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Basel Committee on Banking Supervision
Bank for International Settlements
CH-4002 Basel

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Discussion paper

Designing a prudential treatment for crypto-assets

Dear Madam, Dear Sir

On December 2019, the Basel Committee on Banking Supervision (hereafter the Committee) issued a discussion paper on Designing a prudential treatment for crypto-assets for comment by 13 March 2019 (the "**Discussion Paper** ").

The Crypto Valley Association (CVA), an independent, professional organization located in the Swiss Canton of Zug focused on developing and supporting an optimal ecosystem – in Switzerland, and with a worldwide perspective – for all actors engaged in cryptographic and related technologies, including blockchain and other distributed ledger technologies.

The CVA greatly appreciates the opportunity to provide comments on the proposed legislative changes.

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Regarding the consultation process at hand, the CVA would like to make the following comments on the proposed legislative amendments.

Key positions | Summary

I General approach

The CVA shares the view, that the evolution of the technologies has a potential of innovation and considerable increase of the efficiency of the financial sector and other sectors of the economy.

We welcome and support the Committee's effort to regulate and provide standards in the industry.

In general, we recognize the Committee efforts to align from the Pillars 2 and 3 standards applicable to the crypto-assets. Yet, the Committee should acknowledge the complexity involved in formulating a standardized Pillar 1 measure of crypto-asset risks which would be both sufficiently accurate to set regulatory capital and adequate to support financial innovation.

A global standard under Pillar 2 would be better suited, in the circumstances, to reconcile sustainable and beneficial financial innovation with an effective control of crypto-asset risks in the banking system. The prudential framework in place for banking book interest rate risk should serve as inspiration.

With respect to these preliminary, directional views issued for comment, we believe that a Pillar 1 charge is not fully suited, in the circumstances, and that a Pillar 2 approach is a better way to reap the benefits of technological innovation in banking and finance in a regulated and controlled way. Crypto-assets may appear as an immature asset class, linked to a developing technology poised to revolutionize banking, finance and the broader economy, but they provide undisputed benefits, including enhanced efficiency, market liquidity and risk diversification. The Committee should allow these innovations to thrive in a regulated and risk-controlled environment.

It is premature to anticipate at which pace and with what scope the transformation will unfold. It is also too early to foresee when and in what form there will be sufficient stability and maturity in the crypto-markets to support the introduction of a meaningful formulaic Pillar 1 global prudential banking standard.

The Committee should first achieve a full understanding of the additional risk factors and exposure channels currently associated with crypto-assets and clearly isolate the intrinsic risk carried by crypto-assets from the broad operational risk currently surrounding their development (which in part originates from a currently immature and incomplete market infrastructure).

The Pillar 1 standard as currently proposed would prevent banks from participating in the crypto-asset market and from offering services vital for the development of such markets – effectively promoting parallel, unregulated, activities and delaying innovation.

During the ongoing rapid and intense development phase of crypto-assets, related activities, markets and infrastructure, it is preferable to leverage a more flexible supervisory review process. This process should be complemented by appropriate supervisory dialogue and cooperation, and by issuing qualitative standards (including for DLT / blockchain) for the digitization processes. A Pillar 2 approach would make it possible to reconcile the need to be sufficiently conservative with the need to grant flexibility and allow further development.

The prudential framework in place for interest rate risk in the banking book should serve as an inspiration. It formulates clear risk management and governance expectations, a detailed (product-based) risk measurement framework, disclosure requirements. It positions capital adequacy within the context of the internal capital adequacy process; it provides supervisory

principles for the identification of outliers (including international cooperation) and a standardized risk measurement framework that could be mandated to banks or offered as an option.

II Answers and comments

1 **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?**

Technological and design features as well as the relevance of such features may vary among crypto-assets. Hence, economical and risk-based functions should be main drivers in designing a prudential treatment of crypto-assets.

In addition, one should take into account the smart contracts embedded within a crypto-asset that satisfy predefined conditions. Ownership of the cryptoasset should be clearly identifiable as well as debt attached to assets to avoid "shadow fractional banking" - "lending the same asset to many people.

In this context, a distinction between Crypto-assets and Cryptocurrencies should be reached at the outset as it will define a number of features and constrains for both. Are cryptocurrencies subset of crypto-assets or a standalone financial instrument for instance?

