

**From:** Blockchain Academy Treinamento e Consultoria Ltda. ("**Blockchain Academy (Brazil)**")  
**To:** the Basel Committee on Banking Supervision ("**BCBS**")

São Paulo, March 13, 2020

**Re.:** Comments to the BCBS Discussion Paper entitled "Designing a prudential treatment for crypto-asset"

Dear Sirs,

1. We make reference to the BCBS Discussion Paper entitled "[Designing a prudential treatment for crypto-assets](#)", published on December 12, 2019 ("**Discussion Paper**"). This is a Feedback to the Discussion Paper, prepared by the [Blockchain Academy \(Brazil\)](#), a Brazilian education project launched in 2016, focused on crypto-currencies, blockchain and related matters. It is an independent and neutral work<sup>1</sup>.

## **I. FEEDBACK**

2. As a general comment, it is our understanding that the Discussion Paper was created based on broad and biased assumptions and definitions, which tends to inspire a more conservative approach, and, therefore, more restrictive rules for the targeted regulated institutions.

3. As a response, in order to hopefully contribute with BCBS efforts and the development of the market in general, we hereby present suggestions for such definitions, as well as a response for each of the specific questions posed therein.

## **II. EXPLANATION**

4. The core terms which are object of the risk analysis are not clearly defined, particularly "crypto-assets" and "crypto-currencies". Although a universal agreement on the meanings can be a complex achievement, in the Discussion Paper they are frequently mentioned in a oversimplified manner, as if the meanings were almost equivalent, and all the analysis has been

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<sup>1</sup> For the avoidance of doubt, this document does not intend to represent the Brazilian and/or the crypto market generally, nor the intentions and opinions of any of the instructors and consultants with whom the Blockchain Academy may partner with. It represents the view of the undersigned and of anyone else who, elsewhere, may expressly state his/her agreement.

mostly focused on the features and concerns arising from such specific kind of asset (crypto-currency) rather than recognizing more carefully the infinite other different natures and possibilities potentially relating to crypto-assets generally. Besides, the risks potentially related thereto are overstated, as illustrated in the extract below:

*"While certain types of crypto-assets are at times referred to as "crypto-currencies", the Committee is of the view that such assets do not reliably provide the standard functions of money and can be unsafe to rely on as a medium of exchange or store of value."* (Executive Summary, Third Paragraph, page 1)

5. Differently from what has been stated in such extract, the nature of a privately issued currency and/or its quality as money is not related to the risk assessment that is the purpose of the Discussion Paper: other assets which do not provide all functions of money are even less risky than a currency with legal tender, especially Gold.

6. As a natural consequence to that biased approach, the major conclusion expressed by the work is that a conservative treatment is needed, as expressly mentioned twice:

*"Therefore, (...) **conservative** prudential treatment for such exposures"* (Executive Summary, Third Paragraph) (emphasis added)

*"They should manage the risks stemming from such exposures in a **conservative** manner"* (Chapter 3, page .12) (emphasis added)

7. It is also worth questioning if such recommendation could potentially be contradictory to principles governing BCBS efforts, which assume an equal treatment for assets subject to the same risks and activities, as described below:

*"General principles*

*In considering how to specify a prudential treatment for crypto-assets, the Committee has been guided by the following general principles:*

- *Same risk, same activity, same treatment: A crypto-asset and a 'traditional' asset that are otherwise equivalent in their economic functions and the risks they pose should not be treated differently for prudential purposes. The prudential framework should not be designed in a way to explicitly advocate or dissuade specific technologies related to crypto-assets, but it should account for any additional risks resulting from the unique features and other factors of crypto-assets relative to traditional assets."*

8. As a final comment, it is our concern that any broad, biased and conservative approach may inspire the creation of restrictive rules for the regulated institutions' activities, which may impact their competitiveness. In this sense, for instance, any need of prior authorization, as implied below, can create a strong competitive disadvantage towards unregulated institutions:

*"Therefore, **if banks are authorised**, and decide, to acquire crypto-assets or provide related services..." (emphasis added)*

9. In view of the above, we hereinafter initially propose a Prudential Taxonomy for Crypto-Assets as well as some notes on the related proposed general principles, that will hopefully be considered in BCBS efforts.

