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To:

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Chair, ESMA
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Date:

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ESMA second consultation on requirements in MiCA

Coinbase Global, Inc. and its EU subsidiary Coinbase Europe Limited (together, "Coinbase") welcome the opportunity to respond to ESMA's second consultation on *"Technical Standards specifying certain requirements of the Markets in Crypto Assets Regulation"* ("MiCA").

Coinbase started in 2012 with the idea anyone, anywhere, should be able to send and receive Bitcoin easily and securely. Today, we are publicly listed in the US and provide a trusted and easy-to-use platform relied on by millions of verified users in over 100 countries to access the broader crypto economy.

We are committed to the EU, where we have a significant presence reflecting its importance as one of our largest international markets outside of the US. Coinbase has a crypto licence in Germany, EMI licence in Ireland and a number of registrations in national markets across the EU. We believe we are well placed to transition to a MiCA licence, and we are excited by the opportunities presented across the region. The EU has taken a leadership role globally with MiCA, introducing the most comprehensive regulatory framework in the world, and is now well positioned to capitalise on this new wave of technological innovation towards Web3, and to achieve its strategic autonomy ambitions by onshoring tech investment.

However, MiCA is not "done" and ESMA's work is critical to maintaining EU competitiveness. Countries around the world continue to watch to see if the EU achieves the right balance: of fulfilling important regulatory objectives of financial stability, market integrity and consumer protection, and creating the right conditions to spur innovation and growth. We appreciate the thoughtful approach ESMA is taking to regulating the sector, and we stand ready to support it in this important work.

Yours sincerely,

Tom Duff Gordon, Vice President, International Policy, Coinbase

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Introduction and Summary

Coinbase recognises and appreciates the important work that ESMA has done in drafting the second package of technical standards for the Regulation (EU) 2023/1114 on markets in cryptoassets ("**MiCA**"). This second consultation package covers a raft of proposed measures which we understand ESMA has considered in detail, and we commend ESMA where it adjusted requirements currently applicable to traditional financial markets ("**TradFi**") so that it is appropriate and achievable for the cryptoasset market.

We agree with the majority of ESMA's Level 2 / draft regulatory technical standards ("RTS") with respect to the areas covered in the second consultation package and we have responded to specific questions in the response form.

In addition, we consider that there are two areas, in particular, which would benefit from a more a detailed response, namely the measures related to sustainability disclosures and those related to white papers in respect of cryptoassets other than asset-referenced tokens ("**ART**") and e-money tokens ("**EMT**") (we refer to these as "**cryptoassets**"). We have summarised our observations with respect to these measures below. We have also set out our specific proposals in relation to these measures in the "Proposals" section below and we have provided additional detail in the "Further Response" section, both below.

For completeness, we have also summarised a number of areas with respect to continuity and regularity in the performance of cryptoasset services, pre- and post-trade data, record keeping and order book records, and the public disclosure of inside information, which would benefit from clarification or refinement in the "Further Response" section below.

Regarding sustainability disclosures, we agree with ESMA that more scrutiny is warranted on the sustainability impact of cryptoassets and, therefore, sustainability disclosures focussed on understandability and comparability are important. However, we are concerned that ESMA's RTS setting out the content, methodology for, and presentation of sustainability disclosures will present material challenges for issuers and CASPs without achieving ESMA's objective of enhancing the understandability and comparability of the sustainability impact of cryptoassets, for reasons set out below. Furthermore, since the drafting of MiCA, the industry has shifted towards less energy-intensive consensus mechanisms, such as Proof-of-Stake ("**PoS**") or Proof-of-Authority ("**PoA"**), and away from Proof of Work ("**PoW**").

Regarding whitepaper obligations, we agree with ESMA that investors should be given key information about cryptoassets so that they can make an informed decision on whether to invest or not. White papers and disclosures are crucial to investor protection and education. However, we are concerned that the MiCA approach to white paper requirements may impose a significant burden on issuers, many of whom will be start-ups and SMEs, without adequately addressing the principle of proportionality, which is crucial for ensuring that regulatory obligations are commensurate with the size and capabilities of the entities they affect. Our key concerns are set out below.

The proposed approach to whitepapers including sustainability disclosures could have the effect of limiting innovation within the EU by deterring i) startups and SMEs from launching

projects under MiCA and ii) CASPs from listing assets, owing to the onerous compliance obligations, significant liability and costs associated. This could impede the growth and innovation of the industry within the EEA, potentially shifting the epicentre of development to regions outside the EEA. This shift would not only affect the availability of cutting-edge cryptoassets for European consumers but also impact job creation and economic growth within the EEA. By adopting a more proportionate approach, we believe ESMA's objectives regarding sustainability, consumer protection and a competitive market can be met without compromising scope for growth and innovation in this space.

Sustainability disclosures in white papers and on a CASP's website

MiCA introduces disclosure requirements related to the climate and environmental impact of consensus mechanisms used to issue cryptoassets as part of white papers and on a CASP's website (we refer to these the "**sustainability disclosures**").[1] The core purpose of the disclosures is to ensure that investors receive easily understandable information ("**understandability**") and can compare the information ("**comparability**") on impacts of cryptoassets on the climate and the environment (we refer to this as the "**sustainability impact**").[2]

We agree with ESMA that more scrutiny is warranted with respect to the sustainability impact of cryptoassets and, therefore, sustainability disclosures focussed on understandability and comparability are important.

However, we are concerned that ESMA's draft RTS setting out the content, methodology for, and presentation of sustainability disclosures will present material challenges for issuers and CASPs without achieving ESMA's objective of enhancing the understandability and comparability of the sustainability impact of cryptoassets. This is because, in summary:

Unreliability of data	The decentralised nature of many consensus mechanisms poses significant challenges in gathering reliable sustainability data under the MiCA framework. This makes it impractical for issuers and CASPs to comply without heavily relying on estimated data.
Lack of consistent calculation methodologies	Currently, there is a lack of uniform methodologies for calculating the energy consumption of consensus mechanisms and individual network nodes, which further complicates compliance. We expect as a result that different methodologies and assumptions will be utilised by issuers to calculate energy consumption and energy intensity (at least at in the short to medium term), which means that

[1]Articles 5(1) and 6(1) of MiCA, respectively require offerors and persons seeking admission to trading of a cryptoasset, to draw up, notify and publish a cryptoasset white paper which includes "*information on the principal adverse impacts on the climate and other environment-related adverse impacts of the consensus mechanism used to issue the crypto-asset*".

There are equivalent requirements for issuers of ARTs and EMTs under Articles 16(2), 19(1)(h), 48(7), and 51(1)(g), however our response focuses on cryptoassets.

[2] Draft regulatory technical standards specifying the content, methodologies and presentation of information in respect of sustainability indicators in relation to adverse impacts on the climate and other environment-related adverse impacts, Recital 2

	such disclosures will not be consistent or meaningfully comparable for investors.
Energy consumption and intensity are not accurate or representative measures of sustainability	The mandatory disclosures emphasise energy consumption and intensity, yet these metrics do not necessarily reflect the overall sustainability, greenhouse gas ("**GHG**") emissions, or carbon footprint of a protocol. Notably, protocols with higher energy consumption may, in fact, be more sustainable if they predominantly use renewable energy sources. The focus on energy consumption and intensity does not achieve the sustainability objective and more focus should be placed on GHG emissions or the overall carbon footprint of consensus mechanisms. National energy mix data may be a helpful indicator for Tradfi purposes but is a less helpful metric for cryptoassets owing to greater variations in energy sources chosen by node operators. Competition in node operations (staking, mining, etc.) incentivises participants to choose locations that offer a competitive advantage from energy cost and usage perspective. Further, nodes can easily mask their true location through proxies or Virtual Private Networks (VPNs), rendering the data inaccurate. In addition, operators of nodes are trending towards using renewable energy or a mix which favours renewable energy on account of competitive cost benefits. This trend will be accelerated, as miners are pushed to find more cost effective means of running the nodes, i.e. via renewable energy sources, as "bitcoin halving"[3] occurs and mining becomes less lucrative. Furthermore, since the drafting of MiCA, the industry has shifted towards less energy-intensive consensus mechanisms, such as PoS or PoA, and away from PoW. Most notably, Ethereum's 'Merge' transitioned the blockchain from a PoW consensus mechanism to a PoS mechanism resulting in a carbon footprint decrease by approximately 99.992% (from 11,016,000 to 870 tonnes CO2e).[4] Consequently, PoW mechanisms are becoming increasingly rare, rendering obsolete disclosure requirements, written primarily for PoW, relating to quantitative metrics with a focus on energy consumption and intensity.
Costs and complexity of requirements	The proposed requirements for sustainability disclosures are complex and burdensome. Many issuers will likely need to engage specialist consultants or make costly expert hires, both in terms of finances and time. This complexity, coupled with the extensive content requirements for white papers as stipulated in the MiCA

