of the internet in the early past, cryptocurrencies will change the world in the upcoming years, and the environment where business works will modify dramatically the relationship between undertakings and clients or the governments.

At first glance, the cryptos are seen as a digital currency that is protected by cryptography. [1]In other words, this characteristic provides a high level of protection against counterfeiting or double-spend.[2] This is one of the possibilities that arise, which could transform how the EU market works. Since a currency is not issued by a central bank, it cannot be controlled or manipulated by any government.[3]

Thus, most of them are decentralized and work through the blockchain, which is a distributed ledger technology (DLT) that saves the information of each transaction and duplicates it to distribute to the whole network of the participants on the blockchain.[4]

These transactions get an immutable signature called ‘’hash’’, which provides the safety of the service because if there is an attempt to modify one chain, the others will recognize it and alert the system.[5] This means that if someone tries to hack it, all the chains will need to be changed and it is nearly impossible.[6]

Since they assured this safe environment, what started as a digital currency with the Bitcoin – created by Satoshi Nakamoto after the financial crisis in 2008 as an alternative currency to the US Dollar evolved into Smart contracts which developed many areas as DeFi’s and tokens for example.

All these projects represent different functions from the most diverse areas. The impacts of them will affect not only the governments but many industries such as games, finance, law, health, social media, etc. That is why this subject is so important to be aware of.

Due to these reasons, the European Union (EU) sees this situation on two sides, promising and problematic.[7] To protect the consumers, companies,

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[1] Jake Frankenfield, ‘Cryptocurrency’ (Investopedia, 11 January 2022) <Cryptocurrency Definition (investopedia.com)> accessed 11 April 2022
[2] Ibid
[3] Ibid
[4] ’What is a Blockchain?’ (EuroMoney) < Blockchain Explained: What is blockchain? | Euromoney Learning> accessed 11 April 2022
[5] Ibid
[6] Ibid
[7] ’Cryptocurrency dangers and the benefits of EU legislation’(European Parliament, 08 April 2022) <https://www.europarl.europa.eu/news/en/headlines/economy/20220324STO26154/cryptoc

and markets and at the same time boost the development and the usage of new technologies, the EU is working on a regulation to increase the benefits and restrain the threats[8].

EU understands that a great part of the attraction of the users is the avoidance of a central institution, but this feature combined with an absence of regulation makes the crypto-assets out of the scope of the EU and represents many risks.[9]

Those risks involve consumers, undertakings, and the markets. Since the crypto-assets are not covered by the EU yet, the consumer protection rules cannot be applied.[10] Besides that, another concern relates to the lack of regulation could lead to financial crimes, market manipulation, and financial instability.[11]

On the other hand, the regulation could bring several benefits to the crypto-assets environment. As soon as it comes into force, it will be able to provide legal certainty, protect the parts involved and avoid economic disruptions.[12]

This regulation aims to have a uniform framework for Crypto-assets in the EU[13] to offer more transparency and make the information regarding the risks, costs, and charges of crypto-assets better informed to the clients of businesses that deal with them. Also, it has key provisions for the transactions to be more transparent, disclosure, supervision, and authorization.[14]

Finally, this regulation demonstrates concern about the sustainability between crypto-assets mining and the environment. The MEPs want to include the process of validating transactions in the EU taxonomy which is a hall of activities that strongly affects climate change.[15]

After that, it is possible to visualize how Europe is aiming and seeing crypto-assets. While their concerns focus on regulating it to protect consumers and avoid any financial disruption, they also understand the importance of this new technology for the development of the European Union.

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urrency-dangers-and-the-benefits-of-eu-legislation#:~:text=In%20April%202022%2C%20Parliament%20agreed,terrorist%20financing%20and%20other%20crimes. > accessed 11 April 2022

[8] Ibid

[9] Ibid

[10] Ibid

[11] Ibid

[12] Ibid

[13] 'Cryptocurrencies in the EU: new rules to boost benefits and curb threats' (European Parliament, 13 March 2022) < https://www.europarl.europa.eu/news/sl/press-room/20220309IPR25162/cryptocurrencies-in-the-eu-new-rules-to-boost-benefits-and-curb-threats> accessed 11 April 2022

[14] Ibid

[15] Ibid

Besides that, it is vital to deeply understand the reasons why this class of assets is getting so much attention. Thus, this paperwork will discuss in detail the main topics related to crypto and its possibilities. That part will target to give a better understanding of this environment and how enormous it could be.

Since the world is in a context of globalization, it is impossible to not look outside of the scope of the European Union and understands other points of view. Due to that reason, this thesis will address interesting points that could be adopted by the EU to benefit the population and the crypto environment, in special the stablecoins to avoid the financial risks.

Therefore, it is necessary to make a complete analysis of how this upcoming regulation can influence the adoption of stablecoins in Europe, understanding the legal framework and possible benefits and issues to the financial stability that may arise. Especially because this class of crypto-asset has been getting a lot of attention due to its rapid growth and the latest events.

1.1 Purpose

The purpose of the thesis is to analyze the legal situation that crypto-assets are in right now and the risks to financial stability because of the stablecoins. To fulfill the purpose, this thesis focuses on the next questions:

a) What are the crypto-assets and their possibilities for the future?
b) How stablecoins can destabilize the financial system?
c) What are the possible solutions to minimize the risks and not hinder the usage of stablecoins?

The goal of the thesis is to give an understanding of the crypto environment in the European Union and the potential risks to financial stability due to the popularization of stablecoins. Also, it aims to discuss the possibilities to regulate them and still stimulate the development of this new technology.

1.2 Method

The method chosen to interpret the legislation and case law is the traditional legal one. The sources include EU legislation, academic writings, case law, texts written by crypto specialists, and other legal sources from different jurisdictions.

1.3 Delimitation

The thesis aims to explain the main topics that are related to crypto and will be part of the discussions on regulations. The specifications of each term are outside of the scope of the thesis.

The sources of law are mainly focused on the EU legislation, but to achieve a better understanding of the global context, other legislations will be used. The thesis will not address the procedural or legislative matters, since the legal measures and their effects are the points that are interesting to the discussion.

It will examine the consequences of a possible regulation and the impact it would have on the financial system and monetary policies. The competition law theories will be part of the discussion, but not debated in depth.

Since the theme is newly discussed in the academic writings, the literature chosen is the one that is more related to the European Union framework and also the other jurisdictions that will be part of the paperwork.

2 Crypto-assets and the new possibilities

2.1 Definition of Crypto-assets and their market capitalization

Even though Bitcoin was the first invention that changed the perspective of how we see money, the Blockchain is the tool that is bringing a huge technology change.

In the beginning, Bitcoin was created to have the same role as currency which would avoid the abuse of governments and also the inflation as said before, but the feature of being an open-source project has changed the whole perspective of it. Since anyone could access it and modify the specifications in the way they want, the technology got extremely popular on the internet.[16]

After that, the technology of the blockchain expanded and transformed what was supposed to be a cryptocurrency into an ocean of possibilities, and new projects started to come out of the paper. What was intended to transfer value and funds now became much more complex and demonstrated that the definition of cryptocurrencies was outdated.[17]

It turned out to be only one of the categories of the cryptos. There is not any unanimous definition of what crypto-assets are and it will never be an easy task to do it since this is a constantly updated technology and new features can appear daily. The categories that could be broadly considered for this study are Crypto-assets and tokens as the two biggest divisions and on each topic, the subdivisions will be discussed.[18]

Another important aspect of crypto-assets is how strong their capitalization has been growing. In 2020, the number of crypto-assets was over 5,100 and the total market cap was $250 billion. [19]In April of 2022, there are more

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[16] Marcin Watorek, Multiscale characteristics of the emerging global cryptocurrency market (2020), Elsevier, Multiscale characteristics of the emerging global cryptocurrency market - ScienceDirect > accessed on 13 April 2022)
[17] Ibid
[18] Houben & Snyers, 'Crypto-assets – Key developments. Regulatory concerns and responses (2020), accessed 14 April 2022 https://www.europarl.europa.eu/thinktank/en/document/IPOL_STU(2020)648779
[19] Ibid

than 18,800 of them and the total capitalization is over $1,9 trillion US Dollars.[20]

These numbers demonstrate the adoption and the development of this environment at a fast speed that in 2 years the number of existing crypto-assets is more than triplicate and the market capitalization is almost 8 times bigger. Thus, crypto-assets are a reality and due to these numbers, it is impossible to ignore them and that is the reason why this subject raises more discussions in governments and among people.

Even though the amounts are raising significantly, the lack of regulation and legal certainty still makes a lot of people and businesses out of this revolutionary technology, especially in Europe. It demonstrates how crucial is to better explain the concepts and regulate the system to create a legal framework to have mass adoption. That debate is already in place and will be developed in this thesis in the next chapters.

2.2 Cryptocurrency

2.2.1 ''Non backed'' Cryptocurrency

Cryptocurrencies are the category that is most famous between people and their function is basically to compete against the fiat. For example, Bitcoin could be used to buy or sell goods, pay salaries, and be effectively used in society as an instrument that would protect people from inflation.

Besides that, there is another possibility that would not only try to surpass the fiat but work together as a store of value. Instead of using Bitcoin in a transaction of buying and selling, it could be used as collateral for getting loans anywhere in the world. It means that if a person or an undertaking owns BTC, they could get a loan and have access to finance anywhere.

That does not obligate the borrower to own something in the specific place where to give as a guarantee for the lender, thus it would proportionate the access to markets anywhere in the world. For instance, in places which are debt-based countries is hard to get credit, that would be an alternative solution for businesses and people.