### III. PRUDENTIAL TAXONOMY FOR CRYPTO-ASSETS

10. A precise risk analysis depends on a clear definition of crypto-assets, crypto-currency and some closely related terms, all presented in a neutral manner, to promote the effectiveness of any derived guidance and/or regulation.

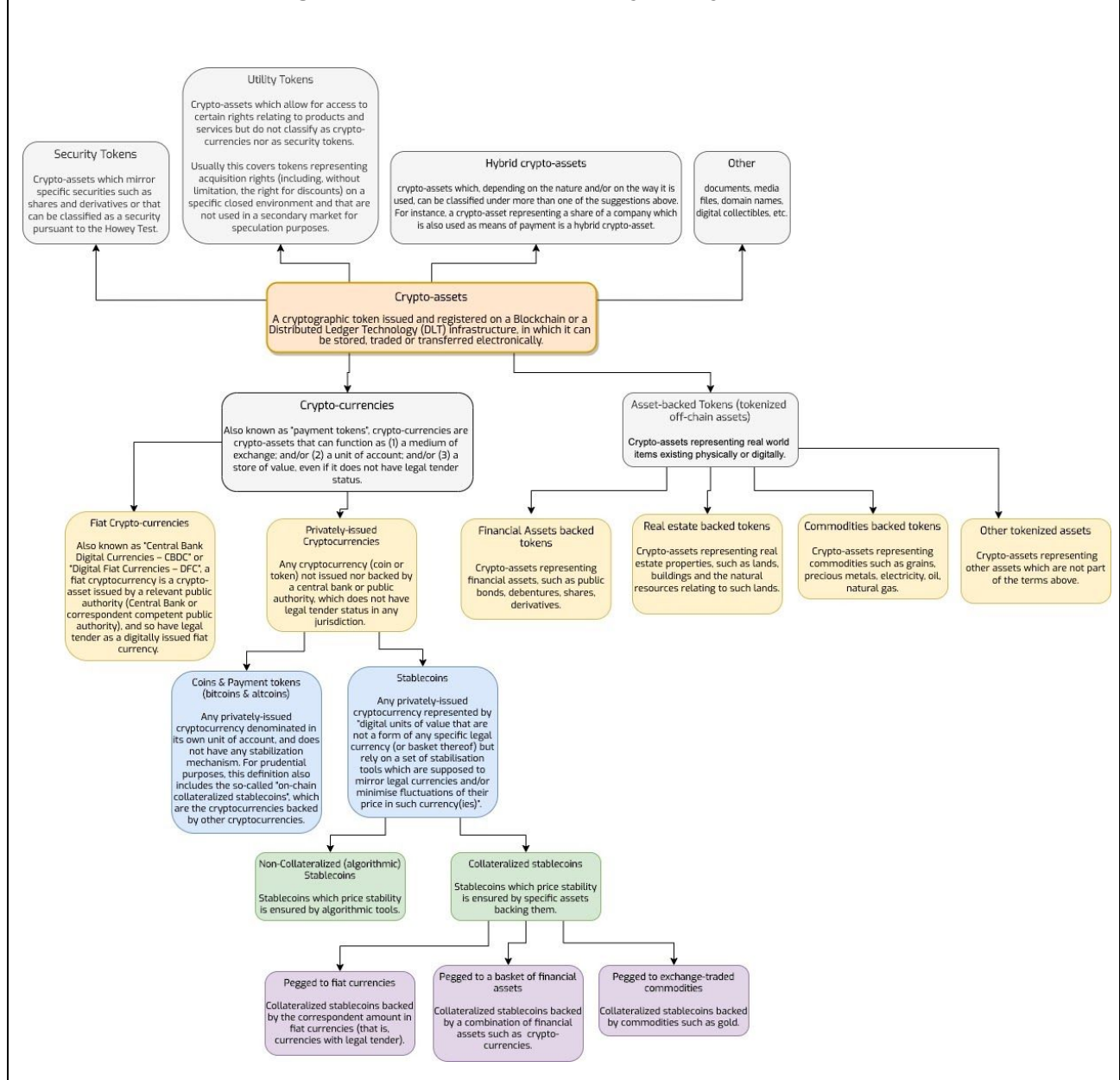
11. There have been many attempts to provide a taxonomy of crypto-assets, and conceptually categorize this new class of assets focusing on different aspects related to their nature, function or underlying technology, just to mention a few of the features considered in these efforts.

