Consultation response

HM Treasury - UK regulatory approach to cryptoassets and stablecoins: consultation and call for evidence

19 March 2021

The Association for Financial Markets in Europe (AFME) welcomes the opportunity to comment on Her Majesty's Treasury (HMT) Consultation Paper and Call for Evidence (referred to hereafter as "this CP") on the **UK REGULATORY APPROACH TO CRYPTO-ASSETS AND STABLECOINS.**

AFME represents a broad array of European and global participants in the wholesale financial markets. Its members comprise pan-EU and global banks as well as key regional banks, brokers, law firms, investors, and other financial market participants. We advocate for stable, competitive, sustainable European financial markets that support economic growth and benefit society.

AFME is the European member of the Global Financial Markets Association (GFMA) a global alliance with the Securities Industry and Financial Markets Association (SIFMA) in the US, and the Asia Securities Industry and Financial Markets Association (ASIFMA) in Asia.

Executive Summary:

There is an important opportunity for HMT and relevant UK authorities[1] (referred to hereafter collectively as "UK Authorities") to create a regulatory environment that delivers digitisation of UK capital markets. Digitisation can lead to benefits for end users, and wider market participants, by bringing innovative new products to market, increasing operational efficiencies, and reducing risk. AFME therefore encourages UK authorities to send a strong signal to the market that they are committed to pursuing digitisation in UK capital markets to foster innovation and promote long term investment in new technologies.

We welcome UK authorities in:

- Bringing all crypto-assets within the scope of Anti-Money Laundering/Counter-Financing Terrorism (AML/CFT) and financial promotions requirements;
- Bringing stable tokens in scope of new, and proportionate, risk-based requirements; and
- Seeking industry input on the regulatory barriers for Distributed Ledger Technology (DLT) adoption in wholesale markets.

We encourage UK authorities to act quickly at this early stage of development, and in collaboration with the industry, to identify any barriers to DLT adoption and to provide regulatory certainty on the treatment of different types of crypto-assets.

We have listed below our high-level recommendations for this CP to support the UK approach in fulfilling regulatory objectives and encouraging innovation:

- **Provide a more granular crypto-asset taxonomy to clarify the treatment of existing use cases.** This will support greater certainty on which regulations apply to the different categories of crypto-assets that exist today. We recommend utilising the framework and definitions provided in the Global Financial Markets Association (GFMA) 'Approach to the Classification and Understanding of Crypto-assets' (see Annex II) to develop this taxonomy.

[1] We consider relevant UK authorities to include, in respect of this consultation, the Financial Conduct Authority, Payment Systems Regulator and the Bank of England.

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- **Apply the principle of 'same activity, same risk, same regulation' to the regulation of crypto-assets.** This will help to maintain a level playing field, encourage innovation, and ensure effective supervision and oversight.
- **Align the UK approach with globally agreed principles and frameworks to ensure global coordination.** This is needed to protect end users, promote financial stability, and reduce regulatory complexity. It will also support the development of interoperability and standards for crypto-asset solutions cross-border. Specifically, action is needed to align AML/CFT frameworks[2] and definitions to avoid any potential gaps in regulation and ensure the protection of end users.
- **Narrow the scope of the stable token category to focus on currently unregulated activities and therefore exclude activities using Distributed Ledger Technology (DLT) that are already regulated**. For example, this scope should exclude tokenised commercial bank money and Financial Market Infrastructure (FMI) tokens. These two forms of 'digital money' should operate under existing rules and regulations to avoid creating conflicting regulatory frameworks and additional complexity.
- **Leverage existing payment regulations for the regulation of stable tokens, to the extent possible, to protect financial stability and ensure a level playing field.** However, we note that additional requirements may be needed to address the unique features of stable tokens (e.g., the need to maintain a stable value and ensure convertibility into fiat, at par and on demand).
- **Deliver greater regulatory certainty by providing guidance on the application of existing regulations in a DLT context and/or making legislative amendments where needed**. For example, UK authorities should conduct a review of existing securities legislation (such as the Second Markets in Financial Instruments Directive (MiFID II), Settlement Finality Directive (SFD), Financial Collateral Directive (FCD), Central Securities Depository Regulation (CSDR), Alternative Investment Fund Managers Directive (AIFMD), Undertakings for the Collective Investment in Transferable Securities (UCITS)), and UK property and private law, and provide guidance. This review should include engagement with the industry and any issues that require legislative amendment should be addressed in a timely manner to encourage investment and facilitate innovation. It is crucial that UK authorities provide transparency on the UK approach and move quickly to reduce uncertainty on the application of markets rules to provide firms the confidence to invest.
- **Consider creating a mechanism for identifying regulatory obstacles to the adoption of DLT in wholesale markets**. This could include forming an industry expert group to support UK authorities, introducing additional consultation and review cycles, maintaining international collaboration, and facilitating the large-scale testing of DLT solutions by enhancing (e.g. scaling up) the Financial Conduct Authority (FCA) Sandbox or establishing a time-limited exemption-based regime. This could bring benefits by supporting the scalability and interoperability of DLT solutions that is required to facilitate wide scale adoption.

Finally, if the Bank of England (BoE) were to consider the development of a Central Bank Digital Currency (CBDC), we believe the development of a wholesale CBDC should be prioritised. A wholesale CBDC could provide benefits for end users and market participants and encourage digitalisation and innovation in financial services more broadly. For example, a wholesale CBDC could offer the possibility of atomic settlement without credit risk, increase operational efficiencies across the capital markets value chain, and provide new opportunities for innovation and digitisation (e.g. atomic Delivery versus Payment, digital debt/equity issuance and settlement). We look forward to further communications from the BoE regarding next steps and would welcome the opportunity to provide input.

Our detailed response to this CP is provided below and we look forward to continuing to support HMT in this important initiative.

Consultation response:

Chapter 1 - Cryptoassets and the current regulatory landscape

[2] E.g. Financial Action Task Force (FATF) Recommendations on Virtual Assets, UK transposition of the Fifth Anti-Money Laundering Directive (AMLD5)

1. Do you have views on continuing to use a classification that is broadly consistent with existing guidance issued by UK authorities, supplemented with new categories where needed?

We welcome the UK authorities in utilising a classification that is broadly consistent with existing guidance and based primarily on the function of the token and the activity being conducted. We agree it is important that any classification is future-proof and sufficiently flexible. Crypto-asset categorisation should also be globally aligned wherever possible.

However, we find that there are use cases being developed today that are not covered in the categories proposed in this CP. For example, we consider it necessary to clarify the categorisation and treatment of:

- Deposits recorded on DLT;
    - We believe that an account credit-balance recorded on DLT could qualify as a deposit if it were otherwise able to satisfy the definition of a deposit as set out in Section 2(1) of the Deposit Guarantee Scheme Regulations 2015[3]. The manner of recording the deposit should not change its regulatory treatment, which should be based on the rights and claims of the depositor. We note that there are various nuances that require further clarification, such as the regulatory treatment of tokenised balances recorded on DLT that are transferrable across institutions and used to discharge obligations. We would welcome the opportunity to work with UK authorities in assessing any arising risks and the application of existing regulations.
- Settlement tokens[4];
    - We believe that settlement tokens (i.e., tokens used to speed up settlement) should be covered by existing regulations for equivalent banking functions today. These tokens are only used to record ownership and are not used as a means of payment or exchange. On this basis, we request clarity on para 1.20 of the CP which states "the [regulated category of stable tokens] would also include other forms of tokenised payment and settlement assets, as well as tokenised forms of central bank money" (p 6).
- Hybrid tokens:
    - A hybrid token would include, for example, a token that initially falls under the proposed regulations as a payment instrument but then gains additional characteristics to become a financial instrument (or vice versa). We recommend that UK authorities provide guidance on hybrid tokens that leverages existing practises in the market today when a financial instrument changes features. This will provide regulatory clarity on the treatment of hybrid token use cases (please see Annex I for further detail on the treatment of hybrid tokens).