[3] "Bitcoin halving" is the term given to instances where the block rewards given to bitcoin miners for processing transactions is cut in half (next expected to occur H12024).
[4] Ethereum.org, Energy Consumption (23 June 2023).

	level 1 text, could potentially preclude start-ups and small and medium-sized enterprises ("**SMEs**") from entering the EU market. We are concerned that ESMA has not gone far enough in applying proportionality to the sustainability requirements of MiCA, particularly for start-ups and SMEs.
Unreliable information on location of nodes and devices used	Information regarding the geographical location of nodes and the specific devices they employ is often neither accessible nor dependable. Consequently, such data cannot reliably serve as a proxy for estimating GHG emissions, waste production, or the impact on natural resources. These challenges compound over tens of thousands of nodes for large blockchains.
"Best efforts" is too high a bar	Authors of white papers are held accountable to cryptoasset holders for any losses incurred due to non-compliance with white paper requirements. However, the draft RTS mandate that sustainability disclosures be made on a "best efforts" – basis a standard that is unreasonably high, considering the aforementioned issues with data reliability and inconsistent calculation methods. We would suggest "*commercially reasonable efforts*" is a more appropriate standard.
Comparison with existing regimes (CSRD and SFDR)	The CSDR and SFDR regimes apply to a well-defined set of large corporates (CSDR) and financial institutions (SDFR), whereas the draft RTS will impose burdensome requirements on start-ups and SMEs, meaning that there is a lack of parity in the application of CSDR and SFDR, on the one hand, and the MiCA sustainability disclosures in the draft RTS, on the other.
Sustainability requirements for CASPs' go further than the Level 1 text	The requirements for sustainability disclosures on CASPs' websites appear to go further than permitted under the MiCA level 1 text and appear to (we assume inadvertently) impose an additional obligation on CASPs to review and update sustainability disclosures which it publishes on its website on an annual basis. The drafting could also be interpreted as a requirement on CASPs to validate or carry out quality control exercises over sustainability disclosures published in white papers or other sources which the CASP then makes publicly available on its website. Any such requirements on CASPs and the potential liability attached to those requirements could make them hesitant to list a wide array of cryptoasset, particularly given that they have no direct control or direct access to sustainability metrics on issuers and the consensus mechanisms they utilise. This could impede the growth and innovation of the industry within the EEA, potentially shifting the epicentre of development to regions outside the EEA. This shift would not only affect the availability of cutting-edge cryptoassets

	for European consumers but also impact job creation and economic growth within the EEA.
Understandability	The complexity of the sustainability disclosures may exceed the grasp of retail customers, thereby compromising the objective of making such information understandable - a criticism that is often directed at other energy-related metrics, such as those underlying energy utility bills. Furthermore, to achieve the goal of comparability, current proposals do not offer a method to benchmark sustainability metrics across chains with differing levels of activity. It will likely follow that chains with more activity will require more frequent updating, more computation, and thus more emissions. This does not capture the productivity or value that each chain produces in exchange for any emissions.

In light of these concerns, we recommend that ESMA reconsider the proposed RTS measures to ensure they are both practical for issuers and CASPs to implement and effective in achieving ESMA's sustainability objectives.

We are firmly convinced that adopting a more balanced, less granular, and more principles-driven framework for sustainability disclosures would be more suitable, particularly until a universally accepted and reliable suite of sustainability metrics for all consensus mechanisms is established. By embracing a well-crafted principles-based approach, we can offer investors data that is not only more meaningful and comprehensible but also more comparable. This strategy would circumvent the reliance on data that may be unreliable or inconsistent. Moreover, it would significantly alleviate the financial burden and potential liability that issuers and white paper authors would face under the current RTS proposals. Such a shift would not only align with the practical realities of the current state of available data but would in our view also foster a more sustainable and responsible cryptoasset environment while balancing the need for sustainability disclosures to be achievable in practice.

We have set out our Proposals for amending the draft RTS in the “Proposals” section below. We have also set out further detail on each of these concerns in Section 1 of the “Further Response” section below.

White paper machine readability and white paper templates

MiCA introduces the requirement for offerors of cryptoassets, and persons seeking admission to trading of cryptossets, to “draw up”, “notify”, and “publish” a white paper in respect of that

cryptoasset, which contains mandatory disclosures.[5] The white papers must also be "*made available in a machine-readable format*".[6] The purpose of the white paper is to inform investors of the characteristics, functions and risks of the crypto-assets that they intend to purchase.[7] The Level 1 text details numerous mandatory disclosures which must be contained in white papers, apart from sustainability disclosures which are detailed by ESMA in the Level 2 text.

We agree with ESMA that investors should be given key information about cryptoassets so that they can make an informed decision on whether to invest or not. White papers and disclosures are crucial to investor protection and education.

However, we are concerned that the MiCA approach to white paper requirements may impose a significant burden on issuers, many of whom will be start-ups and SMEs, without adequately addressing the principle of proportionality, which is crucial for ensuring that regulatory obligations are commensurate with the size and capabilities of the entities they affect. Our key concerns are, in summary:

Costs of complying with the proposals on machine readability	The requirement for white papers to be machine readable is a significant change compared to market practice, including in TradFi. The Level 2 text proposes that white papers are machine readable and human readable in the same 'document' or 'file' and produced in xHTML with Inline XBRL tags ("iXBRL") and XML which ESMA estimates may cost up to €33,000 per file. We consider this to be a high cost and with little upside given that much of the information mandated to be included within white papers will be free text information which will not benefit from iXBRL tags (in the way that figures in an annual statement might). While there are examples of the use of iXBRL in aspects of financial markets today these tend to be in relation to documents that are highly numerical in nature, such as financial statements, which are more suited to machine readability. White papers, by contrast, will require a large amount of textual (rather than numerical information) which may not be suited to iXBRL tagging. We are concerned that the requirement for white papers to be machine readable is a significant change compared to market practice, including in TradFi where there is no requirement under the Prospectus Regulation for entire prospectuses to be published in machine readable form (rather, the requirements only apply to certain limited information contained in prospectuses such as ISINs and LEIs).

[5] MiCA Articles 5(1) and 6(1). There are equivalent requirements for issuers of ARTs and EMTs under Articles 16(2), 19(1)(h), 48(7), and 51(1)(g), however our response focuses on cryptoassets.

[6] MiCA, Article 6(10).

[7] MiCA, Recital 24.

	We, therefore, query whether a better approach would be to focus the machine readability requirements only on the information to be published in white papers which will benefit from machine readability (i.e. the key numerical information to be published in white papers), as well as developing common templates and guidance for SMEs. We have set out our proposals on this in the "Proposals" section below.
Lack of proportionality for white paper form and content requirements	The form and content requirements for white papers are numerous and detailed, and in our view, this creates potentially prohibitive administrative and financial burden for issuers. This burden is exacerbated by the fact that the requirements are applied uniformly, without regard to the size, resources, or operational scale of the white paper authors. Such a one-size-fits-all approach fails to account for the diverse nature of entities within the cryptoasset market, particularly harming startups and SMEs. While MiCA does offer certain exemptions from the obligation to publish a white paper, these exemptions are notably more restrictive than those found in the Prospectus Regulation, and the overall number of exemptions is fewer. The costs associated with compliance are substantial in isolation, but when aggregated with other requirements such as the requirement for sustainability disclosures and machine readability, they may become insurmountable for a significant portion of the market. This is especially true for startups and SMEs, which often operate with limited capital and are in a critical phase of growth and development. For these entities, the high costs of compliance can divert essential resources away from innovation and business expansion, ultimately stifling their potential and contribution to the broader economy. Given these considerations, there is a pressing need for a regulatory approach that incorporates the principle of proportionality, tailoring requirements to the capabilities and needs of different market participants. A more nuanced application of the white paper obligations would not only alleviate the financial strain on startups and SMEs but also encourage a more dynamic and inclusive cryptoasset market.
LEI requirements	We are concerned that the requirement for persons drawing up a white paper to ensure that they are identified with a pertinent, validated, issued, and duly renewed legal entity identifier code ("**LEI**") in the data accompanying the white paper does not recognise that a broad range of issuers may not be eligible to obtain an LEI. For example, many decentralised autonomous organisations and Web3 issuers may be structured in a way that means they will find it challenging to obtain an LEI.

	We estimate that this may impact around 50% of cryptoasset issuers and that figure may grow substantially as the Web3 market expands. The LEI requirement, as currently drafted, therefore risks excluding a significant portion of issuers from being able to issue a compliant whitepaper, effectively excluding them from accessing the EU market. These restrictions also mean that the EU could miss out on a thriving Web3 market, as well as miss out on attracting the Web3 unicorns of the future. This seems inconsistent with MiCA recital 22 which clarifies that fully decentralised providers should not fall within the scope of MiCA.