The profound features of cryptocurrency (preventing crypto assets become speculative trading instruments under the premise of digital currencies) should include the matching of the cryptocurrency as a unit of account, store of value, and a mean of payment beyond the "trading ecosystem".

2 **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?**

Crypto-asset's economic function can be differentiated¹ in tokens which have

- no right against a counter-party (payment token, e.g. Bitcoin);
- relative right against a counter-party (e.g. asset backed token or token with a contractual right);
- absolute/ownership right (e.g. IP rights such as copyrights and may also include material objects in certain jurisdictions).

Like traditional products, financial and/or other contractual claims vary and have different risk related characteristics. As example is the risk for a bank or bank customer higher in case of an unauthorized transfer of a third party (cyber risk) of payment tokens much higher than the same situation for asset backed token (e.g. representing shares) as legal claims related to the asset

¹ Conceptual Framework for Legal and Risk Assessment of Crypto Tokens, 2018; https://www.mme.ch/fileadmin/files/documents/180501_BCP_Framework_for_Assessment_of_Crypto_Tokens_-_Block_2.pdf

still can be pursued (e.g. acknowledgment of rights to the assets via the counterparty or a judge)?

The difference risk to bank customers/investors shall be reflected accordingly in differentiated approach towards different token categories in designing a prudential treatment.

For a bank the greatest amount of economic value creation in the context of crypto-assets is (as with fiat money) in lending operations. Due to the disinflationary nature of those assets (in relation to transaction costs) banks could run a risk if unchecked with the collateralization and over lending. Inevitably volatility will play a major role in defining risk parameters within regulation for prudent lending operations.

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

Crypto-assets will bring many benefits once the distributed ledger technology has been adopted in the banking system. Benefits are clearly in the payment and settlement process, where significant savings in time, people, transmission time and security are evident. The rules on the network are agreed and verified by all participants which places an emphasis on fairness.

The technology not only bring internal benefits for market players such as cost saving and efficiency gains (i.e. in settlements, KYC, product replication, product portfolio, speed of execution, cross-chain amendments with spontaneous validation, due-diligence) but also from an external point of view for revenue generation opportunities such as bringing banking to un-banked people, microfinancing, savings, money transfers, new products (collateral, lending and trading).

Traditional security markets tend to be easier to access and more stable than the crypto-assets equivalent, whereas blockchain-based assets excel in terms of efficiency. In particular, blockchain technology prevents duplication of effort when validating information, potentially enabling many of the activities of corporate actions to be automated through smart contracts. If we can combine the advantages of both traditional and crypto-assets, we can create a digital asset ecosystem that is both stable and accessible, while being more efficient and dynamic than before.

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

Additional risk factors can be technological e.g. related to restrictions in tradability / transferability. Another risk factor can be the (lack of or weakness) of the legal connection of the crypto-asset to the underlying asset (e.g. shares) and the holder has no or insufficient legal instruments to claim the rights on the underlying asset.

Finally, members reported that multi-ownership of the digital asset that acts as a proxy to an asset manifested in the real world i.e. in case of a yield producing asset can be a risk factor.

(similar to a major shareholder who would potentially press minor shareholders to accept a bid for a company).

5 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?

The three general principles seem to be adequate.

The principle "same risk, same activity, same treatment" is key as regulations should be technology neutral and hence based solely on the functions of crypto-assets and not guided by the underlying technology. This approach has proved itself in a rapidly changing technological environment, where development can be predicted only to a limited extent by lawmakers. Firstly, it offers a high degree of flexibility. Secondly, it supports the objective of competitive neutrality. Thirdly, a technology-neutral approach alleviates the potential problem that sustainable legislative processes often lag behind technological progress.

It is crucial that the Committee ensures optimal framework conditions that enable the development of new technologies such as blockchain/DLT in a regulated and risk-controlled environment. If an innovation is technically feasible, offers economic potential, and there are no overriding interests (such as excessive risks) speaking against it, the framework should facilitate and support successful implementation. We also suggest to only perform targeted and limited adjustments of existing frameworks. The Committee should not fundamentally question its proven and balanced risk framework for traditional assets but should make swift and targeted adjustments if needed where there are gaps or obstacles with regard to a prudential treatment of crypto-assets.