We recommend that UK authorities leverage the framework and definitions provided in the Global Financial Markets Association (GFMA) *'Approach to the Classification and Understanding of Crypto-assets'* to develop a more granular taxonomy (see Annex II). The GFMA approach has been developed by the industry and is an important tool for clarifying what types of assets are intended to be included in and out of scope of the regulatory perimeter. This is important for bringing legal certainty to market participants in how different crypto-asset products and services in the markets today will be treated under new or existing regulations.

2. Do you have views on the proposed new regulated category of 'stable tokens'?

We welcome the creation of a category for stable tokens; however, we believe that the proposed scope of this category is too broad. There is a need to clearly differentiate the broader category of 'Value Stable Cryptoassets' (see Annex II B.) from stable tokens. The stable token category should specifically include new and currently unregulated activities, where a new regulatory approach is needed to account for their unique services and additional risks.

[3] https://www.legislation.gov.uk/uksi/2015/486/pdfs/uksi_20150486_en.pdf

[4] Representation on DLT of underlying traditional securities/financial instruments issued on a different platform (e.g., a traditional CSD, registrar, etc.) where such representation itself does not satisfy the definition of a security or financial instrument under local law and is used solely to transfer or record ownership or perform other mid/back-office functions (e.g. collateral transfer, recording of ownership), see Annex II, D.

The stable token category should not include activities that are already regulated, that simply use DLT to conduct them. This means that tokenised commercial bank money[5] and FMI tokens[6] should not be in scope of the stable token category.

These two forms of 'digital money' should operate under existing rules and regulations to avoid creating conflicting regulatory frameworks and additional complexity, which could limit innovation in this area. This is in line with the principle of 'same activity, same risk, same regulation' and is the same approach that has been proposed in this consultation for the regulations regarding securities issued on DLT. In these cases, HMT should assess the existing legislation to identify whether further clarity or adjustments are needed in a DLT context.

To help make the above distinction clear, we recommend that HMT utilise the following definition of stable tokens that we developed in the GFMA *Approach to Classification and Understanding of Crypto-assets* (see Annex II B. 4.):

> *"Tokens (crypto-assets) designed to minimize/eliminate price fluctuations relative or in reference to other asset(s), and which are not issued by a central bank, FMI, bank, credit institution or highly-regulated depository institution. They may represent a claim on the issuing entity, if any, and/or the underlying assets*."

Chapter 2 - Policy approach

3 Do you have views on the government's proposed objectives and principles for cryptoassets regulation? Do you have views on which should be prioritised, or where there may be tension between them?

We are supportive of the proposed objectives and principles for crypto-assets regulation. In particular, the principle of 'same activity, same risk, same regulation' will be critical for supporting innovation, providing legal certainty to market participants, ensuring a level playing field, and protecting end users and financial stability.

At a high level, we recommend that the UK approach considers the following objectives to support DLT innovation:

1) Clarify how existing regulations apply to existing regulated activities conducted using DLT;
2) Develop clear, risk-based and proportionate regulations for new DLT-based activities that are covered by this proposed regime; and
3) Align to international standards to allow for cross-border activity and regulatory certainty.

Overarching approach and related UK initiatives

4 Do you agree with the approach outlined, in which the regulatory perimeter, objectives and principles are set by government and HMT, with detailed rules to follow set by the UK's independent regulators?

We agree with the high-level approach outlined by HMT. We recommend that UK authorities act quickly, in consultation with industry stakeholders, to establish or clarify applicable regulations. This will bring regulatory certainty to market participants and encourage innovation. It is essential that UK authorities work closely together to ensure the regulations set out are coordinated and do not create additional complexity or conflicting regulatory requirements.

5 What are your views on the extent to which the UK's approach should align to those in other jurisdictions?

There is an opportunity for the UK to be at the leading edge of digitisation, in which the UK should act to create a regulatory environment that fulfils regulatory objectives and fosters innovation. At the same time, global regulatory alignment is critical for maintaining financial stability and protecting end users by addressing gaps in supervision across

[5] a digital form of money that represents single fiat currency and is issued by/structured as a claim on a bank, credit institution or other similarly highly regulated depository institution[5] that may or may not pay interest, see Annex II B. 3.
[6] a digital form of money representing claims on an FMI and reflecting deposits held at a central or commercial bank in a single fiat currency that may or may not pay interest, see Annex II B. 2.

jurisdictions, particularly in a global or cross border market. These gaps, if left unaddressed, could create systemic vulnerabilities, client protection issues and legal uncertainties as the use and volume of crypto-assets continues to grow.

The UK's regulatory approach should be aligned with globally agreed principles and frameworks. This will support the development of interoperability and standards for crypto-asset solutions cross-border and create a UK regulatory environment that is supportive of innovation. We therefore welcome the CP's references to international work such as the Committee on Payments and Market Infrastructures (CPMI) - International Organization of Securities Commission (IOSCO) Principles for Financial Market Infrastructures (PFMIs) (para 2.4) and the Financial Stability Board (FSB) report on Stablecoin Regulation (para 1.23).

Global alignment is particularly important given the number of cross-border crypto-asset products and services in existence and under development[7]. It will be important to clarify how these activities will be treated cross-border to encourage innovation, mitigate risks, and ensure a level playing field.

If a global framework is not possible to achieve, an alternative option could be globally agreed minimum operating and conduct standards for currently unregulated crypto-asset related activities (to protect market integrity as well as the security and privacy of end users). For example, internationally agreed minimum standards for data exchange, AML/CFT, conduct and governance are important first steps in achieving the anticipated cost and efficiency gains in cross-border crypto-asset payments. Finally, any work on a crypto-asset taxonomy should align with ongoing global initiatives on classification (e.g. G7/G20, FSB, BIS, IOSCO[8]).

Chapter 3 - Expanding the regulatory perimeter

The first phase of legislative changes

6 Do you agree with the government's assessment of risks and opportunities?

We agree with the government's assessment of risks and opportunities.

However, one risk we believe should be added is *price pressure* on a stable token. This risk occurs when there is higher or lower demand on the stable token compared to that for the reference asset (such as a fiat currency as per paragraph 1.15 of this consultation). Price pressure can result in price volatility and therefore needs to be managed effectively to protect end users and financial stability.

Further, we recommend that UK authorities review and consider the risks and mitigants provided in the ECB opinion on a proposal for a Regulation on Markets in Crypto-assets (MiCA)[9].