Accordingly, we are concerned that draft RTS requirements may introduce significant barriers to entry for new market entrants, particularly startups and SMEs. The stringent measures and the associated compliance costs could effectively preclude these firms from participating in the EEA cryptoasset market. As a result, these entities might be compelled to seek more favourable jurisdictions outside the EEA to launch their businesses and issue their cryptoassets. This exodus could lead to a significant loss for the EEA, not only in terms of missing out on the burgeoning Web3 market but also in failing to attract and nurture the Web3 unicorns of tomorrow.

While we acknowledge the rationale behind ESMA's approach and recognise the constraints of its mandate as outlined in the Level 1 text of MiCA, we believe that the principle of proportionality has not been sufficiently applied and we have proposed a range of Proposals for amending the draft RTS in the "Proposals" section below. We have also set out further detail on each of these concerns in Section 2 of the "Further Response" section below.

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Proposals

1. Sustainability disclosures

We have set out below our proposals for amending the draft RTS on sustainability disclosures in white papers and on a CASP's website.

Proposal 1 **Principles-Based Regime**	We recommend that ESMA removes the proposed granular quantitative reporting requirements for sustainability disclosures until a reliable set of sustainability indicators across all consensus mechanisms are agreed. In lieu, ESMA could introduce principles-based measures, based on qualitative assessments, which could include: • Standardised EU-level statistical data source for sustainability metrics for the largest layer 1 protocols, which could be relied upon by in-scope-persons as being accurate. This resource could be provided by a centralised EU body obtain information from. • Principles-based disclosures for issuers relying on the consensus mechanisms of these layer 1 protocols which require in-scope-persons to describe in their white papers the additional energy consumption required with respect to their tokens over-and-above the energy consumption of the layer 1 protocol. These principles-based disclosures could consider qualitative factors such as: the purpose of the token, anticipated size and scale, any underlying assets linked to the token, geographies, use of renewable energy, industry of issuer/project etc. • For layer 1 protocols for which no standardised EU-level statistical data is available, allow in-scope-persons to broadly estimate the sustainability metrics by reference to the relevant consensus mechanism adopted (e.g. PoW, PoS, PoA), by reference to any similar consensus mechanisms which are covered by the EU-level statistical data. We believe that prioritising qualitative over quantitative factors would better support the objectives of understandability and comparability of the sustainability disclosures, given the concerns raised above. We understand that ESMA is empowered to change the RTS on sustainability disclosures under Article 6(12) of MiCA which states "ESMA shall update those regulatory technical standards in the light of regulatory and technological developments." This means that ESMA could amend the technical standards upon further

	consultation and coordination with cryptoasset market participants as well as international organisations such as IOSCO when more reliable sustainability data on consensus mechanisms becomes available.
Proposal 2 **Proportionate Approach**	However, if ESMA retains the requirement to report on sustainability indicators in the manner currently envisaged, we would welcome a proportionate approach particularly for start-ups and SMEs. ESMA could consider introducing the following measures to take into account an in-scope person's size, revenue, sophistication, and therefore financial and non-financial resources, as well as the consensus mechanism being utilised (e.g. PoS, PoA, PoW, or another mechanism). Given the typically small size and scale of a start-up and an SME's business, adopting this approach would likely result in a minimal environmental impact. • **Proposal 2A:** Adding in thresholds to be met before the disclosure requirements are triggered (based on cryptoasset volume / value / market capitalisation, within a period e.g. annually or within a three-year period); • **Proposal 2B:** In addition to or instead of proposal 1, introduce a 'lite' sustainability disclosure regime for cryptoassets that fall below a threshold (based on cryptoasset volume / value / market capitalisation, within a period e.g. annually or within a three-year period); and • **Proposal 2C:** In addition to proposals 1 and 2, for obliged persons to utilise "*commercially reasonable efforts*" when making sustainability disclosures (including those based on estimates) rather than utilising "*best efforts*". • **Proposal 2D:** Make GHG emissions and GHG intensity key mandatory indicators. This means that GHG emissions will be kept in, GHG intensity will be added to, and energy consumption and energy intensity will be removed from the key mandatory indicators. • **Proposal 2E:** Making the following mandatory indicators optional – energy consumption, energy intensity, and non-renewable energy consumption, carbon intensity, waste production, natural resource. • **Proposal 2F:** Adding renewable energy consumption (which currently does not exist as a disclosure) as an optional indicator and ensuring that it is also reflected as part of the calculation for the mandatory indicators in terms of calculating GHG emission and GHG intensity.

	• **Proposal 2G:** Allowing revaluation of average energy mix as part of GHG emission calculation as further data and methods are developed.
Proposal 3 **Removing Sustainability Disclosures on CASPs' Websites**	We also recommend that the draft RTS requirements relating to sustainability disclosures on CASPs' websites fully align with the requirements in the MiCA level 1 text and do not inadvertently impose additional obligations on CASPs, including: • **Proposal 3A:** Removing the obligation for CASPs to be responsible for providing sustainability information, in Recital 2 of the draft RTS, or amending the drafting so that it is aligned with the MiCA Level 1 text which is requiring CASPs to make sustainability disclosures publicly available. • **Proposal 3B:** Removing the obligation for CASPs to review and update the sustainability information published on their websites at least annually or without undue delay in case of material changes, or amending the drafting so that it cannot be interpreted as requiring CASPs to validate or carry out quality control exercises over sustainability disclosures which the CASP makes publicly available on its website.

2. Whitepapers

We have set out below our proposals for amending the draft RTS on white paper machine readability and the draft ITS on standard forms and templates for whitepapers.

Proposal 4 **Machine Readability**	We recommend that ESMA recognises the high costs associated with producing fully machine-readable white papers under the current proposals in the draft RTS and focuses the machine readability requirements on the information that is most relevant to the concept of machine readability i.e. financial or numerical information. This could be achieved by: • **Proposal 4A:** Clarifying that the requirement for the white paper to be machine readable is limited to the most important financial/numerical information relating to the cryptoasset and not textual information (such as risk factors) which is not suitable for machine readability. • **Proposal 4B:** Introducing a short-term sheet-style document ("key terms document") of the key investor-facing metrics to be published in white papers to which the machine readability requirements would apply, rather than applying the machine readability requirements to the whole white paper. This would ensure that investors are provided with the key information they need

	• **Proposal 4C:** Removing the requirement for the white paper to be human and machine readable in the same 'file'. The machine readability requirement should be clarified so that it only applies to the key terms document described above. • **Proposal 4D**: We also recommend that EMSA allows white paper authors flexibility over the technology they utilise to ensure their white paper is machine readable. To ensure the regulatory framework remains adaptive and does not inadvertently mandate specific technological solutions that may become obsolete, it is crucial to allow for the adoption of industry-developed solutions over time. This approach is in harmony with the essential principle of technology neutrality, which posits that regulations should facilitate innovation and competition without favouring any one technology or approach. By embracing technology neutrality, ESMA can create a regulatory environment that is flexible and responsive to the rapid pace of technological advancement, ensuring that newer, more efficient, or more effective technologies for machine readability can be integrated as they emerge.
Proposal 5 **Templates for White Papers**	**Proposal 5A:** Allow for a more proportionate approach for SME issuers which enables them to produce a shorter-form white paper than that set out in the current draft RTS while ensuring that the MiCA Level 1 requirements are met. For example, this more proportionate approach could apply to issuers where the market capitalization of tokens is less than €8 million, to align with the exemption from publishing a prospectus in the Prospectus Regulation. **Proposal 5B:** Introduce detailed and specific guidance for SMEs on ESMA's expectations as to the level of detail and content of the whitepaper requirements to make it easier for SMEs to understand how to comply. **Proposal 5C:** Produce an ESMA-approved e-template white paper for SMEs which hard-codes machine readability into the template. This would enable SMEs to rely on a centralised resource and would substantially mitigate the costs for SMEs for producing white papers and complying with the machine readability requirements. It would also increase the consistency and comparability of white papers for investors. **Proposal 5D:** Standardise an EU-level repository of whitepapers for the largest layer 1 protocol assets without known issuers, which could be relied upon by in-scope-persons as being accurate

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Proposal 6 **LEI Requirement**	Include an exemption from the requirement for authors of white papers to obtain an LEI, where they are not eligible for an LEI or where one cannot be obtained despite reasonable commercial efforts.

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Further Response

We have set out in this section further information with respect to our concerns on sustainability disclosures in white papers and in relation to the draft RTS on white paper machine readability and the draft ITS on standard forms and templates for whitepapers.

3. Sustainability Disclosures

3.1 Unreliable Data

ESMA states that based on initial analysis and the academic body of research to date, the sustainability impact of consensus mechanisms can be anchored in three main features of the DLT network nodes:

1. the energy consumption of each DLT network node;
2. their location; and
3. the devices that each DLT network node uses both to take part in the DLT network, and to hold a replica of records.