Moreover, the Committee should position itself as open towards new technologies and innovations and cultivate regular dialogue with the industry. Innovation-friendly framework conditions are determined not only by features and risk characteristics of crypto-assets, but also by the openness of the competent committee members to new technologies and by the accessibility of the Committee for market participants.

6 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?

Points of contact with crypto-assets are very different for one bank to another and it might not be possible to standardize this. For most banks, it will initially come down to the three positions - providing custody, exchanging fiat, and trading. One of the main advantages for banks is the opening of a new revenue stream, which has not existed in this form before and therefore higher margins can be earned. However, higher margins also come at a higher cost, as most banks will have to adapt their risk management and compliance controls and processes to the new channels first. This could be achieved with larger investments. Also, banks must first acquire the know-how, which can lead to taking too many or unknown risks.

7 Are any exposure channels likely to change in response to ongoing or envisaged developments in crypto-asset markets?

Most channels will change over time. Crypto-assets are new territory for most banks and very few can currently imagine lending or just trading. As soon as clearer guidelines will be provided in this area, participants will increase their participation in this product range. Deposits or lending will be among the basic products of most banks.

A potentially large change might appear in the relationship between Central Banks and retail/commercial banks if the Central Banks decide to issue CDBC's. Another major impact will be in Tier 1 and Tier 2 reserves definition and requirements.

8 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?

The loss of private keys of payment tokens is the highest risk for bank customers/investors. For other crypto-assets access to or exercising of rights to the underlying assets might still be possible why the risk for the customer/investor is lower.

We can also add two related in nature risks that could be detrimental for the existence of the banks in a world of digital assets: first (i) an attack concentrated around the distribution network to sever the links between the entry and exit point of each digital payment/validation node which will wall-fence the bank and render it a prisoner and second (ii) An attack that could initiate mass instantaneous outflow of payments to a payment point which could then severed from the grid, thus starving the system of liquidity and causing a digital run-in-the-bank of a global scale. These risks are based on cybersecurity controls, like smart contracts where the functionality of an asset, i.e. its creation, transfer, trading etc., depends on the smart contract used. Failure in the smart-contracts can have deep consequences.

Finally, we would also to add a specific risk that might occur related to the transactional risk. When a transaction is made to an address, the receiving address cannot refuse the transaction. Therefore, the owner of the address has no control over the funds that come onto the address, nor over their origin. This effectively implies the risks of holding digital assets unwillingly.

9 What are your views on the illustrative example of a prudential treatment for high-risk crypto-assets?

Characterized features do not help to distinguish between "high-risk" crypto assets and "low or medium-risk" crypto assets as they are vague, generic and of explanatory nature.

All crypto assets used as means of payment or exchange (native crypto currencies) would be classified as high-risk crypto assets which in our view does not make sense. With the appropriate safeguards, the market is generation or two away from the digital assets that could

fit the sound and safe means of payment, unit of account and store of value for the wider population with a lower risk. This should not be disregarded.

We agree on the general principles proposed by the BIS. Regarding the principle “same risk, same activity, same treatment”; why should crypto assets then be treated different than traditional asset, more specifically why should banks not be permitted to use their internally modelled approach for any crypto-asset exposures (p. 11 trading book treatment)?

With regards to credit risk mitigation, it is questionable as to why should crypto assets not be eligible to serve as collateral. A healthy lending and borrowing market allow for better price discovery and valuation of the underlying assets through the interest rate² which in turn has the potential to draw in new investors while encouraging the movement of crypto capital out of storage and into markets which finally should decrease the long-awaited volatility.

Which crypto-assets would classify as high-risk based on the criteria set out above?

A reliable classification model and risk assessment criteria are indispensable. We suggest developing a holistic multi-layered risk framework with a focus on the functionality of crypto assets, the underlying protocol aspects and with the financial and non-financial risks as mentioned in the Consultation paper on page 10.