7 Do you have views on the proposed initial scope of UK cryptoasset regulation as summarised above?

We agree that stable tokens should be brought in scope of UK cryptoasset regulation. Stable tokens that do not qualify as e-money are new products with additional features. This means they do not fit into the existing regulatory framework and require a new approach. However, as noted in our response to Q2, we believe the scope of stable tokens in this consultation is too broad. Other forms of digital money (such as tokenised commercial bank money and FMI tokens) should be excluded from scope of this consultation and instead covered by existing regulations. This approach is technology neutral and consistent with the approach to tokenised securities that is proposed in Chapter 4 of this consultation.

We welcome in particular para 3.4, which brings all crypto-assets in scope of AML/CFT requirements. This is a key priority for the industry in order to protect clients/consumers and market integrity.

[7] See Section 4.1 on cross border challenges – FSB 2020 Final Report on Global Stablecoins - https://www.fsb.org/wp-content/uploads/P131020-3.pdf
[8] E.g. *Harmonisation of Critical OTC Derivatives Data (Other than UTI and UPI),* Technical Guidance, BIS, CPMI-IOSCO –(Apr. 2018), *available at*: https://www.bis.org/cpmi/publ/d175.htm
[9] https://www.ecb.europa.eu/pub/pdf/other/en_con_2021_4_f_sign~ae64135b95..pdf

We would also welcome clarity on whether HMT intends to bring crypto-referenced financial products, such as derivatives that reference certain types of crypto-assets for wholesale use, into the scope of this consultation. It would also be helpful to clarify if or when crypto derivatives are considered financial instruments.

8 Do you agree that this approach best balances the government's stated objectives and principles?

We agree that this approach best balances the stated objectives and principles.

Scope of regulation and requirements

9 Do you agree that the activities and functions outlined above are sufficient to capture the activities that should fall within the scope of regulation?

Yes, we agree, however we request additional clarity or guidance on the following areas:

- How regulations for authorisation will be enforced;
- What it means to "authorize or verify the validity of transactions and records." For example, we request clarity on whether this would include participating in a node within the DLT network, and whether participants acting in this capacity would be considered in scope. This raises questions regarding the concept of a fully distributed FMI network, where the traditional concept of one FMI operator is replaced with a decentralised group of validators and service providers with different roles and responsibilities. Such an operating model may require a new framework of regulation given its unique characteristics, which will need further thought and attention from the regulatory community; and
- What will be considered as "facilitating access" to a stable token network, such as a standalone or ancillary activity, and whether this is considered as the distribution and customer interface.

10 Do you agree that the government should primarily use existing payments regulations as the basis of the requirements for a new stable token regime, applying enhanced requirements where appropriate on the basis of mitigating relevant risks? What other existing legislation and specific requirements should also be considered?

Yes, we agree that the government should primarily use existing payments regulations, in applying the principle of 'same activity, same risk, same regulation', to establish clear requirements for market participants. This means that if stable tokens are to be widely used as a means of payment, their issuers must comply with the equivalent standards and principles that govern payment service providers today. Similarly, if stable token issuers conduct activities that are akin to regulated banking activities, they should be regulated as such. This is required to protect end users and ensure financial stability. There is also further support of this notion in para. 3.7 of this consultation, regarding risks to competition.

Whilst not exhaustive, we believe that the requirements for stable tokens used for payments should include the following:

- The ability to maintain a stable value, ensuring convertibility into fiat, at par and on demand, which should include the necessary requirements to ensure this;
- Being subject to the same oversight and regulation as the regulated/financial sector (regardless of the issuing institution), based on the type of activity conducted (e.g. application of PSD2 requirements or banking regulations to service providers managing single-fiat backed stable tokens);
- Ensuring the safety and soundness of the supporting infrastructure and participants across the value chain, including custodians, asset managers, market makers and service providers (e.g. authorization, governance, disclosure, prudential and other requirements among others); and
- Ensuring the transfer of other relevant equivalent standards in existing UK regulations and requirements for payment services providers throughout the legislative process.

Regarding oversight of stable tokens, we recommend that UK authorities account for ongoing resourcing constraints when determining which authority will oversee these activities.

11 Do you agree with the high-level requirements outlined? Do you consider that any additional requirements are needed?

Yes, we agree with the high-level requirements outlined, however we provide the following additional considerations where we believe clarification is needed:

- Regarding the requirements for safeguarding the client's assets, custodians should also be included in addition to wallet providers and exchanges. This is because custody of crypto-assets could be conducted by a third-party intermediary.
- Regarding reserve management, we support the imposition of requirements similar to those in funds, such as the segregation of duties and valuations of the reserve. Regarding valuations of the reserve, trusted and reliable market data and auditability will be required, for instance, if a stable token is pegged to a currency. We also support leveraging existing frameworks that would apply when a financial market participant handles reserves or assets that serve as underlying value. Transparency around calculations and the appropriateness of governance structures should also be clearly identified for both users and supervisors, as well as details on any banding or collaring.
- We recommend that the requirements for cyber security are coordinated with the BoE's work on operational resilience[10].

12 Do you have views on whether single-fiat tokens should be required to meet the requirements of e-money under the EMRs, with possible adaptation and additional requirements where needed?

This will likely depend on the design of the single-fiat stable token. If the substance of the activity being conducted using the single-fiat stable token does reflect e-money activities, then the E-Money Regulations (EMRs) should apply. If single-fiat tokens do not fit the requirements of e-money, then a separate framework with safeguards and requirements should be put in place to mitigate any risks.

If UK authorities conclude that these regulations should apply, it will be important to clarify which requirements from the EMRs will be applicable. UK authorities will also need to ensure that any new or additional risks arising from the use or creation of stable tokens linked to a single fiat currency, which are not addressed by the EMRs, are also accounted for.

13 Do you have views on whether exclusions to the authorisation regime are needed in relation to the stable tokens regime, in light of the government's objectives? If so, which activities do you think should be excluded?

Exclusions to the authorisation regime should depend on materiality and the ability of the UK to enforce applicable regulations, such as the Overseas Framework for wholesale activities[11], to those participants.

Any exclusions granted should balance the objectives of encouraging innovation with maintaining a level playing field, in particular between participants granted exclusions and participants complying within the authorisation regime.

14 What are your views on the appropriate classification and treatment of (unbacked) tokens that seek to maintain a stable value through the use of algorithms?

[10] https://www.bankofengland.co.uk/financial-stability/financial-sector-continuity
[11] https://www.gov.uk/government/publications/call-for-evidence-on-the-overseas-framework

While algorithmic stable tokens may currently be small in scale, there are still risks to end users and potential knock on effects to financial stability and wholesale markets that will need to be addressed (particularly if the volume of transactions and products available begins to grow, given the exponential growth experienced in DeFi in the last year[12]). At a minimum, we recommend that in all cases, clear disclosure of risks is provided as part of the product information.

15 Do you agree Part 5 of the Banking Act should apply to systems that facilitate the transfer of new types of stable tokens?

We recommend ongoing monitoring at this stage, in particular for stable tokens that are used for payments. For example, if a parallel payment system were created with the potential to become systemically important, oversight from the Bank of England via Part 5 of the Banking Act might be appropriate.

16 Do you have views on potentially extending Bank of England regulation of wider service providers in the stable token chain, where systemic?

We agree that the Bank of England should extend its regulation to service providers in the stable token value chain where they are deemed systemic. Systemic service providers in stable token chains should be covered by existing regulations that apply to service providers today, for example the CPMI-IOSCO PFMIs[13].