Also, there are other altcoins, which is the name of the cryptos that came after Bitcoin that have interesting ideas as Litecoin, which is a version of BTC with some improvements such as reducing the time of the transactions

[20] Data derived from https://coinmarketcap.com/ on 14 April 2022

to happen.[21] And Ripple is a protocol that is focused on connecting banks to use their coin instead of fiat to do international transfers.[22]

Those are examples of ‘’non-backed’’ cryptocurrencies since they do not work as a representation of any underlying asset, claim, or liability. [23]Due to their high volatility, it is difficult to work as a form of payment since the stability of their value could not be guaranteed. [24] To solve this situation, the developers created the concept of stablecoins.

2.2.2 Stablecoins

On the other hand, in ‘’non-backed’’ crypto, the stablecoins represent an asset or a group that can maintain their value stably. [25]Instead of being decentralized as the other type of cryptocurrency, they have a proper issuer or an underlying asset that supports their value. It means that the value of the stable coins is not perceived per se, but due to something that keeps their value. [26]One example of them is the Tether, which issues tokens hosted by Ethereum and Bitcoin blockchain by an undertaking called Hong Kong Tether Limited.[27] This stablecoin aims to keep the value of each token the same as the US Dollar, thus for every token they issue, they have one US Dollar in their reserves.[28]

Due to the similarities to the tokens, the stablecoins are confused as such, but they do not have a specific function or objective as the tokens beyond providing any form of exchange.[29]

2.3 Tokens

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[21] Marcin Watorek, Multiscale characteristics of the emerging global cryptocurrency market (2020), Elsevier, Multiscale characteristics of the emerging global cryptocurrency market - ScienceDirect > accessed 13 April 2022

[22] Ibid, accessed 13 April 2022

[23] Houben & Snyers, ’Crypto-assets – Key developments. Regulatory concerns and responses (2020), accessed 14 April 2022 https://www.europarl.europa.eu/thinktank/en/document/IPOL_STU(2020)648779

[24] Ibid

[25] Ibid

[26] Ibid

[27] Silverman, Jacob (13 January 2021). *"Is Tether Just a Scam to Enrich Bitcoin Investors?"*. The New Republic. *ISSN* *0028-6583*

[28] Tan, Andrea; Robertson, Benjamin; Leising, Matthew (15 October 2018). "Why Crypto Traders Are So Worried About Tether: QuickTake Q&A". Bloomberg.

[29] Houben & Snyers, ’Crypto-assets – Key developments. Regulatory concerns and responses (2020), accessed 14 April 2022 https://www.europarl.europa.eu/thinktank/en/document/IPOL_STU(2020)648779

In this environment is always complicated to define specific categories since it keeps mutating daily, but the regulatory institutions normally see it as investment or utility tokens. [30]Besides them, there are the Nonfungible tokens, known as NFT that have been getting a lot of attention lately.

The tokens are directly related to the stablecoins since they are utilized to replicate the value of fiat or a basket of them. It will be explored in the upcoming sections, but it is fundamental to understand how they work and why they can be part of the ecosystem that can cause risks to financial stability.

2.3.1 Investment Tokens

Investment tokens have the characteristic to offer their holders rights and entitlements.[31] These kinds of tokens have the aim to raise funds or also they can be referred to as tokens that represent other assets that went through a process of tokenization.[32]

2.3.2 Utility Tokens

Different from the investment tokens, this type of token offers access to applications, products, or services that are provided in the framework developed by the blockchain. [33]Instead of working as a means of payment as cryptocurrencies, their main focus when issuing the coins is to raise capital in exchange for using their technology.[34]

One example is the Chiliz, which is a fan token related to soccer clubs. The holders of it get access to voting on soccer kits, interactions with the players, and many more actions that create a connection between the holder and their specific soccer club.

2.3.3 Non-Fungible Tokens

The Non-fungible Tokens, popularly known as NFTs, are the latest trending topic in the crypto world. They came up from the smart contracts of

[30] "Report with advice for the European Commission on crypto-assets", January 2019, https://eba.europa.eu/eba-reports-on-crypto-assets
[31] Houben & Snyers, 'Crypto-assets – Key developments. Regulatory concerns and responses (2020), accessed on 14 April 2022
https://www.europarl.europa.eu/thinktank/en/document/IPOL_STU(2020)648779
[32] Ibid
[33] Ibid
[34] Ibid

Ethereum and have a specific characteristic that gives them an intrinsic value.

Different from the Bitcoin which the coins are equal and a person cannot distinguish one from another, the NFTs are unique. [35]It means that each non-Fungible token has its code and the creator can demonstrate the originality through certificates generated by the blockchain.

That technology provided new opportunities for creators of songs, images, videos, and many forms of art to produce their work as digital assets.[36] Due to that token, a huge market has been brought up and the amounts of money exchanged on that is exponentially growing.

The Non-Fungible Tokens reached impressive numbers. For instance, the market cap is over 36 billion US Dollars, which represents almost 1,9% of the Crypto market cap.[37] These values from a recently discovered market demonstrate how important it is and that lawmakers and governments should not ignore this matter.

This also represents an opportunity for businesses to expand their revenues by exploring this activity. The NFTs offer different approaches for the most variable types of companies from the game industry to sports. One example is the NBA Top Shot which was used to trade digital videos of basketball moments.[38]

Due to the scarcity provided by the NFTs, there is also the possibility for brands of different kinds of business to aggregate value and increase their profits. The Non-fungible tokens go beyond the arts, they can give access to digital or physical events to the holders.[39]

Besides that, it adds the possibility to use as a form of investment. As objects of art or even access to an event, the NFTs can offer extremely high returns for the creator and the owners. One example is the NFT of the Bored Ape Yacht Club bought by Neymar, which spent more than 1 million US dollars to have access to this membership.[40]

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[35] Wang et all, 'Non-Fungible Token (NFT): Overview, Evaluation, Opportunities and Challenges' (2021). Cornell University < arXiv:2105.07447v3 > accessed 15 April 2022
[36] Ibid
[37] Data derived from https://coinmarketcap.com/ 14 April 2022
[38] Wang et all, 'Non-Fungible Token (NFT): Overview, Evaluation, Opportunities and Challenges' (2021). Cornell University < arXiv:2105.07447v3 > accessed 15 April 2022
[39]'Neymar joins the celebrity NFT club with his own Bored Ape' https://www.lifestyleasia.com/sg/gear/tech/neymar-joins-the-celebrity-nft-club-with-his-own-bored-ape/ Accessed 16 April 2022
[40] Ibid

3 Regulatory Concerns about the Stablecoins and Crypto-assets

The surge of new technologies not only brings benefits to society but also raises some concerns. This chapter will develop in more depth what challenges the EU will face to regulate the crypto-assets and offer the businesses and consumers an environment that ensures financial stability and a higher level of protection without hindering the freedom and competition that it has.

The European Union has already understood the importance of the digital world and has been moving towards the direction of it as one of its top priorities.[41] In that ambiance, where the EU is focusing on policies that will give support to new technologies, expand new horizons for consumers and undertakings, digitalization of public services, and enhance workers' digital skills,[42] the crypto-assets are integrated into it and that explains why the regulation of this subject is necessary.

3.1 EU Regulation

The initial mark for regulating the crypto-assets in the European Union was introduced in 2020. The Markets In Crypto-assets (MiCA) regulation will provide the crypto industry a legal framework by regulating the ones which are not being reached by the current legislation

In March of 2022, the Economic and Monetary Affairs Committee confirmed the negotiating position on rules for crypto-assets.[43] The MEPs combined to draft a regulation that will aim for the consumer protection, supervision, and environmental sustainability of crypto-assets.[44]

This topic aims to demonstrate what subjects could affect stablecoins in future regulation, especially what directly relates to them as the scope of the

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[41] 'Digital transformation: importance, benefits and EU policy' (European Parliament, 27 January 2022) https://www.europarl.europa.eu/news/en/headlines/priorities/digital-transformation/20210414STO02010/digital-transformation-importance-benefits-and-eu-policy > accessed 16 April 2022

[42] Ibid

[43] 'Cryptocurrencies in the EU: new rules to boost benefits and curb threats' (European Parliament, 13 March 2022) < https://www.europarl.europa.eu/news/sl/press-room/20220309IPR25162/cryptocurrencies-in-the-eu-new-rules-to-boost-benefits-and-curb-threats> accessed on 19 April 2022

[44] Ibid

law, financial stability, and monetary policies. Also, it is important to mention the other concerns that indirectly touch the stablecoins environment.

3.1.1 Scope

The framework to regulate crypto in the European Union is under construction by the authorities. The commission understands the necessity to develop a regulation that will harmonize the rules of the EU.