12. In this regard, and considering the very purpose of the Discussion Paper, it is particularly useful to quote "The Global Cryptoasset Regulatory Landscape Study", published by the Cambridge Centre for Alternative Finance ("**Cambridge Study**"):

*"The terms cryptoasset and token can have different meanings depending on the context in which they are used. Regulators therefore face several challenges: first, to **understand the nuances of the different terms**, second, to **identify the terminology most suitable for their regulatory objectives**, and finally to **define the terminology clearly** and ensure it is used consistently in official statements." (emphasis added)*

13. For the sole purpose of defining a prudential treatment of crypto-assets to which banks might be exposed, we suggest a specific "Prudential Taxonomy of Crypto-assets" as per Figure 1 below.

**Figure 1: Prudential Taxonomy of Crypto-assets**



14. In addition to that intuitive and self-explanatory presentation context, some other relevant notes and highlights should be pointed out, as follows:

(i) **Bitcoin as the pioneer:** *Bitcoin* was the first really global and integrated distributed financial system based on decentralized governance; *bitcoin* is, in a simplified manner, its respective financial unit. The existence and development of that pioneer system comes along with serious in depth discussions relating to trust, privacy, money, democracy, freedom, among others.

Understanding the combination of features, discussions and conclusions around that matter is key to properly understand the features and expectations relating to crypto-currencies;

(ii) **The term “crypto-asset” must not be used as a synonym for “crypto-currency”:** based on our experience, we are aware that a certain *taboo* has been historically created around the term "crypto-currency" (of which, as mentioned, *bitcoin* is the first example). However, financial regulation demands clarity and conceptual accuracy. Therefore, we truly believe that it is time to finally acknowledge the specific existence and relevance of privately-issued currencies (or crypto-currencies) which, despite their lack of legal tender, have a fundamental role to play in the increasingly tokenized economy.

(iii) **Accessible to non-regulated institutions:** crypto-assets, particularly crypto-currencies, can, from a technological standpoint, mirror - totally or closely - functions and activities that were originally restricted to regulated players, such as fiat money, global money exchange and global crowdfunding. And that can be the case irrespective of any legal restriction, considering cryptographic and decentralized elements that can be part of the architecture of the project. Accordingly, anyone willing to impose standards and guidance shall bear in mind that very restrictive regulations will impose a heavy burden to regulated institutions but not necessarily eliminate the existence of any such parallel mirror activities.

(iv) **Taxonomy as a guide:** the proposed taxonomy is a rather a guide than a fixed and definitive proposal, since, as acknowledged in the Discussion Paper, the exponential effect caused by the dynamic evolution of technologies and related services and products may, at any time, add up new possibilities to our proposed classification.

(v) **Definition of "Token":** is a term that has been created prior to any discussions on crypto-assets, as explained in the Cambridge Study:

*"The hype around digital tokens suggests that asset digitisation is a relatively recent phenomenon. However, tokens have already been used for several decades in electronic recordkeeping systems. At its most basic, a digital token is simply a string of characters that constitutes a cryptographically-secure representation of a set of rights that can be used within a specific context.<sup>2</sup> Tokens do not need to be monetary in nature: for instance, web browsers commonly use so-called security tokens for secure online authentication.*

*Recently, there has been a renewed interest in tokens. The reason lies in blockchain and distributed ledger technology (DLT), which significantly changes how assets can be issued and transferred digitally. Until*

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<sup>2</sup> For example, a tokenised casino chip will be useful within the premises (i.e. context) of the casino that issued the chip token, but likely be worthless in a different casino.