17 Do you agree that Part 5 of FSBRA 2013 should apply to payment systems facilitating the transfer of new types of stable tokens?

Yes, we agree. This should apply to any service providers that pose a risk to systemic failure.

18 Do you have views on location and legal entity requirements?

We believe that location and legal entity requirements should be based on the activity being conducted and the materiality of that activity. A proportional, risk-based approach should be taken to meet regulatory objectives and ensure the UK regulatory environment remains open to innovation.

Chapter 4 - Call for evidence on investment and wholesale uses

Security tokens

19 Are there any areas of existing regulation where clarification or amendments are needed to support the use of security tokens?

UK authorities should provide regulatory certainty by providing guidance and/or amending existing rules early where clear regulatory obstacles to digitisation have been identified. Provided below are examples where we believe clarification or amendments to existing regulation may be needed:

Regulated Activities Order (RAO)
Interpretive guidance could provide the clarity required regarding whether an instrument that meets the characteristics of a specified investment could also be considered as such when issued via DLT.

Transposition of the Second Markets in Financial Instruments Directive (MiFID II)

[12] https://defipulse.com/
[13] https://www.bis.org/cpmi/info_pfmi.htm

Clear and practical guidance to determine whether a particular crypto-asset constitutes a financial instrument, and which type of financial instrument, would be welcomed. We recommend that crypto-assets that qualify as financial instruments follow a similar client categorisation, with accompanying documentation requirements.

The legal framework should be applied in a way that is technology neutral to avoid creating a different treatment for securities that are issued on DLT and therefore limiting innovation. A clear definition of the category a crypto-asset may fall under is needed to ensure that crypto-assets are regulated in the same way as existing securities.

We have also provided below examples of other areas where clarification might be required:

- **Tokenisation of an existing financial instrument –** Whether, and in which cases, the tokenisation of an existing financial instrument creates (or does not create) a new, additional financial instrument. This should include clarifying whether and in which cases a tokenised financial instrument is fungible, and how it should be treated. In addition, the categorisation and treatment of "settlement tokens" (see Appendix II) should also be clarified.
- **Transactions that move on and off-chain–** Clarification is needed on which organisational requirements are applicable when both off-chain and on-chain recording coexist. This includes clarifying conflicts of interest management, and how these transactions will be treated and related requirements (i.e. trading off chain but End of Day (EOD) is recorded on-chain, or off-chain settlement later recorded on-chain).
- **DLT networks with nodes in multiple jurisdictions –** Guidance is potentially needed in relation to conflict of laws issues raised by the nature of the network structure.
- **Client asset rules –** Clarification is needed on how to apply the UK's detailed client assets (CASS) rules to crypto-assets that qualify as financial instruments. In particular, guidance on the nature of providing custody and sub-custody in a DLT context would be welcomed as it can be difficult to distinguish some technology provider services from regulated activities. More broadly, wider clarification on the application of custody requirements for other types of crypto-assets that do not qualify as financial instruments would be welcomed.

Market Abuse Regulation (MAR)
Clarification is required on what constitutes a MiFID trading venue in a DLT environment under Article 8 of MAR, to ensure that security tokens fall in scope.

In addition, if there are new unregulated crypto-assets, whose values are directly or indirectly referenced to regulated financial instruments, then it would be possible for insider dealing to be committed using unregulated crypto-assets. Therefore, the scope of MAR (and MiFID II) should be continually reviewed to assess the need for new and unregulated crypto-assets to be captured. This would be similar to the necessity of bringing over the counter financial derivatives that reference shares, bonds, or other securities within the scope of MAR.

Central Securities Depository Regulation (CSDR)
Further consideration is needed is on the roles and responsibilities of the Central Securities Depositories (CSDs) and other market participants, and the treatment of distributed FMIs in a DLT-based market environment.

In some jurisdictions, amendments to local laws have allowed the recording of some securities on DLT by addressing issues such as the 'securities account' or 'book-entry' requirements[14]. Other amendments have opened the central account keeper role for the recording and operating of DLT issuances of unlisted debt securities to any EU credit institution, or investment firm, with specific additional control and security mechanisms in place[15]. We believe the UK

[14] E.g. German draft law on the introduction of electronic securities (11 August 2020) - https://e.linklaters.com/130/2637/downloads/linklaters-ewpg---bilingual-version.pdf
[15] E.g. Luxembourg Bill 7637 (22 January 2021) - https://www.allenovery.com/en-gb/global/news-and-insights/publications/luxembourgs-legal-framework-has-just-been-amended-to-recognise-the-use-of-dlt-for-issuing-and-settling-dematerialised-securities

should consider such approaches but emphasise that other measures may be needed to reassign liabilities and ensure related risks are mitigated (such as operational, cyber and ledger transparency).

Further, we believe that clarification is required on the set-up and applicable Delivery vs. Payment model, the provider of cash services, the interface model, and credit and collateral management services. For further detail, please see Chapter 4 - Technology of AFME response to the European Commission's CSDR review consultation[16].

UK authorities should continue to engage relevant stakeholders to map out this evolution while ensuring financial stability, the protection of end users, finality of transfers and a level playing field. For more detail on private-public engagement, please see our response to Q24 below.

Settlement Finality Directive (SFD)/Financial Collateral Directive (FCD)
Clarification may be required on the application of the SFD and FCD in a DLT environment to ensure the legal transfer of title and payment of entitlements between counterparties. We note that AFME is considering the open reviews of the SFD[17] and FCD[18] being conducted by the European Commission, which aim to determine where clarification may be required.

Alternative Investment Fund Managers Directive (AIFMD) and Undertakings for the Collective Investment in Transferable Securities (UCITS)
UK authorities should clarify whether crypto-assets that qualify as financial instruments can also be considered as assets held in custody under AFIMD/UCITS. This is to ensure that investor protection requirements under this legislation are fulfilled by relevant market participants.

UK property law
The property status of crypto-assets that qualify as financial instruments requires further clarification to ensure they can be legally own, transferred, purchased, sold or used as collateral in a transaction. Further clarity is needed, for example, on the type of category under English law these crypto-assets would fall under. In addition, there is currently no concept of a "bailment" over a crypto-asset under English law, on the basis that it does not satisfy the usual requirement on possession of an asset. Similarly, clarification is needed on who will have the legal title to the assets in relation to custody. Providing specific guidance on how crypto-assets are recognised as property will support in clarifying how crypto-assets are, for example, also considered from an insurance, accounting, capital adequacy and insolvency perspective.

UK contract law
Clarity is required on the enforceability of smart contracts under English law. This could include amending UK contract law at the legislative level to recognise that code embedded within a smart contract forms part of the overall contract and is subject to the same existing regulations on recognition and enforcement (for example where there are specific rules applicable that require contracts to be in writing). For more examples and detail, see the UK Jurisdiction Taskforce Legal Statement on Crypto-assets and Smart Contracts[19].

Cross-border regulations
It will be important to clarify the enforceability of rights and obligations for crypto-assets, smart contracts and the underlying platforms across borders (e.g. transfer obligations, property rights).

DLT-based financial market infrastructures

20 What, specifically, are the potential benefits of the adoption of DLT by FMIs? What could be the benefits for trading, clearing and settlement?