ESMA explains that these features can be used as a proxy to calculate various sustainability indicators[8] and persons drawing up crypto-asset white papers and CASPs will be expected to identify these main features and combine them with relevant datasets (e.g., on countries' energy mixes and on life cycle assessments for hardware equipment), in order to obtain comparable and reliable assessments of the sustainability impact of consensus mechanisms.[9]

However, the decentralised nature of many consensus mechanisms poses significant challenges in gathering reliable sustainability data under the MiCA framework. This makes it impractical for issuers and CASPs to comply without heavily relying on estimated data.

While we are supportive of ESMA's acknowledgement that there are challenges with collecting sustainability data under MiCA, and the proposal to permit the reliance on estimates in certain circumstances, in our view ESMA does not go far enough in recognising the challenges of calculating qualitative sustainability data given the lack of available data.

We respectfully disagree with ESMA's assessment that the challenges are similar to those experienced by in-scope entities under the CSRD and SFDR. The decentralised nature of the consensus mechanisms means that cryptoasset services, activities, and market participants are structured and operate in fundamentally different ways from other markets, not limited to those in TradFi. As a result of this decentralisation, the challenges associated with MiCA sustainability disclosures may not be resolvable to a standard that makes the disclosures meaningful, and therefore reliable or comparable by investors. We expand on this below.

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[8] ESMA Consultation Paper "*Technical Standards specifying certain requirements of Markets in Crypto Assets Regulation (MiCA) - second consultation paper*", paragraph 17.

[9] ESMA Consultation Paper "*Technical Standards specifying certain requirements of Markets in Crypto Assets Regulation (MiCA) - second consultation paper*", paragraph 20.

3.2 Lack Of Consistent Calculation Methodologies

Research on calculating energy consumption (and by extension energy intensity) of consensus mechanisms has to date focussed mostly on PoW. From this research, two main theoretical approaches to quantify the energy consumption of a DLT system have been posited. One is to measure the consumption of a representative participant node and then extrapolate from this measurement. An alternative approach is to develop a mathematical model that includes core metrics of a DLT system to calculate its energy consumption.[10] However, even for PoW consensus mechanisms, such as Bitcoin, we do not believe that there is a reliable method to calculate energy consumption and energy intensity, because the algorithms for PoW consensus mechanisms adjust the difficulty of the hash function (the mathematical problem) that validators must solve based on the total computational power allocated to the network to ensure that each block always takes a certain amount of time (for Bitcoin approximately 10 minutes) to generate. Since the difficulty of the hash function moves dynamically, the energy needs respond accordingly, meaning that the consumption and energy intensity of PoW consensus mechanisms are liable to fluctuate.

For other consensus mechanisms, such as PoS and PoA, there has been a lack of research given the lower energy consumption of these consensus mechanisms meaning that, to our knowledge, there are no reliable methods of calculating energy consumption in general, nor for calculating the energy consumption of a network node.

Although PoW currently dominates the consensus mechanisms used by cryptoassets, this is only due to the weight of Bitcoin in the overall cryptoasset market.[11] In reality, the majority of new cryptoassets utilise a PoS or related consensus mechanism. In addition, cryptoassets have moved from a PoW model to a PoS model, notably the Ethereum blockchain in 2022.

We expect that due to the issues identified above (at least in the short to medium-term) different methodologies and assumptions will be utilised to calculate energy consumption and energy intensity which means that such disclosures will not be consistent and cannot be meaningfully compared by investors.

3.3 Energy consumption and intensity are not accurate or representative measures of sustainability

The proposed RTS mandatory disclosure requirements, with their emphasis on energy consumption and intensity, may not accurately capture the true sustainability, GHG emissions, or carbon footprint of a cryptoasset protocol. It is essential to recognise that protocols with higher energy consumption are not inherently less sustainable, particularly if they primarily utilise renewable energy sources. The correlation between high energy consumption or intensity and to GHG emissions or carbon footprint is not direct; it largely hinges on the balance between renewable and non-renewable energy sources employed by the network nodes. With a discernible shift towards renewable energy or energy mixes skewed in favour of renewables among operator nodes, it becomes clear that renewable energy usage is a

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[10] M Platt, J Sedlmeir, D Platt, J Xu, P Tasca, N Vadgama, J Ibañez, "*Energy Footprint of Blockchain Consensus Mechanisms Beyond Proof-of-Work*, UCL Centre for Blockchain Technologies Discussion Paper Series, Q 3 2021, page 1.

[11] OECD (2022), "*Environmental impact of digital assets: Crypto-asset mining and DLT consensus mechanisms*", OECD Business and Finance Policy Papers, OECD Publishing, Paris, paragraph 2.1.3, page 23.

critical factor in assessing the environmental and climate impact and should be a central metric in evaluating the sustainability of a consensus mechanism.

In light of this, we believe that the RTS proposals should pivot away from a narrow focus on energy metrics and instead prioritise GHG emissions or the overall carbon footprint of consensus mechanisms. A mere report of high energy consumption or intensity could inadvertently convey a misleading narrative: (a) suggesting that a consensus mechanism is less sustainable due to increased energy usage or intensity, or conversely, more sustainable due to reduced energy consumption; and (b) implying that cryptoasset A is less eco-friendly than cryptoasset B solely based on the energy profile of its consensus mechanism.

3.4 Costs and complexity of sustainability disclosure requirements

The approach adopted by ESMA places an undue burden on the authors of cryptoasset white papers, who may find themselves compelled to either develop proprietary methodologies for calculating energy metrics or engage costly specialist third-party services for assistance. Given that such services are scarce and potentially expensive within the cryptoasset sector, this requirement could be prohibitive.

While the industry could collaborate to establish agreed-upon methodologies, this solution demands significant time and both financial and non-financial investment upfront.

Therefore, we are advocating for a more qualitative and principles-based framework that better reflects the multifaceted nature of sustainability in the cryptoasset ecosystem and the need to reduce the burdens on white paper authors and issuers, particularly SMEs, that the current RTS proposals would impose.

Without a material shift in ESMA's approach to proportionality in the current RTS proposals, we are concerned that the burden of the sustainability disclosure requirements, when combined with the already demanding content requirements for white papers under the MiCA level 1 text, as well as the requirements for machine readability of white papers, will place a significant strain on issuers which could act as a substantial barrier to entry for SMEs from accessing the EU market.

3.5 Unreliable information on location of nodes and devices used

ESMA believes that the location of nodes may be used as a proxy to estimate GHG emissions, and that the devices (hardware equipment) of each DLT network node may be used to assess the waste production and the impact on natural resources.[12] We agree with ESMA that GHG emissions, waste production, and impact on natural resources are key indicators of climate and environmental impact and are applicable across all consensus mechanisms.

However, the reliability of data concerning node locations is questionable. Typically, such information is inferred from IP addresses or through voluntary disclosure, the latter being less common. The use of IP addresses as locational indicators is inherently flawed, as nodes can easily mask their true location through proxies or Virtual Private Networks (VPNs), rendering the data inaccurate. The situation is further complicated when considering the hardware devices utilised by nodes. For non-PoW consensus mechanisms, any assumptions about the

[12] ESMA Consultation Paper "*Technical Standards specifying certain requirements of Markets in Crypto Assets Regulation (MiCA) - second consultation paper*", paragraph 19.

devices in use are speculative at best. In the case of PoW, it is reasonable to presume that nodes employ the latest crypto-asset mining infrastructure, such as Application-Specific Integrated Circuits (ASICs) or Graphics Processing Units (GPUs). This is because miners are incentivized to upgrade their equipment regularly to maintain competitive processing power, leading to a cycle of obsolescence and electronic waste. However, for PoS and PoA mechanisms, the need for cutting-edge hardware is diminished, as these systems rely on token holdings or identity as the basis for validation, not computational power.

Given these complexities, accurately determining and disclosing the exact GHG emissions, e-waste production, and natural resource impact based on node location and device usage for a larger number of nodes is fraught with difficulty, if not entirely unfeasible. Any estimates produced in the absence of reliable data are likely to be imprecise and could vary significantly.

We are, therefore, concerned that entities subject to these disclosure requirements may struggle to comply in a meaningful way. The inconsistencies and potential inaccuracies in the data would not only undermine the reliability of such disclosures but also impede the ability of investors to make meaningful comparisons.

3.6 "Best efforts" is too high a bar

The draft RTS mandates that sustainability disclosures be conducted on a "*best efforts*" basis. Some courts have previously stated that this standard requires the obliged person to "*leave no stone unturned*"[13], essentially doing everything in their power to ensure the accuracy of sustainability disclosures. Such a stringent requirement sets an exceptionally high bar, and we would strongly recommend a more balanced standard of conduct, one that is guided by the principle of "reasonableness." A shift towards a "commercially reasonable efforts" standard would be more appropriate and manageable, particularly for the reasons we have outlined below.