Nowadays, the situation demonstrates a fragmentation of the rules. The situation is so delicate that some member states such as Malta and Germany have already passed laws regarding regulating crypto-assets.[45]

The lack of regulation leaves them out of the scope of the EU rules, and this implies many consequences to the European Union. From one side, the consumers and the investors are facing many risks since the absence of regulation leaves them unprotected.[46]

Besides that, another concern is that the diversity of regulations from different EU members raises the problem of distorting the internal market.[47] Since they do not see the crypto-asse in a concise form, it makes it difficult for the service providers to expand their business in other member states. Furthermore, this situation hinders the competition at the same time offers space for regulatory arbitrage.[48]

Another important factor for the EU to regulate crypto-assets is to enforce the principle of Primacy. It means that when a discussion appears between a national and EU law, the European Union interpretation will prevail. This principle aims to give the EU the power to enforcement of its law to achieve its goals. This principle was developed by the case law through many cases as C-6/64 *Costa v. Enel, Internationale Handelsgesellschaft mbH v Einfuhr- und Vorratsstelle fur Getreide und Futtermittel (C-11/70) and Amministrazione delle Finanze dello Stato v Simmenthal SpA (C-106/77).*

A uniform regulation to the EU member states is also interesting to offer a better control against money laundering and terrorist financing. Since it will

[45] 'Crypto Travel Rule in European Union by European Banking Authority (EBA) - https://notabene.id/world/eu#:~:text=Is%20cryptocurrency%20legal%20in%20the,rates%20of%200%20to%2050%25.> Accessed 18 April 2022
[46] Stagmena, Carla. 'Proposal for a regulation of the European Parliament and of the council on markets in Crypto-assets' (European Parliament, 24 March 2022) https://www.europarl.europa.eu/legislative-train/theme-a-europe-fit-for-the-digital-age/file-crypto-assets-1 Accessed 18 April 2022
[47] Ibid
[48] Ibid

cover the European Union, it will make it more difficult for criminals to find gaps between legislations and get the advantage of the fragmentation.[49]

Their characteristics of being private and the features of being transferable, exchangeable and tradable from any country[50] make the crypto-assets a challenge to the governments, and offering a regulation through the European Union is a first step to facing this new reality that will probably require a higher standard in the future that will include places outside of the EU.

The stablecoins are also involved in this vacuum of legislation and still await the lawmakers to regulate the sector offering a clear definition of what is authorized and a specific regulation that indeed gives them a legal framework. The next chapter will have a section that addresses the actual discussions about it and the reasons why the issuers cannot fall into the scope of investment funds, banks or e-money emitters.

3.1.2 Financial Stability

Another situation that should be addressed is how stablecoins could endanger financial stability and the Monetary policy. There are many risks to that and could threaten the consumers and the banks and central banks.

Since some stablecoins are backed by safe assets, if there is a massive buying on those assets, markets could run out of liquidity on these and create instability.[51] That could cause panic and fear in the consumers.

On the opposite side, if the stablecoins get popular and the population starts to visualize them as a better store of value than the Euro, for example, this could lead people, during times of economic turbulence, to put their money on stablecoins and cause more instability to the Eurozone.[52]

Besides that, the mass adoption of stablecoins would automatically reduce the retail deposits on banks, making them depend more on different sources to fund. [53]In other words, the banks would be obliged to find more costly and volatile ways to fund themselves and this could bring the risk of being underfunded.[54]

The problem that could cause instability to the financial framework is the risk of schemes caused by stablecoins. If there is a stablecoin that has its

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[49] Houben & Snyers, 'Crypto-assets – Key developments. Regulatory concerns and responses (2020), accessed on 14 April 2022 https://www.europarl.europa.eu/thinktank/en/document/IPOL_STU(2020)648779
[50] Ibid
[51] Ibid
[52] Ibid
[53] Ibid
[54] Ibid

confidence questioned, it could lead people to take their money out. This would create liquidity trouble for the banks that back the assets for the stablecoin.[55]

3.1.3 Monetary Policy

The benefits of using stablecoins are many, especially the lower fees in transactions between different countries.[56] But the mass adoption of them may face the central banks an issue that was never seen before, the control of monetary policy.

If the payments and the usage of the stablecoin start to get very popular, the central banks could not control the monetary policy, and the private undertakings that administer the stablecoins could be in charge of that. This situation could bring two things. First, the companies have no experience in administering a monetary policy,[57] and in the European Union, this could impact more than 400 million people. [58]Second, these private companies do not need to proceed with measures that would be in the interest of the population, thus the monetary policy could be in the hands of an undertaking that seeks for maximizing its interests.[59]

Due to that, the stablecoins industry could control the interest rates and the credit conditions for their good. Also, as a consequence of that, the capital control would be weakened, which means that during times of financial crisis, the monetary policies that could protect the capital from moving to other places would be affected.[60]

3.1.4 Other Concerns

The subject that has been participating in any discussion about industries lately is how the environment could be affected by that, and the crypto would not be out of it.

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[55] Ibid
[56] Ibid
[57] Ibid
[58]' EU population in 2020: almost 448 million.' (Eurostat, 10 July 2020) < https://ec.europa.eu/eurostat/documents/2995521/11081093/3-10072020-AP-EN.pdf/d2f799bf-4412-05cc-a357-7b49b93615f1#:~:text=On%201%20January%202020%2C%20the,States%20on%201%20January%202019.> Accessed 20 April 2022.
[59] Houben & Snyers, 'Crypto-assets – Key developments. Regulatory concerns and responses (2020), accessed 19 April 2022 https://www.europarl.europa.eu/thinktank/en/document/IPOL_STU(2020)648779
[60] Ibid

Some crypto-assets, for example, the Bitcoin, need their blockchain to pass a validation process that consumes a lot of electricity.[61] BTC uses a process of consensus called ‘’Proof of work’’ and this involves a puzzle that should be solved by the network users to add a validated block to the chain.[62] This process to avoid double-spending and manipulation generates a carbon footprint[63] and brings a lot of concerns to the MEPs.

To develop a European Union with a future that preserves the environment and nature, the MEPs target the carbon footprint which is generated by mining crypto. This consumption in 2018 was similar to the expenditure of countries such as Jordan and Sri Lanka.[64]

This is the reason why MEPs are asking the commissioners to include Crypto-assets mining as an activity that supports climate change.[65] The reaction about that targets the European Green deal which expects to achieve zero net emissions by 2050 and at least 55% in 2030.[66]

Besides that, the Taxation also takes place in this discussion. This subject brings concern about the profit that is made with them. There is an understanding that it should be where the value is created[67]. Thus, businesses and people may have to deal with it where they made money.

Finally, there is another issue that concerns lawmakers for many reasons, which is cyber security. The relationship between crypto-assets and cyber security is very close. These attacks are increasingly common on crypto exchanges or providers, and this is a concern that may hinder the adoption of new users.

Beyond protecting the customers and bringing more safety to the ecosystem, the attention in cyber security is focused on avoiding the funding of criminal activities. The activities vary from hacking exchanges to ransomware attacks the money stolen which are also used to finance terrorism.

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[61] Stoll, Christian, Lena Klaaßen, and Ulrich Gallersdörfer. "The carbon footprint of bitcoin." *Joule* 3.7 (2019): 1647-166]1.
[62] Ibid
[63] Ibid
[64] Stoll, Christian, Lena Klaaßen, and Ulrich Gallersdörfer. "The carbon footprint of bitcoin." *Joule* 3.7 (2019): 1647-166]1.
[65] ’’Cryptocurrency dangers the benegits of EU legislation.’ (European Parliament, 08 April 2022) https://www.europarl.europa.eu/news/en/headlines/priorities/digital-transformation/20220324STO26154/cryptocurrency-dangers-and-the-benefits-of-eu-legislation > accessed 21 April 2022
[66] ’’EU responses to climate change.’’ (European Parliament, 29 October 2021) https://www.europarl.europa.eu/news/en/headlines/priorities/climate-change/20180703STO07129/eu-responses-to-climate-change> Accessed 21 April 2022
[67] ’MEPs lay out plans for a fairer tax system fit for the digital age’ European Parliament, 29 April 2022) < MEPs lay out plans for a fairer tax system fit for the digital age | News | European Parliament (europa.eu) > ; Accesssed 16 April 2022

The stablecoins and the non-backed ones like Bitcoin and Litecoin are the objects of interest of these attackers since they can rapidly transfer the amount worldwide without exposing themselves[68].

3.2 MiCA Proposal

The European Union is aware of the risks of an unregulated market. Due to that reason, the MiCA proposal has been discussed by lawmakers and institutions to address these concerns.

The proposal aims to bring integration between digital finance and the European Union to boost innovation and minimize the risks.[69] The EU understands the importance of connecting businesses and citizens to the newest technologies and bringing a digital revolution.[70]

To respond to the demands of society, the proposal has four goals. First, it aims to bring legal certainty to the crypto-assets in the EU, as seen before, most of them fall outside of the scope.[71] Second, to support innovation and stimulate the development of this technology, it is crucial to create a friendly environment where fair competition and legal frameworks are secured.[72] Third, consumer protection brings credibility to the crypto-assets and promotes their usage at the same time reducing the inherent risks of financial activities.[73] The fourth goal is to ensure financial stability and it's closely related to the stablecoins and their possibility to be widely used in a near future.[74]

3.2.1 Legal Certainty

The lack of legal certainty hinders the crypto-assets to achieve their full potential in the European Union single market. They do not benefit from its advantages because of the fragmentation of the legislation, the providers are forced to deal with different regulatory frameworks from other member states and not exercise the cross-border services freely.[75]

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[68] Tony OWUSU. ''Crypto crime hit an all-time high in 2021 as adoption increases''. (The Street). https://www.thestreet.com/investing/cryptocrime-climbed-sharply-in-2021 accessed on 19 April 2022.
[69] Proposal for a REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on Markets in Crypto-assets, and amending Directive (EU) 2019/1937, Mem. 1
[70] Ibid
[71] Ibid
[72] Ibid
[73] Ibid
[74] Ibid
[75] Proposal for a REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on Markets in Crypto-assets, and amending Directive (EU) 2019/1937, Mem. 2

Aiming to solve this issue, the proposal bases itself on Article 114 TFEU, which states the competence to approximate the laws of member states to establish and function the EU single market.[76] Thus, the proposal would approximate and harmonize the legislation to promote a better integrated single market.

Also, being under the EU legal framework would increase the protection of the consumers since it would be under a set of requirements that would not let them unprotected and dependent on member state's regulations.[77] The principle of subsidiarity would bring benefits to the users and ensure financial stability.