[16] https://www.afme.eu/Portals/0/DispatchFeaturedImages/AFME_CSDR_CP_Response_Final.pdf
[17] https://ec.europa.eu/info/consultations/finance-2021-settlement-finality-review_en
[18] https://ec.europa.eu/info/consultations/finance-2021-financial-collateral-review_en
[19] https://technation.io/lawtechukpanel/#statement

DLT has the potential to bring significant benefits at various stages of the capital markets transaction lifecycle, from trading through to settlement. DLT can also be used to improve the resiliency of market infrastructure, reduce settlement risk and ultimately change the way market participants interact with one another.

The role of FMIs will remain important, but the operation of the platforms may evolve because of the use of DLT and other technologies. For example, many DLT efficiencies may be gained in clearing, settlement, custody and other activities, because DLT can streamline some of the existing manual processes that market participants currently perform. This streamlining may lead to commoditization and automation of various businesses and processes.

We have listed below example benefits from the use of DLT for the trade lifecycle and other areas.

Trade lifecycle benefits:

- *Reduction in risk* driven by i) the ability to settle transactions with complete certainty on DLT (to the nearest minute) and ii) the ability to achieve synchronised settlement (also referred to as atomic settlement). Combined, these functions have the ability to significant reduce liquidity risk, settlement risk, credit risk and operational risk across the financial sector.
- *Enhanced product functionality* offered by the end-to-end processing speed of DLT (e.g. the ability to transact on an intraday basis – which is particularly useful as secured intraday markets will be able to develop) and the ability to mobilise illiquid collateral, which can often be cumbersome to move (i.e. long settlement cycles).
- *Faster settlement times,* by streamlining operational and reconciliation processes, can help reduce counterparty and post trade settlement risk[20] and enable regulatory capital and operational savings[21]. A shorter settlement cycle reduces counterparty credit risk, which could support a firm in reducing regulatory capital requirements. Operational savings may also be possible through reduced margin requirements and short-term funding costs. However, a shorter settlement cycle could also create challenges for market-makers by limiting the time available to source the securities or cash required to facilitate settlement;
- *Enhanced regulatory compliance and auditability*, in which compliance requirements can be programmed into smart contracts, automating and driving efficiencies in regulatory compliance. The smart contract will be able to execute, regulate and govern the token (e.g. through verification and access restrictions);
- *Enhanced transparency* through a single source of information, which facilitates recording ownership and makes beneficial ownership transparent throughout the lifecycle;
- *Automated payment of interest or dividends*[22] and automation of other corporate actions via the use of smart contracts;
- *Globalised market trading,* where tokens can be issued and traded globally by using smart contracts to program in specific jurisdictional restrictions. This opens up opportunities for 24/7 trading and settlement (however this will need to be balanced against specific operational requirements).
- *Reduction in market fragmentation/complexity driven by the use of a single ledger,* which reduces the need for the realignment of cash/collateral across custodians and for reconciliation/confirmation of trade details between back offices and post-trade"[23,24];

[20] See p 7 – the impact of DLT on the capital markets value chain, https://www.mas.gov.sg/-/media/MAS/ProjectUbin/Project-Ubin-DvP-on-Distributed-Ledger-Technologies.pdf?la=en&hash=2ADD9093B64A819FCC78D94E68FA008A6CD724FF
[21] See pp 4-5, Benefits of Accelerated Settlement - https://www.dtcc.com/~/media/Files/Downloads/settlement-asset-services/user-documentation/project-ION-paper-2020.pdf
[22] *BIS Quarterly Review,* Bank of International Settlements (Mar 2020), *available at:* https://www.bis.org/publ/qtrpdf/r_qt2003.pdf
[23] *BIS Quarterly Review,* Bank of International Settlements (Mar 2020), *available at:* https://www.bis.org/publ/qtrpdf/r_qt2003.pdf
[24] E.g. Spunta project for matching trades https://www.r3.com/case-studies/spunta/

Benefits outside of the trade lifecycle:

- *Resiliency:* The ability to replicate data across multiple parties reduces risk of a single point of failure and can help address data recovery issues.
- *Information sharing benefits:* If governance and identification of participants were appropriately managed, DLT could increase the sharing of information between trusted participants. DLT can enhance the handling of data between parties, reduce data processing costs, limit disputes or automate the processing of contractual obligations through the use of smart contracts (e.g. for asset servicing or event processing in derivatives).
- *Innovation benefits:* The standardised sharing of information with vetted third-party vendors can support the development of FinTech ecosystems, for example where market participants can provide value-add by developing smart contracts and applications (Apps).

21 What are the potential drawbacks of DLT for wholesale markets and FMIs?

There can be trade-offs for what is technically possible on different types of DLT networks (e.g. permissioned vs. permissionless, type of consensus mechanism, presence of a notary node). However, given the development of hybrid solutions and enhanced programmability, many projects in development today are overcoming challenges such as limiting access or permissions within the network. There are also implementations of DLT of enterprise grade quality, which are vetted as any other enterprise technology deployment, to minimise some of the new issues or risks that could arise from the use of new technology.

Issuers of security tokens must still comply with any relevant regulations in place (regardless of the technology used, such as restrictions on access to certain financial products based on suitability). However, it should be for the issuer to ensure regulations are complied with rather than the need for any specific restrictions on the type of technology used.

DLT will require a critical mass for adoption to be transformational. It may take time for smaller participants and providers given the associated costs and investment needed. However, uptake from large market participants may be sufficient in driving adoption at this early stage of development.

It is important to note that DLT may not be the best technological solution for all wholesale market activities. This is particularly true for high volume and high frequency activities, given the constrains of capacity and throughput. This should be considered as a potential drawback.

A lack of interoperability or standard protocols for different DLT solutions would create fragmentation in the market. This fragmentation would be a potential drawback of using DLT in wholesale markets if it were not addressed and DLT were adopted at scale. Interoperability will be required both between DLT solutions and with existing systems. For more detail, please see response to Q25.

22 Is UK regulation or legislation fit for purpose in terms of the adoption of DLT in wholesale markets and FMIs in the UK? How can FMI regulation/legislation by optimised for DLT?

No, UK regulation requires a review to ensure it is fit for purpose. To provide legal certainty to market participants, we recommend that UK authorities conduct a review of existing securities legislation (such as MiFID II[25], SFD[26], FCD[27], CSDR[28], AIFMD and UCITS) and UK property and private law. This review can be used to guide UK authorities in clarifying which requirements are applicable and how to meet them, and in proposing legal amendments where necessary (for

[25] We note the upcoming UK review regarding the transposition of MiFID II would provide a useful opportunity to assess for legal barriers.
[26] E.g. noting the recently published European Commission review of SFD - https://ec.europa.eu/info/consultations/finance-2021-settlement-finality-review_en
[27] E.g. noting the recently published European Commission review of FCD - https://ec.europa.eu/info/consultations/finance-2021-financial-collateral-review_en
[28] E.g. noting the recently completed European Commission consultation on the review of CSDR - https://ec.europa.eu/info/consultations/finance-2020-csdr-review_en

more detail please see our response to Q19). Requirements for the provision of outsourcing and cash settlement will also require further consideration.