It is important to emphasise that the primary authors of white papers - those offering cryptoassets or seeking their admission to trading - are often startups and SMEs. Given the significant challenges associated with making sustainability disclosures, as previously detailed, the "best efforts" standard is excessively burdensome. Compliance with this standard presents obstacles that, in our view, may not be surmountable, at least in the short term. This challenge is particularly pronounced for startups and SMEs, which typically have fewer resources at their disposal.

Furthermore, Article 15 of MiCA stipulates that white paper authors are liable to cryptoasset holders for any losses incurred due to non-compliance with white paper requirements. This provision amplifies the risks associated with potential non-compliance. Startups and SMEs may lack the necessary resources to shoulder such risks, which could dampen their willingness to engage in the market. Authors could find themselves liable for investors' losses if they fail to meet the "best efforts" standard in preparing sustainability disclosures, leading to an increased likelihood of liability, litigation, and the need for costly remediation efforts. This is an onerous prospect, especially for startups and SMEs.

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[13] *Sheffield Dist. Ry. Co. v. Great Cent. Ry. Co.* (1911) 27 TLR 451.

This could further discourage issuers from accessing the EU market which runs contrary to one of the core objectives of MiCA and the EU Retail Finance Package.

3.7 Comparison with existing regimes (CSRD and SFDR)

We understand that ESMA, when drafting the technical standards, has considered sustainability disclosure obligations under existing regimes, notably CSRD and SFDR, to ensure complementarity, consistency, and to avoid increasing the burden on companies.[14] On this point, ESMA states that proportionality is embedded in the sustainability disclosures requirements from the outset, as only a limited subset of sustainability matters is to be taken into account under the MiCA disclosure requirements, compared to the CSRD and SFDR frameworks.[15]

We appreciate that a lot of thought has gone into determining the indicators which (in ESMA's view) best articulate the climate and environmental impact of a DLT consensus mechanism.

However, we are concerned that the draft RTS does not place enough recognition on the fact that these TradFi regimes apply to a well-defined and narrow set of entities which are typically authorised financial institutions or large corporates or listed companies, namely Alternative Investment Fund Managers, UCIT management companies, firms carrying out portfolio management and advisers (under SFDR) and large or sophisticated undertakings (under CSDR) such as: (a) EU undertakings which meet two out of three of the following criteria, a balance sheet total of €20m, net turnover of €40m, averaging 250 employees; (b) non-EU companies with a net annual turnover of over €150m with at least one EU subsidiary or branch; and (c) SMEs listed on regulated markets (not growth markets or multilateral trading facilities).

In contrast, the cryptoasset market is characterised by a significant presence of start-ups and SMEs, which are often in the early stages of their business lifecycle. These entities typically have limited financial and operational resources, making the comprehensive sustainability disclosures required by MiCA particularly burdensome. Unlike the entities falling within the scope of SDFR and CSDR, cryptoasset ventures are often in their infancy when they seek to offer or admit cryptoassets to trading. For these startups and SMEs, the process of offering or listing cryptoassets is a critical step in raising capital and scaling their operations without relinquishing control or ownership, as would be the case with traditional equity offerings.

Given this context, the sustainability disclosure requirements proposed under MiCA could erect formidable barriers to entry for startups and SMEs. The practical and financial challenges posed by these requirements may render the cryptoasset market effectively inaccessible to these smaller players. Therefore, we advocate for a more proportionate approach to sustainability disclosures within MiCA, one that takes into account the unique position and constraints of startups and SMEs in the cryptoasset sector. This approach would help ensure that the market remains open and viable for start-ups and SMEs.

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[14] MiCA, Recital 7.

[15] ESMA Consultation Paper "*Technical Standards specifying certain requirements of Markets in Crypto Assets Regulation (MiCA) - second consultation paper*", paragraph 28.

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3.8 Sustainability requirements for CASPs' go further than the Level 1 text

We are concerned that the draft RTS has inadvertently introduced additional obligations on CASPs with respect to sustainability disclosures on CASPs' websites which go further than the MiCA Level 1 text and we would strongly advocate for the language of the draft RTS to be clarified so that the requirements on CASPs with respect to sustainability disclosures are fully aligned with the Level 1 text.

Articles 4(1) and 5(1) of MiCA requires offerors and persons seeking admission to trading of a cryptoasset an obligation to have "***drawn up*** *a cryptoasset white paper in accordance with Article 6" (*Article 6 requires white papers to include sustainability disclosures).

Article 66(5) of MiCA requires CASPs to "*make* ***publicly available,*** *in a prominent place on their website, [sustainability disclosures]*" (emphasis added). The "drawn up" language is clearly omitted from a CASP's obligation, and we assume this could only be intentional. Therefore, the specific drafting of this article has the effect of requiring CASPs to publish, but not prepare, sustainability disclosures. This is consistent with the remainder of Article 66(5) which says that "[sustainability] *information may be obtained from the cryptoasset white papers*", indicating that CASPs can extract such information from available sources. However, the draft RTS, appears to introduce additional obligations on CASPs over and above the Level 1 text.

Recital 2 of the draft RTS state that CASPs "***should be responsible for providing*** *[sustainability] information regardless of whether relevant information can also separately be obtained from a cryptoasset white paper*" (emphasis added). Although the difference in drafting is subtle, "***being responsible for***" *could* be interpreted as a more onerous obligation than to simply "*make [sustainability disclosures] publicly available in a prominent place on their website."*

In addition, Article 3(2) of the RTS state that CASPs "*shall review and update the information published on their websites … on a regular basis, at least annually, and update the information without undue delay in case of material changes.*" This seems to impose an additional obligation on CASPs to review and update sustainability disclosures which it publishes on its website on an annual basis which we assume was not the intention. The drafting could also be interpreted as a requirement on CASPs to validate or carry out quality control exercises over sustainability disclosures published in white papers or other sources which the CASP then makes publicly available on its website. Notably, offerors and persons seeking admission to trading of a cryptoasset, do not have any ongoing validation and quality control obligations (though we are not suggesting that such obligations should be applied).

We note that Article 66(6) of MiCA requires ESMA to develop technical standards on the "*content, methodology and presentation*" of the sustainability disclosures which CASPs are to make publicly available on their website, rather than create new obligations or change the nature of the existing obligations in the Level 1 text.

We therefore welcome ESMA either removing Recital 2 and Article 3(2) or revising the Level 2 drafting so that it is aligned with the Level 1 text.

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4. White papers

4.1 Costs of the proposals on machine readability on issuers

Article 6(10) of MiCA requires the white paper to be "*made available in a machine-readable format*".[16] MiCA does not expand on this requirement and all detail on the requirement has been proposed by ESMA in the draft RTS.

We agree with ESMA that although MiCA does not explicitly require for white papers to be human readable, this is necessary so that investors can easily access information, and be informed about the characteristics, functions, and risks of the cryptoasset they intend to invest in and compare cryptoassets to each other. This is also consistent with the policy objective of ensuring the protection of investors. We also agree with ESMA that iXBRL is an effective method for tagging documents with a high density of numerical information, such as financial statements, to ensure machine readability.

However, we are concerned that the requirement for white papers to be machine readable is a significant change compared to market practice, including in TradFi where there is no requirement under the Prospectus Regulation for entire prospectuses to be published in machine readable form (rather the requirements only apply to certain limited information contained in prospectuses such as ISINs and LEIs). ESMA's proposed measures require human readability and machine readability in the same 'document' or 'file' and require that the entire white paper is machine readable.

We are concerned that complying with the draft RTS requirements will necessitate a substantial investment of time and resources, leading to a significant administrative and financial burden for issuers. Rather than giving in-scope participants the flexibility to comply with machine readability in the manner appropriate to the participant, the draft RTS at Article 2(1) requires white papers to be prepared in XHTML format, and for the fields prescribed in Annex II to be marked up in machine-readable format using the XBRL markup language. In addition, the markups must be embedded in the white paper in XHTML format using the Inline XBRL 1.1 specifications / tag and must comply with the requirements on marking up and filing set out in Annex I of the draft RTS. ESMA's own estimates suggest that the production of a white paper following these guidelines could cost issuers as much as €33,000.

Such steep costs and the intricate technical demands of compliance could have a significant detrimental impact on SMEs issuers, potentially deterring them from issuing cryptoassets within the EU market. The lack of flexibility in how to meet the machine readability criterion could lead SMEs to conclude that the barriers to entry are too high, prompting them to seek alternative markets with less onerous requirements. This outcome would not only limit the diversity and vibrancy of the EU's cryptoasset landscape but also deprive the market of the innovation and growth that SMEs typically bring.