*recently, digital tokens mostly existed in the form of ledger entries in internal database systems maintained by trusted third parties.<sup>3</sup>*"

(vi) **Hybrid Crypto-Assets**: in addition to the formats and functions originally planned for the crypto-assets by their creators and/or issuers, in certain cases they may be used for additional and/or different purposes. For instance, a crypto-asset that was originally created to represent a share in a fund can be used as a payment token, as explained in the abovementioned Cambridge Study:

*"Today, however, **shares in private instrument funds could become i-money**. They can be tokenized, meaning they can be represented by a coin of any amount on a digital ledger. The coin can then be traded directly, at low cost, and constitute a payment denominated in the underlying portfolio, valued at the portfolio's going worth in any currency. For instance, if B owes A 10 euros, B could transfer 10 euros worth of a money market fund to A. To the extent that such fund is liquid, its market price should be known at any point in time. And to the extent that the fund comprises very safe assets, A may agree to hold these with the expectation of using this to pay for future goods and services at approximately the same exchange rate with local currency. In other words, i-money could be sufficiently stable to serve as widespread means of payment. However, as the transfer of i-money entails a transfer of ownership of securities, it may be subject to regulatory restrictions that could limit transactions across borders, for instance."* (emphasis added)

Such hybrid and dynamic feature of crypto-assets is richly explained by Wassim Alsindi in his essay "TokenSpace in a Nutshell", dated June 2, 2019<sup>4</sup>, as exemplified below:

*"Conventional taxonomies are categorical and can be either flat or hierarchical. The classification approach should be built to discriminate for a meta-characteristic, with a series of dimensions asking questions of each object, of which two or more categorical characteristics provide the options which should encompass the property in question.(...)"*

#### *Time-Dependence of Selected Assets*

*A number of interesting observations can be made from this case study, monetary metals are decreasing in Moneyiness with time as Bitcoin's*

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<sup>3</sup> These parties are responsible for recording asset ownership, preventing unlawful access and transfers, and impeding the "double spending" of assets (i.e. copy-pasting the same digital asset and spending it multiple times).

<sup>4</sup> <https://medium.com/@parallelind/tokenspace-in-a-nutshell-35f513c20237>

*increases — ostensibly as the digitalisation of human society corresponds to favouring similarly digital (“simulacrised”) money such as Bitcoin over specie. In this respect, silver is some way ahead of gold, being largely a commodity rather than a commodity-money in the present day. The loss of gold and silver backing on moneys such as the British Pound (GBP) and the US Dollar (USD) leading to loss of Commodityness, Moneyness and an increase in Securityness may also be rationalised as derealisation — a loss of mimetic gravitas in addition to simulacrum-related societal sentiment.*

*The time-dependence of cryptographic assets generally shows a trend of decreasing Securityness as the networks mature and assets become more adopted, distributed, widely held, useful and used. In concert Moneyness and Commodityness also tend to increase as more reasons to use, hold and transact with the assets emerge. Ethereum (ETH) is particularly remarkable as — in tandem with Hinman’s summer 2018 sentiments, what started as a securities offering of a centralised asset reliant on the efforts of a team of others for speculative gain has become (to some extent) more widely used, useful, held and distributed hence leading to a decrease in Securityness and increases in Moneyness and Commodityness. It could perhaps be said that Ethereum in particular is well on the path to desecuritisation, or indeed may have arrived at that destination depending on where boundaries are perceived to lie in TokenSpace. The US Dollar (USD) still possesses a strong Moneyness being the de facto world reserve currency, though its Moneyness and Commodityness have been declining since the abandonment of gold-backing and the rise of the petrodollar system.”*

15. In view of the above, it is key to bear in mind that a substance analysis shall prevail over any simplified formal analysis.

#### **IV. PRINCIPLES GOVERNING THE PRUDENTIAL RISK ANALYSIS**

16. The exponential effect of the technology developments promotes the existence of a very dynamic ecosystem, where general principles are preferable over fixed prescriptive rules since any such prescriptive determinations could quickly become obsolete.

17. We initially endorse that the prudential risk analysis shall take into consideration the general principles specified in the Discussion Paper, that is: (i) same risk, same activity, same treatment; (ii) simplicity; (iii) minimum standards.