These issued identified should be discussed with the industry and addressed as a priority – including clarifications or amendments to existing regulations as necessary – to ensure that UK wholesale markets remain attractive for DLT innovation and investment. UK authorities should provide a clear and ongoing view on the likely implications of this review, where feasible, to support market participants allocating investments accordingly.

23 What are the wider industry incentives or obstacles to the adoption of DLT in wholesale markets and FMIs in the UK?

The first key obstacle is that the current regulatory framework is built around existing financial market infrastructures, for example around bilateral relationships instead of multilateral relationships. Requiring DLT activities to replicate today's market structure limits DLT innovation because it restricts the ability to realise efficiencies and cost savings. To incentivise market participants, UK authorities should consider how to adapt the regulation so that it better reflects how market participants can interact in a decentralised DLT environment and how roles, responsibilities and obligations should apply in this context. This will provide market participants an opportunity to provide a business case for investment.

We provide in our response to Q24 some examples of market coordination which may help to achieve this aim.

The second key obstacle to the adoption of DLT in wholesale markets is a lack of legal certainty of instrument classification and regulatory clarity on how existing regulations apply to DLT-based activities. For example:

- What qualifies as safekeeping and custody of tokenised financial instruments and which regulations apply;
- The requirements for minimum disclosure of risks in assessing the suitability and appropriateness of tokenised financial instruments;
- When transactions are considered final; and
- What constitutes delivery versus payment in a DLT environment.

Providing regulatory clarity will help to further incentivise market participants to invest in DLT for wholesale markets (for instance through the review outlined in Q22). To provide regulatory certainty, UK authorities should consider a range of policy options including:

1) Providing guidance on the interpretation of existing rule-sets in a DLT context;
2) Creating a framework within which firms can test DLT products (see response to Q24);
3) Making rule changes as soon as possible, taking into account the need for global consistency, and further refining and/or clarifying as further obstacles are identified; and
4) Taking an agile and flexible approach to the application of markets rules to encourage the use of new technologies.

24 If market coordination is required to deliver the benefits of DLT, what form could it take?

Market coordination[29] is already taking place today, for instance in the form of consortium projects for collateral movements and platforms for the issuance of security tokens. These projects are not UK-specific, however engagement with UK authorities may encourage greater investment in the UK market.

[29] Defined in this consultation as when regulators or governments play a role in convening market participants, para. 4.16, page 33.

Regardless, further market coordination could help to deliver the benefits of DLT outlined in our response to Q20. We believe that private-public collaboration, in any form, should aim to achieve the following outcomes:

- Identification of regulatory obstacles to allow for early amendments or clarifications where possible;
- Creation of an agile regulatory framework that is adaptable to market developments and changing roles and responsibilities;
- Convergence around interoperability and standards to facilitate scalability of DLT; and
- Alignment with global principles and frameworks to maintain cross-border activity and financial stability.

We recommend that UK authorities consider the following actions to achieve these outcomes:

1) Form an industry expert group to work with UK authorities to identify obstacles to innovation and contribute to reviewing and adapting existing regulations as the market develops. This expert group could also provide market intelligence and contribute to developments in industry-wide standards to address issues such as interoperability and custody.
2) Introduce transparency mechanisms to broadly disseminate findings, policy concerns and work programs in a timely manner (e.g. lessons learnt from sandbox testing). This could include regular reviews, or reporting and consultation cycles, so that market participants can anticipate changes and allocate investment appropriately.
3) Maintain collaboration with other national and supranational authorities to ensure that global principles, frameworks and standards are coordinated. UK authorities should continue to actively engage in global initiatives (such as the Financial Stability Board (FSB) initiatives, BIS Innovation Hub and Global Financial Innovation Network (GFIN)) to identify and address regulatory obstacles to the adoption of DLT.
4) Facilitate the testing of DLT solutions so that additional regulatory obstacles can be identified and addressed through changes in regulation, for example by:
    - Enhancing (e.g. scaling up) the FCA Sandbox. The FCA Sandbox has already demonstrated benefits for the development of DLT in wholesale markets[30], and could continue to provide opportunities for the controlled testing of DLT solutions before coming to market. However, this type of approach is controlled and limited in its scope and participants, so it may lack the scale and breadth needed to identify all regulatory obstacles. To address this issue, UK authorities could expand the scope and participation of activities specific to DLT and crypto-assets regulation. It is important to note that the FCA Sandbox does not remove the need for changes to the rulebook, which provides regulatory certainty for firms to invest.
    - Establishing a regime where all relevant market participants can request exemptions from specific regulatory requirements that present obstacles to DLT (such as specific regulations in CSDR), subject to a period of time and compensatory measures. This would create an opportunity to safely identify a broad range of obstacles in the live market environment and collect sufficient evidence to determine regulatory changes needed. However, this approach should not prolong the period of uncertainty before regulatory change is made, or disproportionately place strict limits on transaction and value thresholds, as this could prevent the market from developing. We also note that this approach should be optional as it may not be appropriate for all transactions. Market participants should be given the choice to conduct capital markets activities outside of the regime. One concern with this approach is that UK authorities may wait to the end of the testing regime to review and make changes to existing regulations. If this approach is taken, UK authorities should:

[30] https://www.fca.org.uk/publication/research-and-data/regulatory-sandbox-lessons-learned-report.pdf

a. Limit the regime period to avoid prolonging regulatory uncertainty which prevents financial institutions from investing.

b. Make regulatory amendments in a timely manner, once regulatory obstacles have been identified, while continuing to assess for further amendments.

c. Market participants, including financial institutions, should be given the opportunity to request exemptions on an ongoing basis with respect to additional regulatory obstacles that go beyond any predefined list, subject to supervisory approval and appropriate risk mitigation.

d. Review any limits on transaction thresholds to ensure their appropriateness over time. Market participants, including financial institutions, should be given the opportunity to request exemptions to thresholds, where they can demonstrate safety and soundness with supervisors.

e. Clarify how transactions will exit the testing regime once it has expired and whether authorisations will continue to be valid.

We recommend that UK authorities consider a full cost-benefit analysis to determine any approach for the testing of DLT solutions (e.g. resourcing, implementation costs, scalability). This analysis should include engagement with the industry to ensure that the approach is practical, efficient and will bring value to wholesale markets.

25 Would common standards, for example on interoperability, transparency/confidentiality, security or governance, help drive the uptake of DLT/new technology in financial markets? Where would common standards be most beneficial?

Yes, common standards would help deliver scalable DLT solutions in financial markets. However, we believe that the development of common standards for DLT interoperability should be left to the industry to develop. This is important for ensuring standards are practical and can match the pace of market development, and for avoiding fragmentation across jurisdictions.

Common standards would be beneficial for key protocol elements such as endorsement/consensus models, on-chain data storage and smart contract frameworks. Standardised protocols will depend on the use case (e.g., asset class) and ecosystem (e.g., which market participants are involved).

Common standards for interoperability between different DLT networks and with legacy architecture, which could include Application Programming Interfaces (APIs), are also important for enhancing liquidity to investors and ensuring faster deployment to custodians and CSDs. This is particularly important for improving cross-market liquidity across different asset classes, data analysis and data management. Various efforts from the industry to build interoperability are already ongoing[31].