The imposition of such a high cost for compliance with the machine readability requirement appears disproportionate, particularly when considering the limited benefits that may be derived from it. A significant portion of the content within white papers consists of descriptive, free-text information that does not lend itself to the same advantages of machine

[16] ESMA has an equivalent mandate under Articles 19(9) and 51(9) of MiCA for ARTs and EMTs, however our response focuses on cryptoassets.

readability as numerical data found in financial statements. In the context of financial markets, the application of iXBRL has been largely confined to numerical and financial reporting, where its benefits are clear and tangible. White papers, however, are fundamentally different; they encompass a substantial amount of narrative content that provides context, explanations, and qualitative insights into the cryptoasset being offered. This type of information is inherently less amenable to machine readability, as the nuances and complexities of textual data are not as easily captured or standardised for machine processing. Given this mismatch between the nature of white papers and the capabilities of machine readability, the requirement to tag such documents in this manner seems to impose an unnecessary financial burden on issuers, without delivering commensurate advantages.

We refer ESMA to Recital 112 of MiCA, which we have extracted in Section 2.2 above which states "*[i]n accordance with the principle of proportionality as set out in that Article, this Regulation does not go beyond what is necessary in order to achieve those objectives [namely addressing the fragmentation of the legal framework for cryptoassets].*"

In our view MiCA's objectives can be achieved in a more proportionate and measured manner through amending the draft RTS in the following manner:

- Clarifying that the requirement for the white paper to be machine readable is limited to the most important financial/numerical information relating to the cryptoasset and not textual information (such as risk factors) which is not suitable for machine readability.
- Introducing a short-term sheet-style document ("key terms document") of the key investor-facing metrics to be published in white papers to which the machine readability requirements would apply, without applying the machine readability requirements to the whole white paper. This would ensure that investors are provided with the key information they need.
- Removing the requirement for the white paper to be human and machine readable in the same 'file'. The machine readability requirement should be clarified so that it only applies to the key terms document described above.

We would also recommend that EMSA allows white paper authors flexibility over the technology they utilise to ensure their white paper is machine readable. To ensure the regulatory framework remains adaptive and does not inadvertently mandate specific technological solutions that may become obsolete, it is crucial to allow for the adoption of industry-developed solutions over time. This approach is in harmony with the essential principle of technology neutrality, which posits that regulations should facilitate innovation and competition without favouring any one technology or approach. By embracing technology neutrality, we can create a regulatory environment that is flexible and responsive to the rapid pace of technological advancement, ensuring that newer, more efficient, or more effective technologies for machine readability can be integrated as they emerge.

4.2 Lack of proportionality for white paper form and content requirements

As discussed above, in comparison to similar requirements for TradFi, notably the requirements for a prospectus for public offers of securities and for admission to trading of securities, we are concerned that the MiCA requirements on form and content of white papers places an undue burden on SMEs.

The form and content requirements for white papers are numerous and detailed, and in our view this creates potentially prohibitive administrative and financial burden for issuers. This burden is exacerbated by the fact that the requirements are applied uniformly, without regard to the size, resources, or operational scale of the white paper authors. Such a one-size-fits-all approach fails to account for the diverse nature of entities within the cryptoasset market, particularly putting startups and SMEs at a disadvantage. While MiCA does offer certain exemptions from the obligation to publish a white paper, these exemptions are notably more restrictive than those found in the Prospectus Regulation, and the overall number of exemptions is fewer.

The costs associated with compliance are substantial in isolation, but when aggregated with other requirements on issuers such as the requirement for sustainability disclosures and machine readability they may become insurmountable for a significant portion of the market. This is especially true for startups and SMEs, which often operate with limited capital and are in a critical phase of growth and development. For these entities, the high costs of compliance can divert essential resources away from innovation and business expansion, ultimately stifling their potential.

Given these considerations, in our view it is important for the draft ITS to adopt a regulatory approach that incorporates the principle of proportionality, tailoring requirements to the capabilities and needs of different market participants. A more nuanced application of the white paper obligations would not only alleviate the financial strain on startups and SMEs but also encourage a more dynamic and inclusive cryptoasset market.

While we appreciate that ESMA's mandate under MiCA does not mandate it to introduce additional exemptions to the requirement to draw up, notify and publish a cryptoasset white paper or to widen existing exemptions, we note that the principle of proportionality is hard-baked into the Level 1 text. Most notably:

- Recital 26 states "*[i]n order to ensure a proportionate approach, no requirement of this Regulation should apply to offers to the public of cryptoassets … that are …*". The Recital continues by listing the types of cryptoassets that are excluded from the white paper requirement, as contained in MiCA Article 4(3).

- Recital 27 states "*[i]n order to ensure a proportionate approach the requirements of this Regulation to draw up and publish a crypto-asset white paper should not apply to …*". The Recital continues by listing the scenarios which are excluded from the white paper requirement, as contained in MiCA Article 4(2).

- Recital 6 states "*[s]uch a framework [for markets in crypto-assets] should* ***support innovation and fair competition****, while ensuring a high level of protection of retail holders and the integrity of markets in crypto-assets. A clear framework should enable crypto-asset service providers to scale up their businesses on a cross-border basis and facilitate their access to banking services to enable them to run their activities*

smoothly. A Union framework for markets in crypto-assets should ***provide for the proportionate treatment of issuers of crypto- assets and crypto-asset service providers, thereby giving rise to equal opportunities in respect of market entry and the ongoing and future development of markets in crypto-assets****. […].*" (emphasis added).

- Recital 112 states *"[s]ince the objectives of this Regulation, namely addressing the fragmentation of the legal framework applicable to offerors or persons seeking the admission to trading of crypto-assets … and ensuring the proper functioning of markets in crypto-assets while ensuring the protection of holders of crypto- assets and clients of crypto-asset service providers, in particular retail holders, as well as the protection of market integrity and financial stability, cannot be sufficiently achieved by the Member States but can rather, by creating a framework on which a larger cross-border market in crypto-assets and crypto-asset service providers could develop, be better achieved at Union level,* ***the Union may adopt measures, in accordance with the principle of subsidiarity as set out in Article 5 of the Treaty on European Union. In accordance with the principle of proportionality as set out in that Article, this Regulation does not go beyond what is necessary in order to achieve those objectives****."* (emphasis added).

In our view, ESMA could appropriately introduce proportionality considerations into the draft ITS by adopting the following measures:

- Allow for a more proportionate approach for SME issuers which enables them to produce a shorter-form white paper than that set out in the current draft RTS while ensuring that the MiCA Level 1 requirements are met. For example, this more proportionate approach could apply to issuers where the market capitalization of tokens is less than €8 million, to align with the exemption from publishing a prospectus in the Prospectus Regulation.
- For example, this more proportionate approach could apply to issuers where the market capitalization of tokens is less than €8 million, to align with the exemption from publishing a prospectus in the Prospectus Regulation.
- Produce an ESMA-approved e-template white paper for SMEs which hard-codes machine readability into the template. This would enable SMEs to rely on a centralised resource and would substantially mitigate the costs for SMEs for producing white papers and complying with the machine readability requirements. It would also increase the consistency and comparability of white papers for investors.

4.3 LEI requirements

The draft RTS requires persons drawing up a white paper to ensure that they are identified with a pertinent, validated, issued, and duly renewed LEI in the data accompanying the white paper. Entities eligible for an LEI include legal entities and entities without legal personality such as partnerships, associations, and individuals acting in a business capacity. We consider

that in many cases, an issuer, offeror, or person seeking admission to trading of cryptoassets would be eligible for an LEI.

However, we are concerned that the LEI requirement does not fully recognise that a broad range of issuers may not be eligible to obtain an LEI. For example, many decentralised autonomous organisations and Web3 issuers may be structured in a way that means they will find it challenging to obtain an LEI. We estimate that this may impact around 50% of cryptoasset issuers and that figure may grow substantially as the Web3 market expands. The LEI requirement, as currently drafted, therefore risks excluding a significant portion of issuers from being able to issue a compliant whitepaper, effectively excluding them from accessing the EU market. These restrictions also mean that the EU could miss out on a thriving Web3 market, as well as miss out on attracting the Web3 unicorns of the future. This seems inconsistent with MiCA recital 22 which clarifies that fully decentralised providers should not fall within the scope of MiCA.

Accordingly, we would propose introducing an exemption from the requirement for authors of white papers to obtain an LEI, where they are not eligible for an LEI or where one cannot be obtained despite reasonable commercial efforts.

5. Other Requirements

We support many of the measures proposed by ESMA with respect to continuity and regularity in the performance of cryptoasset services, pre- and post-trade transparency data, record keeping and order book records, and the public disclosure of inside information. For completeness, we provide below our observations on the requirements, and identified areas which we consider would benefit from clarifications and revisions,

5.1 Continuity and regularity in the performance of cryptoasset services

- The existence of a contract between operators under a permissioned arrangement does not change the nature of the DLT into a third-party provider relationship that would fall under the scope of the requirements related to outsourcing of “critical or important functions”. In our view, the draft RTS should characterise permissioned DLT in a similar manner to centralised market infrastructures such as CSDs in TradFi. In TradiFi it would not be appropriate to classify the services of such market infrastructures as an outsourcing by the service recipient because the services provided are not services that the service recipient would otherwise perform. We would recommend that ESMA adopts a consistent approach with respect to Permissioned DLT networks and clarifies that service providers utilising their services would not be considered to be conducting an outsourcing to those networks. Requiring service recipients to comply with the outsourcing requirements (such as those mandated by the EBA Guidelines) with respect to Permissioned DLT networks would not be appropriate nor consistent with the approach adopted in TradFi.