18. On top of that, we would add the following comments and suggestions:

**(i) Same risk, same activity, same treatment:** this principle should be explored in a more neutral manner and considering substance over format in respect of each and every different crypto-asset, especially as follows:

- Tokenized off-chain assets have risk profiles inherently equal to the ones presented by the natively-digital crypto-assets. In this sense, we fully support the following statement made at the final report of the “UK Cryptoassets Taskforce”: *“The regulatory status of an asset or activity should not be affected by the use of DLT and the process of tokenisation, provided that doing so does not change the financial risk characteristics of the asset or the legal title to the underlying asset.”* Notwithstanding, incremental operational risks related to underlying technology, to legal risks embedded in inadequate contractual covenants, or custody by third parties may, in a case-by-case analysis, be considered in a more appropriate risk assessment;
- Be it a tokenization of an off-chain asset or a natively-digital crypto-asset, the assigned prudential treatment must be based on an in-depth assessment of the attached rights, collaterals, governing protocols and broad economic functions, among other relevant features that may have a relevant impact on the risk profile of that specific crypto-asset. Economic function is definitely a relevant driver for a proper prudential classification of crypto-assets, so that the corresponding prudential treatment may take into account the treatment of similar off-chain assets as a benchmark. However, the so-called “hybrid-tokens” may require a more case-by-case sort of analysis, which is not fully compatible with a “minimum-standard” approach.

**(ii) Minimum Standards:** the “minimum standards” should be imposed for very specific and limited cases, to avoid unnecessary restrictions that would imply in competitive disadvantage for the regulated institutions, as mentioned.

## **V. EXAMPLES OF PRECISE PRUDENTIAL RISK TREATMENT**

19. In addition to the aforementioned guiding principles, this prudential taxonomy elaborates on the classification based on economic functions presented in the Discussion Paper, and aims to combine crypto-assets into a more detailed “taxonomic rank” that, to the best of our knowledge, better represents a similar risk profile.

20. Examples of a first risk assessment and a suggested prudential treatment is hereby presented through examples at the applicable lowest “taxonomic rank”, including those not discussed in the Discussion Paper. Considering the evolving nature of this reality, the proposed taxonomy may clearly be a moving target, and so regulators may find useful to treat differently different species or subspecies of crypto-assets, even those for which a minimum-standard approach is fully applicable.

### **Fiat Cryptocurrencies:**

- **Risk profile:** by definition, a fiat cryptocurrency bears the same risk profile as cash.
- **Prudential Treatment:**
  - Capital: no specific requirement
  - Liquidity: must be considered a high-quality liquid asset (HQLA)

### **Coins & Payment tokens (bitcoins & altcoins)**

- **Risk profile:** highly volatile assets, that may also represent a considerable compliance risk related to AML/CFT.
- **Prudential Treatment:**
  - Capital and Liquidity: conservative approach suggested in the illustrative example presented at page 11 of the Discussion Paper.
    - Exposures in the so-called “privacy coins”, such as Monero and Zcash, might be treated in a more conservative approach, for AML/CFT considerations, striking the right balance between the the relevance of privacy and the surveillance needed for the effectiveness of the existing AML/CFT regulations.

## **VI. ANSWERS TO THE QUESTIONS POSED**

***Q1. What features of crypto-assets should be considered in the context of developing any potential prudential regulatory definition? Please describe the features and their relevance for the prudential treatment of crypto-assets.***

21. The nature, function and underlying technology are some of the main features to be considered. For more details, please refer to Section III. PRUDENTIAL TAXONOMY FOR CRYPTO-ASSETS above.