We provide several example areas where common standards may be needed, such as:

- Common definition of an asset-holder (the ongoing definition of a shareholder debate);
- Common framework and definitions for recovery and resolution and authorisation; and
- Common cyber risk management practises and AML frameworks.

26 What should the UK government and regulators be doing to help facilitate the adoption of DLT/new technology across financial markets/FMIs?

The UK government and regulators should aim to prioritise innovation and digitalisation in UK financial markets by providing regulatory certainty on the treatment of tokenised assets and commercial bank money. This will be a key

[31] E.g. Hyperledger Cactus https://www.hyperledger.org/blog/2020/05/28/interoperability-and-integration-developments-in-the-hyperledger-community

incentive for the industry to invest in DLT for wholesale markets. For example, the UK government should set out a clear timeline for legislative review and implementation, with approximate dates where possible.

If a Central Bank Digital Currency (CBDC) were being considered by the BoE, a wholesale CBDC for select use cases could be an option to facilitate the adoption of DLT and new technology across financial markets by mitigating the issues previously identified. A wholesale CBDC could offer the market the possibility of atomic settlement without credit risk and operational efficiencies front to back across the entire value chain, as well as new opportunities for innovation (e.g. atomic Delivery versus Payment), and contribute to the digitisation of other financial activities (e.g. digital debt/equity issuance and settlement). If, for example, a BoE CBDC were to offer programmability as a feature, similar to other tokenised forms of private money, this would allow for other innovations such as self-execution, if the appropriate operational processes are in place, and machine-to-machine payments[32].

For more detail on other possible actions, please see our response to Q24.

Other unregulated tokens and new developments in the market

27 Do you see value in the government capturing tokens typically used by retail consumers as a form of speculative investment under the regulatory perimeter in the future?

AFME has not responded to this question.

28 Do you have any views on how the government should bring these tokens into the regulatory perimeter in the future?

AFME has not responded to this question.

29 What are the risks and opportunities you see in relation to DeFi?

AFME has not responded to this question.

30 Do you have any evidence of risks to consumers when using tokens as a form of speculative investment or through DeFi that may be of interest to the government and UK authorities?

AFME has not responded to this question.

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[32] For more detail, see https://www.bundesbank.de/resource/blob/855148/ebaab681009124d4331e8e327cfaf97c/mL/2020-12-21-programmierbare-zahlung-anlage-data.pdf

Annex I: Hybrid Tokens

We believe that caution should be exercised against hybrid tokens becoming a 'catch all' category for crypto-assets. This could risk conflating very different types of crypto-assets from a regulatory perspective and make this category difficult to monitor and manage. We wish to avoid the creation of a category that crypto-assets fall within only because they contain new or unique features. A catch-all bucket would create regulatory uncertainty for market participants and limit innovation. Therefore, we request further guidance on the treatment of different types of hybrid tokens currently available to avoid this scenario.

We also request that UK regulators continue to collaborate with other international regulators to work towards convergence in the treatment of hybrid tokens at the global level. This is particularly important for international entities, as any variations between jurisdictions would increase the complexity of regulation and raise the cost of compliance.

We note two possible examples of hybrid tokens (although there may be others):

1. Crypto-assets that exhibit characteristics of different types of crypto-assets *at the same time:*

   For example, a crypto-asset that contains typical features of a security token and features of a payment token at the same time. In this instance, careful consideration should be taken as to where a crypto-asset is potentially covered by one or more regulatory frameworks, as all respective obligations will need to be satisfied. Regulators should provide further regulations or guidance on applicable regulatory obligations and how to apply those obligations (for instance how to calculate the token monetary value to which those obligations apply). Regulators should also address any potential conflicts of laws.

2. Crypto-assets that exhibit characteristics of different types of assets *through time:*

   For example, a crypto-asset that initially has the features of a utility token but then acquires the features of a security token over time (or vice versa). A crypto-asset can also be structured from inception as a hybrid instrument, with contingent changes in instrument categorisation pre-programmed in its coding, based on predefined potential future events (e.g. an automated convertible note)[33].

   In the case of hybrids that change through time, regulators should provide appropriate and clearly defined regulations and/or guidance on how to assess when regulatory treatment would change, particularly when the crypto-asset is being traded on a secondary market. This guidance should leverage existing practises in the market today when an instrument changes features; for example, this could include a reassessment at a point where the economic function of a hybrid token undergoes changes or conversion. Should any other types of hybrid tokens develop over time, the treatment of these new crypto-assets should be considered as they develop.

[33] See https://media.consensys.net/the-automated-convertible-note-is-a-big-deal-for-blockchain-startups-cc1dd70904fb for more detail.

Annex II: Proposed Approach to the Classification and Understanding of Crypto-assets

The Global Financial Markets Association[34] (GFMA) developed the following approach to the classification of crypto-assets to support our response to the Basel Committee on Banking Supervision (BCBS) discussion paper on "**Designing a Prudential Treatment for Crypto-Assets**"[35]. The approach reflects the principle that the treatment of crypto-assets should be underpinned by a clear methodology for identifying different types of crypto-assets' risk, which will allow for tailored regulatory treatment, as appropriate.

We believe this provides an important basis for a taxonomy, and it is key that there is close engagement between the industry and the regulatory community on this topic. We therefore recommend that a joint industry-regulatory task force is formed to facilitate ongoing discussions in this area.

The proposal below is an initial starting point for the classification of crypto-assets. It is designed to help regulators evaluate which types of regulations should apply to which types of crypto-assets. We note however that as these assets evolve and potentially new ones are created, this classification may need to be updated over time.

Approach to classification and understanding of crypto-assets

Broadly, crypto-assets[36] may serve a variety of economic functions, such as an agent for payments[37], a vehicle for investment or trading[38], or a utility to access other goods or services[39]. Within those functions, when those assets have the characteristics of existing regulated instruments, a specific regulatory framework may apply. However, given the features of crypto-assets, other key attributes beyond economic function, may need to be taken into consideration by regulators in order to classify those assets and determine what regulations should apply, if any (similar to how frameworks such as those that are leveraged for classifying a security/financial instrument function today). For this initial proposal,[40] we focused on defining features of crypto-assets such as:

A. Issuer (e.g., central bank);
B. Mechanism or structure underlying the asset value (e.g., pegged to or in reference to an underlying asset or access to a network product or service);
C. Rights conferred (e.g., entitlement to cash flows, redemption rights, voting); and
D. Nature of the claim (e.g., claim on an issuer or claim on an underlying asset).

While not part of the feature set used in the proposal below to define a crypto-asset, there are additional features that should be assessed against each type of crypto-asset to help differentiate and evaluate the risk, including types of users/holders (e.g., retail versus wholesale), systemic importance, and if an asset is linked to a real or off-chain asset, who or what type of entity has custody of that asset, if any.

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[34] GFMA represents the common interests of the world's leading financial and capital market participants, to provide a collective voice on matters that support global capital markets. We advocate on policies to address risks that have no borders, regional market developments that impact global capital markets, and policies that promote efficient cross-border capital flows to end users by efficiently connecting savers and borrowers, benefiting broader global economic growth. The Association for Financial Markets in Europe (AFME) in London, Brussels and Frankfurt, the Asia Securities Industry & Financial Markets Association (ASIFMA) in Hong Kong and the Securities Industry and Financial Markets Association (SIFMA) in New York and Washington are, respectively, the European, Asian and North American members of GFMA. SIFMA is not engaged on policy or business issues involving crypto-assets and crypto currencies. Therefore, SIFMA does not formally endorse any positions contained in this letter.