An illustrative example can be found below:

- **Layer 1 Basic risks**

Functional aspects such as

- The underlying economic function – e.g. FINMA Taxonomy – categorize between utility tokens, payment token (native cryptocurrencies) and asset tokens (securities) - with the option of having hybrid tokens
- Target use of crypto asset - e.g. medium of exchange, unit of account and store of value, access right to infrastructure, access right to application/ownership definer

- **Layer 2 Protocol related risks**

Technical and conceptual aspects such as

- Protocol type (native public blockchain, token, sidechain or permissioned chain)
- Timestamping and consensus model (proof of work/stake/authority/hybrid or different models)
- Hash algorithm (Scrypt/SHA/Keccak etc.)
- Governance model
- Launch date (history of stability)
- Community (crypto asset distribution / number of full nodes or validators)
- Possibility of transaction analysis (transparency vs. Pseudo-anonymity vs. anonymity)
- Issuance schedule (centralized / decentralized / block reward)
- Supply implementation of a unit cap / deflation model
- Fork policy (past hard-fork history and future planned hard-forks)

² In traditional financial markets, interest rates reveal significant information about the health of the economy and form the basis for almost all asset valuation models. Whether it be for calculating expected return or present and future market value, the interest rate is a key variable based on the lending and borrowing of assets. underlying assets themselves are valued and priced in the markets.

- IP rights on the underlying protocol
- **Layer 3 Financial and non-financial risks**
 - Liquidity risk
 - Market risk
 - Credit and counterparty credit risk
 - Operational risk (e.g. forks and airdrops)
 - Legal and Compliance risks (including regulatory)
 - Reputational risks

What other features could be considered in specifying the scope for such a potential treatment?

Please find the other features we considered relevant:

- Loans: Loans against crypto-assets are currently being considered as unsecured. It would be recommendable to accept the higher capitalized protocols such as Bitcoin and Ether and maybe Ripple as collateral from a Basel perspective. Most of often it is mentioned that payment tokens cannot be considered as no issuer / direct counterparty is available. However, gold and silver have the same challenge and are accepted as offsetting collateral. In addition, the monitoring approach of the bank and the adherence to the internal controls is important, margin calls and maybe the materialization of collateral might happen more often as with traditional banks.
- Segregation: Using the same approach like for regular omnibus accounts it should also be possible that crypto-assets can be held in omnibus wallets as long as it is possible to allocate individual holdings
- Capital Adequacy Requirements – risk-weighting factors for prop positions must be reconsidered even that the volatility might be slightly higher as traditional products such as bonds and shares. With the current factor it is too expensive to consider it as an additional diversification product for banks. It should be the bank's decision on how much risk appetite they like to take, and it should not be driven by different risk weighting which makes it almost impossible to achieve a decent return on capital. In addition, the items mentioned under "loans" is a direct driver of the capital adequacy requirement as well and are therefore valid for this item too.

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

Regulators have already implemented a process of how to deal with new products / businesses. The process for implementing or activating the crypto business should not be different. We also suggest the setup of an expert group within the Committee to design and implement a potential prudential treatment for crypto-assets. The combination of participants from various industries in the crypto and digital asset space, academia and traditional banking sector will in our view enhance the acceptance of the outcome by member authorities and other authorities to implement them through their national systems. The involvement of financial and fintech

associations to participate in the consultation to actively contribute to a holistic DLT/blockchain framework is a success story in Switzerland ³.

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

Banks should disclose information within the regulatory obligations only. Crypto assets should be disclosed according to the same standard as for other asset classes.

12 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?

As already described above, the differentiation between "high risk crypto assets" and "other types of crypto assets" are too simple and not sustainable. In our view, a prudential treatment needs a clear classification of the economic function and a multi-layered risk assessment of the key aspects described in question 9.

13 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?

Products with a similar or identical risk profile among the crypto-assets compared to the traditional world should be treated under the existing framework.

14 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?

Crypto-assets need to be allocated to appropriate categories considering tradability, underlying assets and transferability among others. Based on a final allocation, it would then also be possible to introduce different treatments. It would be wrong to treat all crypto-assets together under the same approach. This could lead to a situation where these products would have a significant disadvantage compared to the current "traditional" products.

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

We would like to highlight the most important principles of a potential prudential treatment of crypto-assets design:

- The design of a framework for the treatment of crypto-assets shall be technology neutral and principle-based

³ Federal Council: Blockchain/ICO working group consults sector on its work, 2018; <https://www.admin.ch/gov/en/start/documentation/media-releases.msg-id-72001.html>

- The Committee should build on existing frameworks and make only swift and targeted adjustments if needed
- Any framework must be flexible given the pace of technological development

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We remain at your disposal to elaborate further on any of the matters raised in our response.

Sincerely yours,

On behalf of the Crypto Valley Association:

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