***Q2. What are the main economic and related functions and potential sources of value of crypto-assets that are relevant in the context of developing a prudential treatment? To what extent do these functions and potential sources of value affect the relative prudential risks of different crypto-assets for banks? Are there other potential sources of value that are relevant in designing a prudential treatment for crypto-assets?***

***Q3. What benefits do crypto-assets provide for the banking system, and the provision of financial services more generally?***

22. The Discussion Paper has captured some of the interesting functions and potential sources of value of crypto-assets.

23. In addition to that, aggregating the explanations in III. PRUDENTIAL TAXONOMY FOR CRYPTO-ASSETS and IV. PRINCIPLES GOVERNING THE PRUDENTIAL RISK ANALYSIS above, it is possible to infer, additionally, that:

(i) considering that crypto-assets can generally mirror any existing physical or digital asset, it is possible to infer that, crypto-assets can, in principle, provide for the same functions and potential sources of value of any such asset;

(ii) crypto-assets have particular and innovative features, which allow for additional functions and sources of value, including, without any limitation, the following:

- Bitcoin, as a system, allows for the development of the so-called decentralized finance, that is, a new monetary and financial system based on infrastructures which, as Bitcoin, operate based on decentralized governance, as opposed to the traditional system where the States and the financial institutions operate as trust agents. While this discussion usually causes resistance by the incumbent agents, from an individual perspective it could be considered as an alternative potentially allowing for more financial inclusion and less censorship interference;
- The Bitcoin infrastructure has been inspiring efforts for the development of decentralized exchanges through decentralized markets, in a general perspective, which could be interesting in terms of cost, speed and potentially even for individual benefits as such described in the item above;
- Automatization of legal and judicial procedures (such as the enforcement of guarantees) could be promoted by infrastructures inspired in Bitcoin;
- Internet of Things and other exponential technologies can be promoted;
- Hybrid assets can promote not only innovation but also disruption.

These are only examples of major expected functions and sources of value which should also be understood and explored based upon a neutral approach to Bitcoin and the derivative technologies and instruments, including the so-called crypto-assets.

***Q4. What additional factors affect the risk profile of different crypto-assets which are relevant in the context of determining a prudential treatment?***

24. In addition to the proposed in the Discussion Paper, we would suggest you to also consider the underlying technologies.

***Q5. Do you agree with these general principles in guiding the design of a potential prudential treatment of crypto-assets? Are there additional principles that should be considered?***

25. Yes, and we have some additional comments as detailed in IV. PRINCIPLES GOVERNING THE PRUDENTIAL RISK ANALYSIS.

***Q6. Are there additional channels other than those listed above by which banks could be directly or indirectly exposed to crypto-assets? Which channels could potentially be the most material for banks? How do these exposure channels vary by different types of crypto-assets? What are the benefits and risks associated with banks' crypto-asset exposures through these different channels?***

***Q7. Are any exposure channels likely to change in response to ongoing or envisaged developments in cryptoasset markets?***

26. At this moment, we do not envisage any such additional channels other than those listed above by which banks could be directly or indirectly exposed to crypto-assets. Based on our experience and what we have been able to follow up in the market, we would like to express our view on the following activities and channels:

- the channels that we expect to be initially the most material for banks are those described in items: (iii), (iv), (viii), (xii) and (xv), that is, activities mostly related to speculation. The activity described in (ii) may also be of the institutions' interest in this context.
- as stablecoins start to develop and more legal endorsement is provided, we expect that several other traditional banking activities mirroring the activities usually performed with fiat such as (i), (vi), (xiii) and (xviii) will become more popular.
- activities such as (xi) may be interesting with the development of Security Token Offerings - that is, crowdfundings associated to the ownership and custody of Security Crypto-Assets and/or Utility Crypto-Assets<sup>5</sup>.

27. It is our expectation that the development of crypto-assets and of the economy around them (particularly crypto-currencies in this case) will allow for:

- the issuance and exchange of global currencies by non regulated institutions (even if not having legal tender), which challenges the States and banks as: issuers and depositary of currency, providers of credit, intermediaries for banking remittances;
- direct (peer-to-peer) financial exchanges and other exchanges generally, which challenge the incumbent regulated institutions in their traditional functions as custodians and trust agents.

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<sup>5</sup> Originally, crowdfundings involving crypto-assets were named "Initial Coin Offerings", most of which became very popular in 2017 and frustrated investors subsequently. As an evidence of seriousness in making new offerings following that supposedly democratic and innovative technological model, some companies and projects started naming them "Security Token Offering", signaling that from the beginning they recognize that the crowdfunding aims to follow capital markets regulations.