[35] https://www.gfma.org/wp-content/uploads/2020/04/gfma-bcbs-prudential-crypto-assets-final-consolidated-version-20200427.pdf

[36] A crypto-asset is generally any digital asset whose provenance is tracked via a blockchain or DLT infrastructure, with ownership or control determined by a cryptographic key.

[37] Payment tokens may also be referred to as exchange tokens in some jurisdictions. Key uses may include, the crypto-asset being held and transferred primarily for the purposes of buying or selling other assets or being used as a store of value.

[38] Security/ Investment/Financial instrument tokens provide entitlement to proceeds or a right to vote and could also meet the characteristics or definition of a financial instrument or equivalent regulatory classification.

[39] A crypto-asset that is used as a means of accessing a DLT platform and/or a medium of exchange for the provision of goods and services provided on the DLT platform, that does not have value or application outside of the DLT platform on which it was issued. (Note that the crypto-asset may be used as a means for data and database management, data recordation, or other bookkeeping or recordkeeping activity. As these do not constitute financial instruments, they are intentionally excluded here.)

[40] This approach has not been formally endorsed by all GFMA members and is intended as a basis for discussion.

Many crypto-assets have functions and features spanning more than one of the categories identified herein ("Hybrid Crypto-Assets") or may not even be contemplated at this time[41]. These types of crypto-assets may have characteristics that enable their use for more than one purpose (means of payment or investment) at any single point in the lifecycle of the asset, or have characteristics that change during the course of their lifecycle. Further consideration should be given to these types of assets as well as when and how the regulations should apply to them. GFMA would encourage an approach that is agile and remains robust, providing the market clarity while also allowing innovation as market structures develop, uses evolve, and technology changes, or new assets are created.

While we have used the term "crypto-asset" as the overarching category to group together a number of instruments, not all the categories (and associated uses and attributes) should be treated as instruments for which a new financial regulatory framework is necessary or appropriate. A robust regulatory framework (including customer/investor protection safeguards) may already exist for the instruments or activity represented by the "crypto-asset".

The proposal below is an initial starting point for the classification of crypto-assets. It is designed to help regulators evaluate which types of regulations should apply to which types of crypto-assets. We note however that as these assets evolve and potentially new ones are created, this classification may need to be updated over time.

Types of Crypto-Assets[42, 43]

A. Cryptocurrencies
   - Digital representations of value with no redemption rights against a central party and may function within the community (enabled through peer-to-peer networks) of its users as a medium of exchange, unit of account or store of value, without having legal tender status. They may also act as an incentive mechanism and/or facilitate functions performed on the network they are created in; their value is driven by market supply/demand therein.

B. Value-Stable Crypto-Assets
   1. Central Bank Digital Currencies (CBDC[44]) (e.g., e-Krona)
      a. Digital form of money that represents a liability of a central bank in a single fiat sovereign currency that may or may not pay interest.
   2. Financial Market Infrastructure (FMI) Tokens (e.g., USC)
      a. Digital form of money representing claims on an FMI and reflecting deposits held at a central or commercial bank in a single fiat currency that may or may not pay interest.
   3. Tokenized Commercial Bank Money[45] (e.g., Signet)
      a. Digital form of money that represents single fiat currency and is issued by/structured as a claim on a bank, credit institution or other similarly highly regulated depository institution. It may or may not pay interest
   4. Stablecoins: Tokens designed to minimize/eliminate price fluctuations relative or in reference to other asset(s), and which are not issued by a central bank, FMI, bank, credit institution or highly-regulated depository institution. May represent a claim on the issuing entity, if any, and/or the underlying assets.

[41] As the crypto-asset market evolves and the understanding of uses matures, additional uses beyond those identified as payment, investment, or utility may need to be addressed or identified.
[42] GFMA also notes that the term "coin" and "token" are synonymously leveraged below and are not intending to insinuate differences between the two terms.
[43] Some of those instruments may meet the 'e-money' criteria in those jurisdictions where that regulatory classification exists and be classified as such for regulatory purposes.
[44] CBDCs can rely on non-DLT/blockchain technology, this taxonomy is intending to capture only those leveraging DLT/blockchain technology.
[45] Note: Deposits recorded via DLT may not be considered true crypto-assets as they do not create a new asset class with separate intrinsic value from the fiat currency they represent. However, we have included this in our response to be responsive to varying definitions of crypto-asset under consideration, and to comprehensively articulate when the use of distributed ledger technology would not require new regulatory treatment, but would be governed by an existing regulatory framework.

a. Asset Linked Crypto-Asset: Value may be fixed or variable and in reference to individual structures or include a combination of:
    - Fiat currency linked (e.g., Tether, Paxos, USDC, Gemini);
    - Other real asset linked (e.g., Sendgold, Xaurum); and/or
    - Crypto-asset linked (e.g., Maker).

b. Algorithmic Crypto-Asset: Typically not linked to any underlying assets and each token can be pegged to a price level or a unit maintained through buying, selling or exchange[46] among assets[47] or some other pre-determined mechanism.[48]

C. Security[49]Token
- Token issued solely on DLT that satisfies the applicable regulatory definition of a security
    i. or financial instrument under local law (e.g., World Bank's "Blockchain Bond").

- Token that represents on DLT underlying securities/financial instruments issued on a different platform (e.g., a traditional CSD, registrar, etc.), where such representation itself satisfies the definition of a security/financial instrument under local law.

D. Settlement Token
- Representation on DLT of underlying traditional securities/financial instruments issued on a different platform (e.g., a traditional CSD, registrar, etc.) where such representation itself does not satisfy the definition of a security or financial instrument under local law and is used solely to transfer or record ownership or perform other mid/back-office functions (e.g. collateral transfer, recording of ownership).

E. Utility Token
- A means of accessing a DLT platform and/or a medium of exchange which participants on that platform may use for the provision of goods and services provided on that platform (e.g. loyalty rewards programs/systems, gift card rewards, credit points that are only usable within the DLT platform, memory and network server space, and other utilities- based value); or

- Tokens that are not native to the underlying network but are used for accessing applications that are built on top of another DLT platform (dApp).

F. Other Crypto-Assets (not structured as value-stable crypto-assets)
- Representation on DLT of ownership in tangible or intangible underlying assets or of certain rights in those assets (such as interest, e.g. loans), which are not securities or financial instruments (e.g., real estate, art, intellectual property rights, precious metals, grains, or non-fungible assets that only exist in digital form on a DLT network); they may represent a claim on the issuing entity or the underlying assets.

[46] "Buying, selling, or other exchange" may be facilitated algorithmically (pre-programmed) or through market practices (participant arbitrage).
[47] Asset may involve the native stablecoin itself or other crypto-asset used for exchange or collateralization.
[48] Pre-determined mechanisms may involve pre-programmed economic policies, including, but not limited to, asset staking or exchange, dynamic transaction fees, seigniorage, asset. supply control, recapitalizations and/or use of financial instrument.
[49] This category encompasses different regulated instruments from a legal perspective, which may attract different regulatory treatment amongst themselves and across jurisdictions.