- Many institutions do not have a dedicated business continuity function and we consider it would be disproportionate to require that cryptoasset market

participants set up such function to oversee their obligations under the RTS on "*continuity and regularity in the performance of crypto-asset services*", particularly for start-ups and SMEs.

- Many institutions do not have an internal audit function and we consider it would be disproportionate to require that cryptoasset market participants set up such function to test their business continuity plans, particularly for start-ups and SMEs.

5.2 Pre- and Post-trade data

- ESMA recognises that MiFIR includes a range of explicit exemptions to the transparency requirements that have not been reproduced in MiCA. In particular, MiCA does not include any exemptions from the pre-trade transparency requirements for types of orders or trading conditions, meaning that any bid and ask prices and the depth of trading interests at those prices must be made available regardless of their size or how they are formalised. ESMA predicts that market participants will be able to develop order routing strategies or use external order management systems to avoid negative trading impacts resulting from the lack of exemptions. However, ESMA notes that it is crucial to allow trading platforms in crypto-assets to offer order management features to their clients, particularly considering that retail investors may not have the resources to develop their own order routing strategies or use external order management systems. We would recommend that ESMA provides guidance on how the order management systems of trading platforms should interact with the order books of those platforms and when an order should be considered to have been made for the purposes of the MiCA transparency requirements. Otherwise, different interpretations may be adopted by trading platforms which could lead to an inconsistent application of the MiCA transparency requirements.

- We generally agree with the proposed approach with respect to reserve and stop orders.

- We are concerned that ESMA's proposal to reduce post-trade transparency timing requirements to 30 seconds creates an additional burden on trading venues and is inconsistent with the approach adopted in TradFi. In our view, a technology neutral approach should apply to these requirements, and we would recommend that ESMA aligns the post-trade transparency timing requirements with the TradFi requirements (i.e. one minute).

5.3 Record keeping and order book records

- We consider that a token short name (e.g. BTC) should be the key identifier of the cryptoasset, which is supported by a DTI where this is available, rather than the DTI being the key identified as this is not available for all cryptoassets.

- We agree with using the transaction hash to identify on-chain transactions. However, as off-chain transactions will not have a transaction hash, a different unique transaction identification code will need to be attributed to those off-chain transaction. In addition, where off-chain transactions are integrated or submitted

to the main chain, consideration should be given to how best to link the two transactions for the purposes of identifying the sequencing of orders and events affecting the order.

- We do not consider that "gas fees" alone will help identify the sequencing of cryptoasset orders and events affecting the order. Information captured in the other fields (transaction hash, timestamp, etc.) are more helpful in achieving these goals.

- ESMA is also proposing to require CASPs to record information about whether a transaction was a deposit or withdrawal. In our view, these data fields / concepts are not commonly or consistently used in the cryptoasset market.

- ESMA has defined "undertaking a transaction" to include the activity of "executing a transaction". "Executing a transaction" has been defined by using the definition under MiFID and RTS 22 (which was for the specific purpose of MiFID transaction reporting requirements). We note that the RTS 22 definition created a lot of confusion in the TradeFi market as it included activities such as reception and transmission, making an investment decision in accordance with a discretionary mandate, transferring instruments to or from accounts (without a change in ownership). Therefore, we would welcome a clearer approach, for example ESMA could simply list the different activities it considers to be "undertaking a transaction".

- We would welcome ESMA clarifying that the record keeping obligation only relates to transactions which the CASP undertakes, and there is no requirement to look through its client or counterparty and similarly no requirement provide or record information in relation to persons up or down the transaction chain. The blockchain itself is a transparent and immutable ledger / mechanism for record keeping.

- We agree that CASPs should use the ISO20022 methodology when sharing information with competent authorities. However, we consider a proportionate approach would be to not mandate this requirement as many CASPs are start-ups or SMEs may not have the resources to comply with these messaging standards.

5.4 Public disclosure of Inside information

- The draft ITS applies to issuers, offerors and persons seeking admission to trading for cryptoassets. We consider that the ITS could provide further detail on the role of an "offeror" (for example in a recital) as the Level 1 text simply refers to offerors as "natural or legal person, or other undertaking, or the issuer, who offers crypto-assets to the public".

- As currently drafted, an "offeror" may be interpreted to capture operators of trading platforms, and in particular centralised cryptoasset exchanges, which work closely with token issuers to assist them in their compliance with applicable regulatory requirements, security measures related to a cryptoasset, in the

refinement of the cryptoasset's tokenomics etc. The trading platform's role in this regard is not one where it is making an offer of crypto-assets to the public.

- In comparison with offers in TradFi, issuers generally enter into an arrangement with a financial institution for them to carry out the offer to the public. The financial institution would make communications to persons and present information on the terms of the offer and the securities to be offered, and therefore intermediate between the issuer and the public. However, in the scenario described in the paragraph above, the operator of a trading platform does not take on a public facing role, and is more akin to a corporate finance advisor, and the token issuer is the offeror.
- We would welcome ESMA providing further guidance on the definition of an "offeror". As currently drafted the term may be interpreted to capture operators of trading platforms that provide services akin to corporate finance advice, when assisting issuers in their issuance / offers of cryptoassets.
- In TradFi, listed companies generally disclose inside information via a regulatory news service ("**RNS**") which is a part of a stock exchange. We understand cryptoasset exchanges do not currently offer a RNS system. However, we anticipate that such services could be offered by cryptoasset exchanges in future. We would therefore welcome ESMA giving participants more flexibility and allow them to RNS-like services where available.

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Response to Listed Questions

Chapter 3 (Sustainability Disclosures)

Q1: Do you agree with ESMA's assessment of the mandate for sustainability disclosures under MiCA?	Yes, we agree with ESMA's assessment of the mandate for sustainability disclosures under MiCA. However we note that: (1) more could be done with respect to the proportional application of the sustainability disclosure obligations; and (2) the draft technical standards specifying the content, methodologies and presentation of information in respect of sustainability indicators in relation to adverse impacts on the climate and other environment-related adverse impacts appear to introduce new obligations on CASPs which we assume was unintentional. Please refer to Annex A, Introduction and Summary, and Sections 1 and 3 for further detail.
Q2: In your view, what features of the consensus mechanisms are relevant to assess their sustainability impacts, and what type of information can be obtained in relation to each DLT network node?	A consensus mechanism's primary objective is to ensure the authenticity of the ledger or the blockchain. A by-product of these operations could be the validation of a transaction. There is currently no agreed or consistent view of the features of consensus mechanisms that are relevant to assess their sustainability impacts. This makes the calculation of sustainability data challenging. However, we agree that nodes are a key and helpful feature. For example the location of nodes may be used as a proxy to estimate GHG emissions, and that the devices (hardware equipment) of each DLT network node may be used to assess the waste production and the impact on natural resources. However, in practice, the location of nodes is not always available nor reliable. Similarly, the data on what devices a node is utilising is generally not available, and any assumptions made in this respect are not reliable for non-PoW consensus mechanisms. Given the lack of consensus, we would welcome ESMA removing the proposed granular reporting requirements until a reliable set of sustainability indicators across all consensus mechanisms are agreed. In lieu, ESMA could introduce principles-based measures, thereby giving

	in-scope person's flexibility over how they comply with the obligation to make sustainability disclosures. However, if ESMA retains the requirement to report on sustainability indicators, we would welcome a proportionate approach particularly for start-ups and SMEs. ESMA could consider introducing measures to take into account an in-scope person's size, revenue, sophistication, and therefore financial and non-financial resources, as well as the consensus mechanism being utilised as set out in Annex A, section 1.1. Please refer to Annex A, Introduction and Summary, and Sections 1 and 3 for further detail.
Q3: Do you agree with ESMA's approach to ensure coherence, complementarity, consistency and proportionality?	We consider that ESMA could do more to ensure coherence, complementarity, consistency and proportionality. There is a high level of detail and granularity associated with the obligations to make sustainability disclosures, and we query whether they can be achieved in practice as well as in a meaningful way. We note that ESMA applies the sustainability disclosure requirements uniformly to offerors, and persons seeking admission to trading of cryptoassets. This is different to the approach under comparable regulations that MiCA borrows from such as the Corporate Sustainability Reporting Directive ("CSRD"), the Sustainable Finance Disclosure Regulation ("SFDR"). We also consider that the requirement for sustainability disclosures to be made on a "best efforts" basis to be a very high bar and we would welcome a more proportionate standard of conduct, and one which is framed by the concept of "reasonableness", such as commercially reasonable efforts. A common theme across the above areas is the concept of proportionality and we query whether more could be done in this respect. We fear that the measures, as drafted, may create barriers to entry which cannot be overcome by new entrants and emerging businesses, and therefore cause the cryptoasset market to be practically unavailable for start-ups and SMEs.