28. Accordingly, the channels will not necessarily change, but it is likely that intermediaries generally may not be as much necessary as today, whilst the services and products currently provided by the incumbents will likely be also provided by new competitors, which may benefit consumers.

***Q8. Which risks would be the most material with respect to banks' exposures to crypto-assets? Are there additional risks other than those listed above which banks could be exposed to as a result of holding direct or indirect exposures to crypto-assets, or providing related services? To what extent do these risks differ based on the type and design of crypto-assets, and how do they differ to traditional asset classes?***

29. We understand that the list provided is a good starting point as potential risk parameters from a prudential perspective. The Counterparty and the Third Party risks could perhaps be complemented by the Network Risk when involving decentralized projects, since the security of permissionless projects may lay on the network effect in addition to closely related aspects such as technology and governance.

***Q9. What are your views on the illustrative example of a prudential treatment for high-risk crypto-assets? Which crypto-assets would classify as high-risk based on the criteria set out above? What other features could be considered in specifying the scope for such a potential treatment?***

30. Please refer to V. EXAMPLES OF PRECISE PRUDENTIAL RISK TREATMENT above.

***Q10. What further supervisory measures could be considered in specifying a potential prudential treatment for crypto-assets?***

***Q11. What are your views on the disclosure requirements related to banks' crypto-assets? Should additional information related to banks' crypto-asset exposures be disclosed?***

31. As previously informed, it is our understanding that:

- Any risk assessment process shall be as rigorous as needed depending on the nature of the crypto-asset and/or of the related exposure. In other words, we recommend a neutral approach, rather than a biased conservative one ("rigorous", "granulous" should ideally be avoided to the benefit of more neutral adjectives);
- The supervisory process should not impose an excessive burden on the regulated institutions to avoid potential competitiveness disadvantages.

***Q12. What are your views on the appropriate prudential treatment of these types of crypto-assets? Are there additional types of crypto-assets that would warrant a different treatment to the illustrative example outlined in this paper?***

***Q13. What are your views on the potential prudential treatment of specific types of crypto-assets that bear economically equivalent risks to traditional asset classes? To what extent could the prudential treatment of such crypto-assets build on the existing framework?***

***Q14. What specific conditions and criteria are needed for different types of crypto-assets to be subject to a different treatment to the illustrative example discussed in this paper?***

***Q15. Do you have other suggestions regarding the design of a potential prudential treatment of crypto-assets?***

32. Our general view on the criteria that should be applied is expressed throughout this document. Particularly, as regards crypto-assets for intra- and inter-bank settlements, and Crypto-assets that use stabilization tools linked to other assets, it is our understanding that:

- In general terms, these kinds of crypto-assets fall into the category of “stablecoins”, defined as any privately-issued cryptocurrency represented by “digital units of value that are not a form of any specific currency (or basket thereof) but rely on a set of stabilisation tools which are supposed to minimise fluctuations of their price in such currency(ies)”<sup>6</sup>.
- It is our view that the risk profile of such crypto-assets is majorly comparable to the one of the assets (e.g. fiat currency) that constitute its reserves. However, despite of the assumption of stability, the project shall be fully and deeply analyzed as described in the Discussion Paper, considering also: legal aspects (responsibilities of the involved entities) and technologies underlying the system, the software operation, and so on. Independent auditors may be helpful to access any such risks.
- Operational risks related to the technical aspects of the project, and to the governance of the entities involved (if applicable) should also be considered. But if it is potentially a relatively small network, formed exclusively or primarily by regulated institutions, a certain trust shall be assumed among the involved institutions, reducing the risks.

We hope our contributions will be of your interest and remain at your availability for any further development.

Respectfully,

**Blockchain Academy Treinamento e Consultoria Ltda.**

Rosine Kadamani

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<sup>6</sup> Bullman, D; Klemm, J & Pinna, A (2019). *In search for stability in crypto-assets: are stablecoins the solution?*. Occasional Paper Series, nº 230/August2019. European Central Bank (ECB).