Another important principle that is presented in the proposal is proportionality. It clearly says that EU legal actions should not exceed the necessary to achieve the goals of the proposal and only act on the areas where member states are not capable to achieve by themselves. One good example of proportionality is the higher level of requirements that stablecoins may deal with since their possibilities of impacting the society and imposing risks to the financial stability.

3.2.2 MiCA Proposal on Stablecoins

The Commission understood that the best form to regulate the stablecoins is by combining two types of regulation. A bespoke legislative regime that would address the risks of financial stability and not hinder the development of newcomers allied to the Electronic Money Directive to the stablecoins that could fit into this regulatory framework.[78]

The MiCA proposal would hinder any stablecoin to be offered in the EU if they are not authorized and published in a white paper approved by the national competent authority.[79] It would also imply to the issuers a few obligations to protect the consumers and avoid the financial risks to the financial stability.

To provide a clear perspective to the investors, the information and the marketing would be regulated, and the issuers would have to notify the authorities about changes in the management body, the funds, reserve of assets comply with rules of conflicts of interest, governance arrangements, and custody of the reserve assets.[80]

[76] Ibid
[77] Ibid
[78] Ibid
[79] Proposal for a REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on Markets in Crypto-assets, and amending Directive (EU) 2019/1937, Mem. 3
[80] Ibid

Besides that, it would obligate them to only invest the reserve assets in low-risk and secure assets. It would improve the credibility and the better functioning of the financial system. To boost even more the confidence on them, the MiCA proposal aims to grant minimum rights to the stablecoin holders in case of the issuer does not offer direct redemption.[81]

Targeting to avoid the destabilization of the financial system, the proposal aims to set criteria for the European Banking Authority to determine if a stablecoin is significant or not.[82] This situation would require the significant stablecoin issuers to meet extra requirements to not disrupt the ecosystem, such as own fund requirements, liquidity management policy, and interoperability.[83]

Even though the MiCA proposal brings benefits, the absence of defining what stablecoins are raises some concerns. The text talks about two kinds of tokens that perform as means of payment, e-money and asset referenced. This approach does not seem to be the best since it could raise the risk of letting new kinds of tokens outside of the scope and have different implications for regulating them. For instance, the lack of a specific definition could result in future legal disputes and brings uncertainty to an already mutable environment.

[81] Ibid
[82] Ibid
[83] Ibid

4. Stablecoins: Benefits to the population and risks to the financial stability

After giving an overview of the crypto-assets and the issues that worry lawmakers about them, it is vital to develop a further understanding of one of the greatest concerns for the governments, the risk of financial stability caused by stablecoins.

As explained in the previous chapters, stablecoins are defined as a digital currency that is pegged to an asset like the US Dollar, Euro, or commodities that are less volatile than the unpegged ones as the BTC or Litecoin for example.[84] This stability offers the customers new possibilities to use as a means of payment and as a store of value, thus the adoption of their usage has been growing up lately.

4.1 Stablecoins Taxonomy

The stablecoins, even though they have similar objectives as the stability, for example, their form of functioning can vary greatly. They could be classified as Fiat-backed, pegged to commodities, pegged to cryptocurrencies, and the algorithmic stablecoin.[85]

4.1.1 Fiat-backed

This is the most famous type of stablecoin and works similarly to a digital version of a fiat currency. The collateral that supports the value of this stablecoin is the fiat that is in reserve by the issuer or with a financial institution[86]. The interesting fact is the companies that issue this kind of stablecoin must only emit the number of tokens corresponding to the amount of fiat that they have in reserve.

[84] Coinbase, 'What is a stablecoin?' (*Coinbase*, 2022) <https://www.coinbase.com/learn/crypto-basics/what-is-a-stablecoin> accessed 10 May 2022
[85] Carvalho Carla, 'Vale a pena investir em stablecoins?' (*Blog do Yubb*, 2021) <https://blog.yubb.com.br/vale-a-pena-investir-em-stablecoins/> accessed 10 May 2022
[86] Cryptopedia staff, 'What Are Stablecoins?' (*Gemini*, 10 May 2022) <https://www.gemini.com/cryptopedia/what-are-stablecoins-how-do-they-work#section-stablecoin-taxonomy> accessed 17 May 2022

The most used stablecoin and the third biggest crypto-asset in market cap[87], the Tether (UDST) is an example of this off-chain asset. The issuers peg the value of their token paired one to one with the fiat and supports by the reserves. For example, if Tether has 10 billion US dollars, they could issue 10 billion tokens to be used as a digital currency.

4.1.2 Crypto-backed

This category is defined as the stablecoins that are backed by other cryptocurrencies as their collateral[88]. Different from the fiat-backed ones, which have a central issuer, the crypto-backed stablecoins are on-chain and use smart contracts[89].

The form to purchase this stablecoin is different because the usage is based on locking your crypto-asset in a smart contract that issue the tokens of the respective value and does the opposite direction when is intended to withdraw the collateral amount[90]. They have another different feature to protect the ecosystem against fluctuations in price. For example, if a person wants to get ten thousand dollars of DAI stablecoins, he/she would have to deposit twenty thousand dollars of Ether to support possible falls into the price of it. But if it has a strong move and goes below the threshold, the collateral is paid back, and the collateralized debt position is liquidated[91].

4.1.3 Commodity-backed

This kind of stablecoin is used as its collateral physical assets like gold, silver, oil, and real state[92]. They fluctuate with the price of the collateral asset they are pegged to. For instance, if the gold goes down in its value, the stablecoin that supports it will do the same.

That may bring up a question of why a person would have it instead of the asset directly and the answer is that this stablecoin makes it easier to have access to the asset worldwide and where having it is difficult[93].

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[87] Data derived from: https://coinmarketcap.com/ accessed 17 May 2022
[88] Cryptopedia staff, 'What Are Stablecoins?' (*Gemini*, 10 May 2022) <https://www.gemini.com/cryptopedia/what-are-stablecoins-how-do-they-work#section-stablecoin-taxonomy> accessed 17 May 2022
[89] Ibid
[90] Ibid
[91] Ibid
[92] Ibid
[93] Ibid

4.1.4 Algorithmic Stablecoin

The Algorithmic stablecoin is by far the most controversial kind of stablecoins and it justifies that fame. Differently from the others, it does not use fiat, commodity, or crypto-assets as collateral[94]. Their functioning is based on algorithms that provide price stability by using smart contracts to control the supply and demand of tokens in circulation[95].

The most famous case, the TerraUSD, of algorithmic stablecoin collapsed recently and demonstrated why it brings so many risks to financial stability.[96] Also, the algorithmic stablecoins will not be allowed to integrate into the UK financial system and there are many discussions in the US and EU about it. There are a few reasons why lawmakers see it in this way.[97]

First, the system depends on a support level of demand, otherwise, it will fail. In other words, if the demand falls below the threshold the whole ecosystem collapse[98].

Second, the structure of this type of stablecoin relies on market parties to work properly[99]. The independent actors get incentives to keep the price stable, but this dependence without any legal obligation could lead to a collapse in the price stabilization[100].

Last but not least, the algorithmic stablecoins could suffer from a loss of credibility and it could form a massive run into the token and destabilize the price strong enough to break down the entire system[101].

The case that was mentioned above and supports these arguments is the Terra protocol which was used to create the stablecoin TerraUSD and the token Luna. The protocol worked between the interaction of the stablecoin and the token while the token would be burned or issued to maintain the stablecoin pegged to the same value as the US dollar.

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[94] Ibid
[95] Ibid
[96] Gilbert Aleksandar, 'UK Proposes Regulations That Would Recognize Stablecoins As A Form Of Payment' (*Yahoo Finance*, 16 May 2022) <https://finance.yahoo.com/news/uk-proposes-regulations-recognize-stablecoins-022445828.html?guccounter=1&guce_referrer=aHR0cHM6Ly93d3cuZ29vZ2xlLmNvbS8&guce_referrer_sig=AQAAAKQRF_zsnRzXFORQByBu5bBzKs0cQlPzKGfT6avS4YtJY_x5RxWzXtnbdO9sLijtPYWcmfbubCdNqahQPMT56pGtjgieNlxCqddVfVspPBkwOLn-tgrR4Q1grooxkqmGId8d4VWF2gvYVPNmYERcUdDoDTV81OXmqZddbLdrMA8D> ac cessed 17 May 2022
[97] Ibid
[98] Clements, Ryan, Built to Fail: The Inherent Fragility of Algorithmic Stablecoins (October 28, 2021). 11 Wake Forest L. Rev. Online 131 (October 2021), Available at SSRN: https://ssrn.com/abstract=3952045 or http://dx.doi.org/10.2139/ssrn.3952045
[99] Ibid
[100] Ibid
[101] Ibid

As demonstrated as an issue, the demand has fallen strongly and it caused an unbalancing situation that made the protocol issue a lot of Luna to compensate, but it caused devaluation on the crypto-asset which contributed to the catastrophic event. Finally, the users started trying to escape this collapse causing a run that buried the project and reduced it to almost no value.

Even though it seems to be paradoxical, the stablecoins could represent a risk of instability to the financial system and this matter will be explored in detail. They already represent an important part of the crypto-assets industry with a market cap that hits almost 200 billion US dollars[102] and these numbers will rise as their popularity grows.

Attached with the benefits, some risks come with them, for example, liquidity runs and unfunded banks that are objects of concern.

4.2 The Use of Stablecoins

The stablecoins were created as a response to the high volatility of the non-backed cryptocurrencies such as Bitcoin for example. The crypto ecosystem was demonstrating the necessity to bring a solution for transactions and commerce that occur daily and at the same time, it could offer the flexibility of the digital assets.[103] This combination resulted in stablecoins which can provide for the users stability on the currency since they are backed by reserve assets, lower fees, and faster transactions in the digital world. [104]Besides that, it evolved to different functions as a store of value, another possibility to earn interest, and owning safe assets worldwide. This section will be dedicated to demonstrating these possibilities in more detail.

4.2.1 Form of Payment

As known as the most popular function of crypto-assets, the form of payment is also the main utility of stablecoins. When they work as expected, the volatility is minimized and offers to the users a prediction of its value, enabling them to make payments and trades with almost 100% of certainty that it will not change rapidly as other cryptocurrencies.

This feature is one of the most important reasons why they got so popular, especially during the pandemics when the other coins were fluctuating a lot.

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[102] Data derived from: https://www.statista.com/statistics/1255835/stablecoin-market-capitalization/ accessed 10 May 2022

[103] Coinbase, 'What is a stablecoin?' (*Coinbase*, 2022) <https://www.coinbase.com/learn/crypto-basics/what-is-a-stablecoin> accessed 10 May 2022

[104] Ibid

These stablecoins that can reach a global scale offer the possibility to meet the needs of fast, cheap, and international trades which the current fiat or other cryptocurrencies would not be able to.

Beyond that, stablecoins are an instrument of globalization due to their possibilities of rapid transactions worldwide and with fees that are considerably lower than regular ones with fiat money.

4.2.2 Store of Value

Besides being a form of payment, stablecoins are an interesting tool for the users who want to use them as a store of value. Due to their characteristic of pegging their value to a reserve asset, it can offer to users to hold them in their digital wallets. This feature opens a wide range of benefits to the consumers.

First, this form of digitally having reserve assets gives people the chance to have Euro, US Dollar, Gold, and many more reserve assets without needing a bank or brokerage account. The easy way to buy, sell, transfer, and store them democratizes access to these currencies which could be something unthinkable in many countries with bank accounts.

Beyond that, it gives access to people who are unbanked or underserved with financial services. Another important fact is that more than 1.7 billion in the world people suffer from these problems, but approximately 65% of them have smartphones[105], one device would be enough for them to fulfill their needs and have access to the many financial instruments.

The chance of having a stablecoin as a store of value goes further than only giving access to it, sometimes it turns out to be a necessity. In countries where the currency is unstable and suffers a process of constant devaluation, the possibility of purchasing reserve assets in form of stablecoins can work as a hedge against inflation. The Argentina case is a perfect example of it, as mentioned before, the depreciation of the Peso compared to the US dollar has hit all-time highs in the past years and the government has limited the population to buy foreign currency.[106] The advent of stablecoins enables the Argentinians to protect themselves against the abuse of the state and the loss of purchasing power.

The stablecoins can also perform another task as a store of value, on investments. They can generate profits for the owner of them as a means of

[105] Cœuré Benoît et al , 'Investigating the impact of global stablecoins' (G7 Working Group on Stablecoins, October 2019) <https://www.tresor.economie.gouv.fr/Articles/5f8c26f2-a2cd-4685-ba82-fa9e4d4e5d67/files/d10fb97f-a9a6-472b-842a-8b279e8863c4> accessed 11 May 2022

[106] Moreno, Elena Christine. "Bitcoin in Argentina: inflation, currency restrictions, and the rise of cryptocurrency." (2016).

interest. The most famous form of doing it is by staking the stablecoin, which means that you borrow your stablecoins to a project to use it to validate the transactions and add new blocks on the blockchain[107]. The action of pledging them to the protocol rewards the user with the payment of interest that could be in the same token or a different one and this is normally higher than a bank would offer.

These possibilities give an impression of a perfect world and make us think about why it is not fully adopted by the countries and spread even more through the population. The benefits are undoubtedly amazing, but there are some risk factors to leaving the currency to private actors and that is why lawmakers are worried about it.

The upcoming sections will address the discussion with the risks to the financial stability and also the regulations that are about to come to protect the consumers and the system.

4.3 The Risks to the Financial Stability

Stablecoins represent a new technology that will provide consumer benefits as seen above, but it does not come without some concerns that can create serious problems for the financial stability of the countries.

The lawmakers are seriously worried about the implications of the malfunctioning of a stablecoin and the consequences it could have. The stablecoin arrangement depends on its credibility and it makes them fragile to any situation that can compromise the user's confidence in the project[108]. That is why the governments are closely paying attention to what is happening to them and are aiming to regulate to reinforce transparency, avoid poor governance, and any possibility of creating instability in the financial system.

The recent situation with the Terra protocol, which will be discussed during the topic, represents a perfect example of financial instability that made their stablecoin lose its parity with the US Dollar and resulted in a crash in the protocol that has fallen more than 90% in one day[109]. This section aims to demonstrate the risks to the financial stability that could be observed and should be a subject of discussion in future regulations.

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[107] Irving Thomas , 'How to Stake Stablecoins with Daily Payouts?' (*CoinRabit*, 7 December 2021) <https://coinrabbit.io/blog/how-to-stake-stablecoins-with-daily-payouts> accessed 10 May 2022

[108] Cœuré Benoît et al , 'Investigating the impact of global stablecoins' (G7 Working Group on Stablecoins, October 2019) <https://www.tresor.economie.gouv.fr/Articles/5f8c26f2-a2cd-4685-ba82-fa9e4d4e5d67/files/d10fb97f-a9a6-472b-842a-8b279e8863c4> accessed 11 May 2022

[109] Data derived from: https://coinmarketcap.com/currencies/terra-luna/ accessed 11 May 2022

4.3.1 Liquidity Run

The liquidity run occurs on a stablecoin when the relationship between buying and selling gets unbalanced. The situation means that the asset has its liquidity going down affected by a strong movement by the customers trying to sell and withdraw their money in the same period.[110]
It happens due to many reasons, but normally they are the consequences of a failure to keep the functions of the stablecoin working perfectly. Especially in a new ecosystem as the crypto-assets, it creates fear and loss of credibility that ends up on a liquidity run.

The Terra case is an example of the malfunctioning of the stablecoin that led it to a massive loss for the end-users and a panic sell of the assets. The algorithm aimed to control the price of the TerraUSD.

The project situation exposed the customers of the system and the loss of confidence worked as a trigger to make the value of the currency fall even more. This situation would have been different if the money was in the bank because the deposits are protected by the bank’s guarantee of redeemability and in case of a similar problem.[111]

The Terra project suffered from the volatility of other assets and could not meet the demand of the selling pressure to stabilize the value of the UST stablecoin, this failure in providing liquidity arrangements to it could also happen with other stablecoins. The ones who back up their value with bank deposits could be a risk of not meeting the demand if the bank is affected by any liquidity and default problem.[112]

To protect the consumers and also avoid the destabilization of the financial system, the lawmakers must raise questions about who will face the risks if a stablecoin arrangement does not guarantee the value of the coin is fixed and could rely on the fluctuations of underlying assets.[113]

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[110] The financial encyclopedia, 'Liquidity Run' (*Fincyclopedia*, 30 August 2020) <https://fincyclopedia.net/banking/l/liquidity-run> accessed 11 May 2022

[111] Adachi, Mitsutoshi & Cominetta, Matteo & Kaufmann, Christoph & van der Kraaij, Anton, 2020. "**A regulatory and financial stability perspective on global stablecoins**," Macroprudential Bulletin, European Central Bank, vol. 10.

[112] Cœuré Benoît et al , 'Investigating the impact of global stablecoins' (G7 Working Group on Stablecoins, October 2019) <https://www.tresor.economie.gouv.fr/Articles/5f8c26f2-a2cd-4685-ba82-fa9e4d4e5d67/files/d10fb97f-a9a6-472b-842a-8b279e8863c4> accessed 11 May 2022

[113]Adachi, Mitsutoshi & Cominetta, Matteo & Kaufmann, Christoph & van der Kraaij, Anton, 2020. "**A regulatory and financial stability perspective on global stablecoins**," Macroprudential Bulletin, European Central Bank, vol. 10

4.3.2 Destabilize the Financial System

Due to the benefits of stablecoins, it is not unlikely that it could reach a global level and could influence the financial system in some countries. This growing popularity is a concern because as soon as a stablecoin gets big enough to affect the other part of the financial system, a run of a stablecoin could bring fragility to the system in many ways.

First, if a stablecoin decides to have a strong position in the short-term debts of a government, a run could destabilize the market causing volatility and spikes in the price due to the size of the position held by it.[114] This is also bringing a problem to the interest rates since they are related to the short-term debts, thus an undertaking could affect the monetary policy as well.[115]

On the other hand, the success of stablecoins can represent a risk to the bank funding. If they keep growing and more people adopt them as a means of payment or store of value, less money will be deposited in the banks, and this could leave them unfunded. Especially in countries where the bank system is not strong, this movement could bring liquidity problems to them as the capital flows from their reserves to the stablecoins[116].

This situation would leave them unfunded or obligate the banks to find more volatile and risky sources of funding.[117] It could also lead them to have more deposits of the stablecoin issuers than the retail deposits which would be a fragile position for the bank system in general. For example, a stablecoin with a dominant position could easily provoke a bank run if the confidence in one goes down.[118]

Another situation that could occur with the massive adoption of stablecoins by the population is a scarcity of safe assets. If a stablecoin that is backed by high credit rating securities gets bigger and keeps adding to its reserve those assets, this situation could lead to a scarcity of safe assets to be used as collateral and obligate them to lower their requirements to keep growing[119]. It would fragilize the whole ecosystem and make the stablecoins arrangement to explore other classes of assets to fulfill the demands.[120]

Some countries as Argentina for instance could face a problem of the capital outflow of their territory due to the high adoption of the stablecoins by the

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[114] Ibid
[115] Ibid.
[116] Ibid
[117] Cœuré Benoît et al , 'Investigating the impact of global stablecoins' (G7 Working Group on Stablecoins, October 2019) <https://www.tresor.economie.gouv.fr/Articles/5f8c26f2-a2cd-4685-ba82-fa9e4d4e5d67/files/d10fb97f-a9a6-472b-842a-8b279e8863c4> accessed 11 May 2022
[118] Ibid
[119] Ibid
[120] Ibid

population.[121] The citizens of countries where the currency is not stable will probably run from the deposits on banks to these stablecoins that are pegged to fewer volatile ones.[122] The result of this peculiarity would be the money leaving the country and the benefit of fast transactions by the stablecoins could turn out to be a problem for the authorities to avoid this outcome.[123]

4.3.3 Implications in the Real Economy

The real economy could be easily affected by any disruption of the stablecoins if they get widely used by the population. First, if it turns out to be a form of payment, any problems with stablecoin could be harmful to the economy. [124]If the stablecoin were used in the financial market, any problems with the means of the settlement could create risks to the stability.[125]

Besides that, the stablecoins could carry another responsibility if they are used as a store of value, in special where the population suffers from volatile currencies and lack of financial services.[126] If the stablecoin suffers the same situation as the UST had, the customers could suffer a loss and be vulnerable to lose part of their wealth. This would impact the businesses as well since the population could spend less money to recover from this situation. The UST would be a perfect example that in one day the holders had lost 70% of its value and if it was globally used, the consequences would have been everywhere in the economy.[127]

Also, the banks and financial institutions would be affected by any instability with the stablecoins since they would be holding them to offer services to their clients. The stablecoin could harm the intermediaries even more in cases where they will not have deposit insurance and the ole of lenders of last resort.[128] It would influence the image of the stablecoin ecosystem as well because people would be afraid of losing their assets too.[129]

Finally, the size of stablecoins could grow big enough to influence the prices of assets when they transact them. Huge operations to balance the

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[121] Ibid
[122] Ibid
[123] Ibid.
[124] Ibid
[125] Ibid
[126] Ibid
[127] Data derived from: https://coinmarketcap.com/currencies/terrausd/ accessed 11 May 2022
[128] Cœuré Benoît et al , 'Investigating the impact of global stablecoins' (G7 Working Group on Stablecoins, October 2019) <https://www.tresor.economie.gouv.fr/Articles/5f8c26f2-a2cd-4685-ba82-fa9e4d4e5d67/files/d10fb97f-a9a6-472b-842a-8b279e8863c4> accessed 11 May 2022
[129] Ibid

reserves could move the prices and create artificial movements in favor of the stablecoins. In more extreme cases, such as financial crisis or the loss of confidence in the fiat, the stablecoins could be used as a substitute and would implicate monetary policy issues such as the sovereignty of the national currency.

4.4 Regulations on Stablecoins

Stablecoins are a new advent of the crypto-assets, and they have characteristics that could classify them as investment funds, a bank, or an issuer of e-money[130]. The system is complex and due to its features, it could fall into different regulatory structures. Each regulation will imply different obligations to the stablecoin issuers and in the end, they could be outside of the scope of the EU law.

The lack of a specific regulation to the stablecoins shows a gap in the legal system that leads to legal uncertainty, and this implies many consequences to the users. First, this absence of EU regulation provides the fragmentation of the EU law and the consumer protection is mitigated since it depends on each country to provide it. This situation also moves away from new customers that might be interested in using the benefits they offer, but at the same time do not feel comfortable investing their wealth or doing transactions in something that is in a legal blank. Tied to that, the undertakings are aware of the opportunities that stablecoins offer to them, but many of them are also stepping back until a regulation provides the legal certainty needed to do business.

This section will explore the different legal aspects that the stablecoins could fit in and also what lawmakers and authorities from the EU are thinking about regulating them.

4.4.1 Stablecoins as an Investment fund

The stablecoins could fall into different legal frameworks and Investment funds are one of them. In the European Union, there are two possibilities if the stablecoin is based in a member state or offers services in one.

First, it could be within the scope of the regulatory framework of the UCITS directive. The stablecoins would be seen as a collective investment undertaking if it fulfills three conditions: the coin holders can claim the assets of the stablecoin issuer, the reserves are invested in non-zero risk

[130] Adachi, Mitsutoshi & Cominetta, Matteo & Kaufmann, Christoph & van der Kraaij, Anton, 2020. "**A regulatory and financial stability perspective on global stablecoins**," Macroprudential Bulletin, European Central Bank, vol. 10

investments and the stablecoin holders have the right to owe part of the value of the assets of the issuer[131].

This instrument aims to provide investors with a better informed and efficient investment sector[132]. Due to its EU level, the regulation would avoid the requirements at member state level and offer the services in the rest of the European Union. The directive would benefit the users of the stablecoins by making them informed about the risks and the characteristics of it.

Another alternative to this regulation would be if the stablecoins have reserves of short-term assets[133]. That would make them raise their requirements if compared to the UCITS directive and fall into the MMF regulation[134].

This regulation would benefit the users by offering tools to prevent the risk of contagion runs caused by the Money Market Funds and also protect the investors during the crisis by minimizing their unfavorable position for late redeemers[135]. Besides that, another interesting feature that would impose on the stablecoin issuers is the stress tests to verify the quality of the credit they have on reserves[136].

Allied to these requirements, they would also enhance the transparency to the investors and liquidity management specifications.

Even though it would bring benefits to the users and prevent some risks to the financial stability, the stablecoins that are not fulfilling these conditions would stay outside of the scope and the ecosystem would remain fragilized. That is why this could work temporarily, but it does not bring the legal certainty needed to develop an atmosphere that offers a safety net to the environment.

4.4.2 Stablecoins as banks

The stablecoins arrangement could also be considered a bank by the authorities and legal system if it acts like one. The deposit-taking institutions are required to acquire a license from the European Central

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[131] Ibid
[132] Directive 2009/65/EC of the European Parliament and of the Council of 13 July 2009
[133]Adachi, Mitsutoshi & Cominetta, Matteo & Kaufmann, Christoph & van der Kraaij, Anton, 2020. "**A regulatory and financial stability perspective on global stablecoins**," Macroprudential Bulletin, European Central Bank, vol. 10
[134] Ibid
[135] Regulation (EU) 2017/1131 of the European Parliament and of the Council of 14 June 2017 on money market funds
[136] Bnp paribas, 'Money Market Funds regulation (MMFs) – regulation memo' (*BNP Paribas*, 20 October 2020) <https://securities.cib.bnpparibas/money-market-funds-regulation-mmfs-regulation-memo/> accessed 17 May 2022

Bank to work in the European Union.[137] Thus, if the issuer provides the possibility to redeem the money and also offers credit, it will be seen as a bank and need the authorization to work as so[138].

The problem with seeing them as banks is the fact that functions are variably different from a traditional bank. For example, they do not generate money by creating assets that are backed by depositary liabilities as a bank would do, their function is to provide a digital currency to use as an alternative of payment or store of value[139]. It also does not make much sense to consider them banks if the stablecoin issuers do not lend money[140].

Again, this is another attempt to fit the stablecoins into a legal framework. Although it seems to help protect the financial stability since they would be oversight by the European Central Banks, the stablecoin issuers do not act like one and it would not be correct to demand requirements from a bank to them.

4.4.3 Stablecoins as an issuer of E-money

Another possibility haphazard is that the stablecoins issuer could be on the same framework as the e-money emitters. E-Money is defined by the EMD2 as an ''Electronically, including magnetically, stored monetary value as represented by a claim on the issuer which is issued on receipt of funds to make payment transactions''[141]

The algorithmic stablecoins are not able to be considered since they do not have redemption and issuance on the receipt of value[142]. The other categories of stablecoins must fulfill 8 criteria from a test created to evaluate if the stablecoin could be considered electronic money[143] and fall into the scope of the regulation.

The criteria are:

1- The asset is stored electronically
2- The asset is a representation of monetary value
3- The asset is issued on receipt of banknotes, coins, scriptural money, or e-money (funds) meaning that the asset has a 'prepaid' nature and no credit facility is provided

[137] Ibid
[138] Ibid
[139] Middleton Phillip , 'Stablecoin issuers need different regulations to banks' (*OMFIF*, 15 February 2022) <https://www.omfif.org/2022/02/stablecoin-issuers-need-different-regulations-to-banks/#:~:text=A%20stablecoin%20issuer%20is%20emphatically,partially%20backed%20by%20depositary%20liabilities.> accessed 18 May 2022
[140] Ibid
[141] EMRs reg. 2(1)
[142] Sokolov, Mykyta, Are Libra, Tether, MakerDAO and Paxos Issuing E-Money? Analysis of 9 Stablecoin Types Under the EU and UK E-Money Frameworks (August 15, 2020). Available at SSRN: https://ssrn.com/abstract=3746250 or http://dx.doi.org/10.2139/ssrn.3746250
[143] Ibid

4- The issuance of the asset creates financial liabilities of the issuer towards the asset holder equal to the funds received in exchange for the asset
5- The asset is issued to make payment transactions
6- Interest or other benefits related to the length of holding are not paid on the asset by the issuer
7- The asset is accepted not only by the issuer and/or limited network services providers and vendors
8- The asset is not excluded under the electronic communications exclusion

It is interesting to apply this test with a stablecoin to see what could fit or what could be outside of the scope of electronic money. This will demonstrate the reasons why the E-money seems to be a good solution during a vacuum of specific regulation, but not a permanent one.

First, the PAXG is a commodity-backed stablecoin that is pegged to Gold and each token represents one ounce of gold[144]. It is issued on receipt of US dollars and redeemable in the same currency and also gold[145]. Besides that, this stablecoin can be used as collateral or deposit and is commonly traded in different exchanges due to these reasons, the criteria 1,3, and 8 are satisfied[146].

But there was a discussion that went to the Court of Justice of the EFTA that if gold-backed assets could be considered E-mone[147]y. The refusal was based on the understanding that is not possible to maintain the price of Gold linked to the electronic money since the amount held must be similar to the part of the currency received. That authorization would be against article 11 (1) and (2) of the EMD2 if the e-money has a value on the receipt of funds at any moment, also when it is issued or redeemed[148].

Another part of the decision that could affect the stablecoins is the part in which the EFTA points out that the Recital 13 of the EMD2 exposes the feature of E-money as an electronic substitute for coins and banknotes to make payments and not as a form of savings[149]. This conclusion would directly affect one of the core functions of the stablecoins and they reaffirmed that e-money could not be used as a form of investment or

[144] Data derived: https://coinmarketcap.com/pt-br/currencies/pax-gold/ accessed 18 May 2022
[145] Sokolov, Mykyta, Are Libra, Tether, MakerDAO and Paxos Issuing E-Money? Analysis of 9 Stablecoin Types Under the EU and UK E-Money Frameworks (August 15, 2020). Available at SSRN: https://ssrn.com/abstract=3746250 or http://dx.doi.org/10.2139/ssrn.3746250
[145] Ibid
[146] Ibid
[147] Case E-9/17 – Edmund Falkenhahn AG v The Liechtenstein Financial Market Authority, Judgment of 30 May 2018, EFTA Ct. Rep. 153
[148] Ibid
[149] Ibid

savings, thus it would implicate a risk of being outside of the scope of the EMD2[150].

Beyond the PAXG, another asset that could be analyzed is the UDSC, which is a fiat-backed stablecoin pegged to the US Dollar by a one-to-one ratio[151]. It means that for every US dollar deposited on their reserves, the issuer can offer one token to the users. This token is also widely used and traded by different exchanges and used as collateral, deposit, or a mean of payment.

At first, this stablecoin seems to achieve all the criteria from the E-money test, but there are a few considerations to be made. Well, the primary discussion is the risk of being outside of the scope of the EMD2 if the token performs any kind of investment or store of value, but only as a form of payment. This directly affects the fiat-backed stablecoins since most of them as USDT for instance can be used as collateral to get loans or as a deposit by staking them or pools that would provide liquidity in exchange for earning interest[152].

If assumed that the stablecoin is serving for only payments, the discussion comes to the ecosystem that which it operates. While the e-money works in a closed one, the USDC can be transferred by the users of the supported networks.

These questions raise concerns if they could be seen as E-money under the EU framework. Although the E-money through EMD2 is the classification that gets closer to what stablecoins are and could be adapted to englobe them, it does not give enough legal certainty, and dealing with financial stability cannot have space for disruptions. Also, it imposes a challenge to the lawmakers to create a regulation that provides no doubts to different understandings or leaves some features out of the scope.

4.4.4 Different Regulatory Frameworks Approach to Financial Stability Risks

To avoid a complete regulatory vacuum on stablecoins and promote a certain degree of protection on financial stability risks, they could fall into different categories as seen in the sections above. This part of the work aims to show the difference between them dealing with financial stability risks and exposing which brings a better approach to the stablecoins until a specific regulation comes out.

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[150] Sokolov, Mykyta, Are Libra, Tether, MakerDAO and Paxos Issuing E-Money? Analysis of 9 Stablecoin Types Under the EU and UK E-Money Frameworks (August 15, 2020). Available at
SSRN: https://ssrn.com/abstract=3746250 or http://dx.doi.org/10.2139/ssrn.3746250
[151] Data derived: https://coinmarketcap.com/pt-br/currencies/usdc/ accessed 18 May 2022
[152] Ibid

First, if a stablecoin issuer is seen as an investment fund, it could fall into the UCITS directive or the MMF regulation and that would implicate higher standards to protect the investors. The obligation to inform the users about the risks and how the stablecoin works would perform bring credibility to it. Thus, liquidity runs would be minimized due to panic selling.

Besides that, one of the pillars that would prevent the risk of malfunction of the Stablecoin is the UCITS depositary, which is an entity that works independently from the issuer and performs the task to oversee the transactions made by the stablecoin issuer and also as a custodian over the assets.

The combination of well-informed users and a high level of protection of the reserves would enhance the confidence in the stablecoin issuer and reduce the risks of liquidity runs and destabilization of the financial system. Even though this legal framework could help, there are a few considerations that explain why stablecoins cannot be into this legal framework.

The requirements to be considered an investment fund could not be reached by all the stablecoin issuers and that would result in a gray area of the legal certainty. This situation could hinder the clear access of information to users if they would be protected or not.

Also, the financial risks of letting banks unfunded and scarcity of safe assets to the other components of the market would not be protected. It means that directive could be used by the lawmakers as an inspiration to minimize the liquidity runs and bring more confidence to the stablecoin issuers but not as a solution to it.

If the stablecoin issuers are considered banks, they would solve the problems of destabilization of the financial system. Since they would be under a regulation that controls the bank’s actions, they would be hindered from committing abuses or letting the other banks unfunded. This legal approach would be a solution for the legal vacuum that is happening now but the stablecoins issuer does not perform as banks.

The stablecoin issuers do not lend money, thus it does not make sense to be treated in the same way since they are not exposed to the same financial system and events. Even though they have similar functions, applying all the requirements, which are partially for lending activities, seems to be beyond the necessary to regulate and could hinder their access to the market. Due to that reason, it is interesting to extract the financial stability guarantees proposed to banks, but not impose their specific regulation on the stablecoin issuers.

The absence of a specific regulation could make the stablecoin issuers fall into the E-money regulation. Section 4.3.3 demonstrates the criteria to be considered one or not and, as seen above, they would not frame the different types of stablecoins in it.

The EMD2 provides interesting points to protect the consumers and bring credibility to the stablecoin environment. One of them is the supervision that E-money institutions are required to comply with. It implies informing the competent authorities about any changes to safeguard the funds. This is a good practice that enhances confidence and avoids liquidity runs.

Also, to not disrupt the markets or cause any instability, the e-money institutions are required to maintain an amount on their reserves that were received in exchange for electronic money that was issued.

Although the regulatory framework of the E-money demonstrates rules that could apply to avoid liquidity runs and financial stability, only the stablecoins which fall on the criteria would be secure and not bring legal gaps and arbitrarities.

4.4.5 Stablecoins regulatory challenge

The stablecoins arrangement offers a challenge to lawmakers since it is a mutating technology and is still developing itself. Due to their lack of certain information and many different tasks they perform, they could fit in many legal regulations as seen above, but at the same time fall out of the scope and brings uncertainty to the parties. This represents a challenge to lawmakers because even though could be part of financial services, data protection, and protection of consumer regulations, at the same time their functions could easily fall within many regulatory categories[153].

The goal of the governments is to find a solution where a stablecoin arrangement that operates as a means of payment, financial services provider, and other tasks to fall into one place that could englobe the whole system and not individually and fragmentally as it is now.[154]

The collapse of the Terra protocol created a sense of fear and hurry in the lawmakers and government authorities. The head of the US treasury department, Janet Yellen already responded to the situation arguing that even though the crypto-assets bring innovation, they present a risk to the

[153] Cœuré Benoît et al , 'Investigating the impact of global stablecoins' (G7 Working Group on Stablecoins, October 2019) <https://www.tresor.economie.gouv.fr/Articles/5f8c26f2-a2cd-4685-ba82-fa9e4d4e5d67/files/d10fb97f-a9a6-472b-842a-8b279e8863c4> accessed 11 May 2022
[153] Ibid
[154] Ibid

financial system[155]. She also mentioned the run that happened to the UST demonstrates that rapid growth brings also risks.[156]

This regulatory movement on stablecoins has been getting more attention lately and this event brought more focus to it. She also pointed out and urged the United States Congress to approve legislation to regulate stablecoins to avoid more instability in the financial system[157]. In the United States, the government has been working to establish the issuers of stablecoins to be in the same framework as the banks.[158]

The European Commission is committed to hindering the capacity of the stablecoins to be largely adopted by the EU citizens and threatens the dominance of the Euro[159]. Their goal is to impose thresholds on the issuance of stablecoins if they get popular and exceed the number of transactions per day[160].

The MiCA, which aims to regulate the crypto-assets, is being discussed at the final stages and the lawmakers are finalizing the paper that will bring a harmonization through the European Union. The agreement on these matters is never easy to reach a final decision since the crypto-assets and the stablecoins generate doubts and different beliefs on them.

The debate is so divided that the EU commission and the European Parliament see the stablecoins in different ways, the first one wants to halt the issuance of them after a certain amount while the other aspires to a less restrictive approach and subjects the biggest stablecoin to be oversighted by the European Banking Authority[161].

This regulation, as explained before, targets to ensure to the EU citizens and businesses, that the crypto-assets acting in the European Union are well administered, fairly offered to the investors, and have reserves that do not threaten the financial stability[162].

Due to the situation that happened to the Terra protocol, they are also considering more requirements or even prohibiting the stablecoins that are

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[155] Criptonizando, 'Secretaria do Tesouro cita UST da Terra (LUNA) e pede por regulamentação de stablecoins' (*Investingcom*, 11 May 2022) <https://br.investing.com/news/cryptocurrency-news/secretaria-do-tesouro-cita-ust-da-terra-luna-e-pede-por-regulamentacao-de-stablecoins-998929> accessed 13 May 2022
[156] Ibid
[157] Ibid
[158] Ibid
[159] Schickler Jack, 'EU Commission Favors Ban on Large-Scale Stablecoins, Document Shows' (*CoinDesk*, 11 May 2022) <https://www.coindesk.com/policy/2022/05/11/eu-commission-favors-ban-on-large-scale-stablecoins-document-shows/> accessed 14 May 2022
[160] Ibid
[161] Ibid
[162] Ibid

based on algorithms instead of the ones who are pegged to fiat or commodities[163].

Another possibility that has been studied and analyzed by the governments is the creation of a Central Bank Digital Currency (CBDC). The central banks would issue a digital currency that works similarly to the stablecoins and protect the monetary policy to maintain the price stability[164].

This CBDC would be a digital version of the issued cash by the central banks, but instead of being as physical version as the banknotes, it would add cryptography and ledger technology to compete with the stablecoins[165].

The CBDC would be a tool to restrain the adoption of stablecoins by citizens and businesses. Their rationale understands that the users would rather do the transactions with a digital currency that is backed by the central bank than by a private company. It would help the governments to keep control of the currency with the central banks still strongly influencing the monetary policy.

Also, the CDBC could proportionate an alternative form of payment to cash and perform the advantages of what a stablecoin could have. They would be a risk-free currency that would protect the consumers and reach the vital characteristics of money: It is exchangeable through different parties, it is universal, anonymous, and as said before a cash alternative[166].

Besides that, one feature that would be interesting to the governments is their transactions could be monitored, thus any suspicious exchange would be easily tracked. The Central Bank Digital Currency can also minimize the risk of financing terrorism and money laundering.

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163 Ibid

164 Davoodal Hosseini, Mohammad, Francisco Rivadeneyra, and Yu Zhu. *CBDC and monetary policy*. No. 2020-4. Bank of Canada, 2020.

165 Náñez Alonso SL, Jorge-Vazquez J and Reier Forradellas RF, ‘Central Banks Digital Currency: Detection of Optimal Countries for the Implementation of a CBDC and the Implication for Payment Industry Open Innovation’ (2021) 7 Journal of Open Innovation: Technology, Market, and Complexity 72 <http://dx.doi.org/10.3390/joitmc7010072>

166 Ibid

5 CONCLUSION

The crypto-assets started with Bitcoin as an alternative to inflation and it turned out to be a landmark. The relationship that people and businesses have with money, assets, and technology is changing and it will be unavoidable as time flows.

What has started as another currency, evolved into an ecosystem of so much more. They could no longer be called cryptocurrencies anymore because they developed new functionalities. The Blockchain with the Ethereum protocol provided to the users new features like the smart contracts that would be used to substitute physical documents that have previously agreed on clauses.

The new called crypto-assets are a mutant technology that keeps evolving and developing new possibilities for a whole new industry. The Metaverse, the DeFi, and NFTs are trending right now as the next steps of this evolution and creating new opportunities every single day.

Due to this rapid development, the crypto-assets got the attention of retail and institutional investors as a chance to increase their portfolios and navigate the volatility that they have. That transformed the cryptocurrencies like Bitcoin into a store of value more than an alternative form of payment. The volatility and the costs of the transactions would hinder the mass adoption of them, but the developers did not ignore it and thought of a different solution.

The stablecoins appeared after a bear market that affected the cryptos in 2018 and got popular as a solution to solve the volatility problems of being used as a means of payment. They also proportionate the users with lower fees and faster transactions than fiat. A result of these benefits could not be different, and the adoption grew exponentially, but a rapid evolution does not come without side effects.

The lack of regulation in crypto-assets, in general, is a subject of concern for government authorities and lawmakers because it represents a lot of risks to society. They vary from the scope of where it will fit in, especially in the European Union which impacts in a fragmentation of the legal system, to taxation, environmental goals, cyber security, monetary policy, and financial stability.

These last two are the ones with the highest level of apprehension because they could harm the economies and at the same time impact directly on the government's sovereignty over the currency. The stablecoins are directly involved with them and after the latest events with the Terra project, the attention is focused on regulating them. Also, there is a strong movement to ban the usage of algorithmic stablecoins since they are strongly dependent on external factors and already proved how risky they can be if there is any problem with the demand.

Their features bring confusion on the regulation concerns which depending on the kind of stablecoin it is, one regulation could work better than the other. This vacuum of legal certainty urges for a specific regulation that would solve if they could be classified as banks, e-money issuers, or banks.

Regulation could come up to protect their consumers and at the same time create an environment where investors and businesses can boost their participation in it. As said during the paper, this regulation that must be released as soon as possible is full of delicate discussions, because the stablecoins rely on their credibility and cryptos in general on their freedom to innovate, thus the regulators need to find the perfect balance to not hinder their main features.

On the other hand, regulating them and ensuring that the stablecoins offer to the users enough information about the risks and how they operate could increase the knowledge of the customers and avoid the run when anything unexpected happens. So, the regulation regarding stablecoins should pay attention to enforcing the credibility of the companies and create mechanisms that protect the consumers from liquidity runs.

These measures on the regulation will aim the financial stability and protect the environment before the stablecoins get big enough to cause disruptions to the real economy. The lawmakers must ensure that only projects that offer benefits and sustainable environments will prosper, but there is a tricky situation here.

At the same time, the regulators must guarantee projects that offer considerable safety to their users, it will support the adoption by the business and people as a means of payment. This event will bring a consequence that may affect the monetary policies and the sovereignty of the fiat.

If the stablecoin gets too popular, it will raise the participation in the economy and if turns to be a widespread form of payment, the company the issues it can make the central bank's policies less effective. Thus, the dilemma that lawmakers must fix is the balance between controlling their participation in the market without hindering its existence.

Two options could be considered. The first one, which has been discussed by the EU commission and National ministers, seems to be more radical and would probably make the European Union market not attractive to them. This measure would impose thresholds on the issuers to stop the emissions of coins until the numbers of value and transactions go under the established regulation. It sounds like that would be strongly regulated and do not allow them to get effective participation in the EU market.

The second one focuses on an approach more liberal but puts the stablecoins under the oversight of the European Banking Authority as an alternative to control any excesses. This is the MiCA proposal that seems to be on the right path to regulate the stablecoins and effectively minimize the risks to financial stability.

As seen before, the proposal establishes obligations to the stablecoin issuers if they want to operate in the European Union. They vary from information to comply with rules on conflicts of interest, governance arrangements, modification of the management body, the reserve of assets, minimum rights to the stablecoin holders, and own funds.

Also establishing criteria for significative stablecoins is an interesting approach to raise standards for them and also offer the newcomers an easier path to develop and not hinder innovation.

Another alternative to this situation is the Central Bank's Digital Currency. This tool is a way less restrictive measure than the others and would help to maintain the control of monetary policy with the Central Banks. The CBDC would also work as an alternative to stablecoins as a means of payment offering the same benefits as fast transactions, lower fees, and democratic access to money.

The monetary policy would be influenced by the mass adoption of the stablecoin, thus the digital currency issued by the central bank is related to it because once they release it with similar benefits and functions, the natural trend is to people migrate from the stablecoins to the CBDC due to its safe environment to have a digital currency pegged to fiat without the risk of collapsing.

The stablecoins represent a risk to the financial stability since it fluctuates in an ecosystem where the legal certainty is not ensured. So, regulating them and put into a clear and defined legal framework is essential to stop the fragmentation of EU law and protect the consumers. The regulation must express the concerns about the good governance of the issuers to protect the users and avoid financial instabilities if something happens to the stablecoin.

The lawmakers need to have the notion that regulation should be an instrument that is going to restrict part of the freedom of the stablecoins, but only where it is necessary to secure a safe environment. This is vital to not hinder the innovation and make their usage impracticable because even though they represent risks as a new technology the benefits are also present, and a well-designed regulation can boost the advantages and minimize the disadvantages.

Allied to that, the CBDC is also an important weapon to keep the financial stability and offer to the users different options to them. As said before, it would be interesting to be as a form of payment where the transactions could be better monitored by the Central Banks and authorities to track any suspicious trades.

Therefore, the investors who are seeing them as a store of value could feel safe putting their money on it and not suffer from any liquidity runs. This would also protect the banks from being unfunded since the money could be offered by them and the central banks could manage the situation. The CBDC would help the governments to see where they would be sent and if they need to control the capital outflow, it would be easier than with the stablecoins.

Finally, the Central Bank’s Digital Currency would probably become more popular than the stablecoins if they are designed to compete with them and that would solve the risk of losing the monetary policy effectiveness because they would still be controlling the vast majority of the market.

All these measures combined, the regulation and the CBDC, can perform a great solution to the legal vacuum that appeared with the advent of crypto-assets and in particular the stablecoins.

A regulation that defines the types of stablecoins and their authorized functions, promotes good governance, demands from the issuers a complete disclosure about the risks and how the reserves are formed, regular audits, redemption policies and secures the benefits without undermining the innovation and the financial stability would be positive to the population and the businesses.

Together with the regulation, the CBDC could be a complementary tool to reaffirm the goals of the regulation and promote an environment that welcomes the good stablecoin arrangements, but at the same time offers enough protection to the users and the ecosystem.

In conclusion, stablecoins are part of a natural process of modernization of the financial instruments and they can add a lot of benefits to the users, especially in Europe, but that can only happen with a specific regulation to minimize the risks to financial stability.

The MiCA proposal is on the right track to ensure that crypto-assets and especially stablecoins will face an integrated and safe environment to provide services and develop themselves. Even though it is not a perfect solution yet, this regulation could work in parallel with the CBDC to stimulate fair competition and provide better options for the users while at the same time protecting against financial stability risks.

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