	We would welcome ESMA removing the proposed granular reporting requirements until a reliable set of sustainability indicators across all consensus mechanisms are agreed. In lieu, ESMA could introduce principles-based measures, thereby giving in-scope persons flexibility over how they comply with the obligation to make sustainability disclosures. However, if ESMA retains the requirement to report on sustainability indicators, we would welcome a proportionate approach particularly for start-ups and SMEs. ESMA could consider introducing measures to take into account an in-scope person's size, revenue, sophistication, and therefore financial and non-financial resources, as well as the consensus mechanism being utilised as set out in Annex A, section 1.1. Please refer to Annex A, Introduction and Summary, and Sections 1 and 3 for further detail.
Q4: Do you agree with ESMA's approach to mitigating challenges related to data availability and reliability? Do you support the use of estimates in case of limited data availability, for example when data is not available for the entirety of a calendar year?	Yes, we agree with ESMA's approach to mitigating challenges relating to data available and reliability and support the use of estimates in case of limited data availability. However, given the challenges associated with determining a number of the key indicators of climate and environmental impact, we query whether the obligations can be complied with in practice as well as in a meaningful way. We also consider that the measures could apply in a proportionate manner. Please refer to Annex A, Introduction and Summary, and Sections 1 and 3 for further detail.
Q5: What are your views on the feasibility and costs of accessing data required to compute the sustainability metrics included in the draft RTS?	We consider that there are serious challenges with respect to the feasibility and costs of accessing the data required to compute the sustainability metrics included in the draft RTS. Please refer to Annex A, Introduction and Summary, and Sections 1 and 3 for further detail.

	However, we consider that further views could be developed on this point through ESMA's call for tender on '*Developing a Methodology and Sustainability Standards for Mitigating the Environmental Impact of Crypto-assets*' launched in September 2023.
Q6: Do you agree with ESMA's description on the practical approach to assessing the sustainability impacts of consensus mechanisms? If not, what alternative approach would you consider suitable to assess these impacts?	We consider that there are serious challenges with assessing the sustainability impacts of the consensus mechanisms in practice. Please refer to Annex A, Introduction and Summary, and Sections 1 and 3 for further detail However, we consider that further views could be developed on this point through ESMA's call for tender on '*Developing a Methodology and Sustainability Standards for Mitigating the Environmental Impact of Crypto-assets*' launched in September 2023.
Q7 : Do you agree with the definitions proposed in the draft RTS, in particular on incentive structure and on DLT GHG emissions? If not, what alternative wording would you consider appropriate?	N/A
Q8: In your view, are the proposed mandatory sustainability indicators conducive to investor awareness? If not, what additional or alternative indicators would you consider relevant?	We consider that energy consumption and energy intensity are not accurate or representative indicators of sustainability and therefore could be optional / additional sustainability indicators, but not mandatory indicators, which is how they are currently classified. Please refer to Annex A, Introduction and Summary, and Sections 1 and 3 for further detail.
Q9: Do you consider the proposed optional sustainability indicators fit for purpose? If not, what additional indicators would you consider relevant? Would you agree to making these optional sustainability indicators mandatory in the medium run?	We consider that energy consumption and energy intensity are not accurate or representative indicators of sustainability and therefore could be optional / additional sustainability indicators, but not mandatory indicators, which is how they are currently classified. As non-renewable energy consumption is calculated from energy consumption, we also suggest re-classifying this as an optional / additional sustainability indicator, but not mandatory indicator. We also suggest adding in renewable energy consumption as an optional indicator.

	We do not consider that optional sustainability indicators should become mandatory in the medium run. Please refer to Annex A, Introduction and Summary, and Sections 1 and 3 for further detail.
Q10: Do you consider the principles for the presentation of the information, and the template for sustainability disclosures fit for purpose? If not, what improvements would you suggest?	Yes, we consider the principles for the presentation of the information, and the template for sustainability disclosures fit for purpose. However, we query whether a 'lite' regime could be introduced for start-ups and SMEs. Please refer to Annex A, Introduction and Summary, and Sections 1 and 3 for further detail.
Q11 : In your view, are the calculation guidance for energy use and GHG emissions included in the draft European Sustainability Reporting Standards relevant for methodologies in relation to the sustainability indicators under MiCA? If not, what alternative methodologies would you consider relevant? For the other indicators for which the calculation guidance of the ESRS was not available, do you consider that there are alternative methodologies that could be used? If so, which ones?	We consider that further views could be developed on this point through ESMA's call for tender on '*Developing a Methodology and Sustainability Standards for Mitigating the Environmental Impact of Crypto-assets*' launched in September 2023.
Q12 : Would you consider it useful that ESMA provides further clarity and guidance on methodologies and on recommended data sources? If yes, what are your suggestions in this regard?	Yes, we consider that it would be useful for ESMA to provide further clarity and guidance on the methodologies and recommended data sources for calculating the sustainability indicators. However, this should be guidance rather than prescriptive requirements so that the approach to cryptoasset sustainability disclosures can keep up with national and international developments.

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Chapter 4 (Business Continuity)

Q13: Is the definition for permissionless DLT in Article 1 sufficiently precise?	Yes, the definition for permissionless DLT in Article 1 is sufficiently precise.
Q14: Throughout the RTS, we refer to 'critical or important functions'. The term is borrowed from DORA and does not just capture ICT-specific systems. Does this approach make sense?	Yes, we agree with the use of the concept "critical or important functions". o We also welcome ESMA's comments that permissionless DLT used by a CASPs does not constitute a third-party provider relationship (in the traditional contractual sense) and therefore would not fall under the scope of the requirements related to outsourcing of "critical or important functions". In this case, permissionless DLTs is a form of "common good" resource. o This approach should also be applied to permissioned DLT operated by a commercial enterprise which is also a form of "common good" resource. Permissioned DLT are closed networks in which designated entities (which may or may not be members of a consortium) participate in the consensus and validation process. This is the 'permissioned' aspect of the mechanism. However, other than this, the DLT operates in materially the same manner as permissionless DLT. We do not consider the existence of a contract between operators to change the nature of the DLT from a common good into a third-party provider relationship. o We note that permissioned DLTs have the benefit of better information privacy, customisation, speed of consensus and scalability as there are fewer nodes to validate transactions. Applying obligations on the use of permissioned DLT would have the unintended consequence of discourage cryptoasset businesses from utilising this model and therefore potentially hindering the development of this technology.

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Q15: Do you consider subparagraph (e) in Article 4(2) on external communications with clients in the event of a disruption involving a permissionless DLT appropriate for the mandate (i.e., does it constitute a measure that would ensure continuity of services)?	We agree that procedures for timely external communications with clients in the event of a disruption involving permissionless DLT used by the cryptoasset service provider in the provision of its services to be appropriate and important. However, permissionless DLT by design should experience minimal disruption due to the network effects. In this regard, disruptions can occur to off-chain transactions on the CASP's internal ledger, as well as to on-chain transactions via a permissionless DLT. We consider the ESMA Level 2 text could clarify if the RTS applies in the former scenario should the technology used to operate the internal ledger meet the "critical or important function" standard.
Q16: Should this RTS also specify that CASPs should establish a business continuity management function (to oversee the obligations in the RTS)? In your view, does this fall within the mandate of 'measures' ensuring continuity and regularity?	In our view, CASPs should not be required to establish a business continuity management function. Such a function is not required under comparable frameworks applicable to TradFi for example under MiFID and DORA. Further, many institutions do not have a dedicated business continuity function, and we consider it would be a disproportionate requirement particularly for start-ups and SMEs. Were ESMA to introduce such a requirement, we would welcome a proportionate approach whereby it is for the CASP to assess whether this is appropriate with regard to the size, scale, nature and range of its business.
Q17: Are there other organisational measures to be considered for specific CASP services?	We consider that the organisational measures set out in the draft RTS to be appropriate, subject to our comments at Q14, and Q15.
Q18: Do you consider the obligation for CASPs to conduct testing of the business continuity plans in Article 4(4) via an internal audit function appropriate for the mandate?	We do not consider this to be appropriate for all CASPs. We agree with ESMA that CASPs should be required to periodically test their business continuity plans. However, we do consider that ESMA's mandate to develop regulatory technical standards to further specify "*the measures ensuring continuity and regularity in the performance of the crypto-asset services referred to in Article 68(7) of MiCA*" extends to ESMA requiring that the testing is carried out via an internal audit function.

	We note that many institutions do not have a dedicated business continuity function, and we consider it would be a disproportionate requirement particularly for start-ups and SMEs. Were ESMA to introduce such a requirement, we would welcome a proportionate approach whereby it is for the CASP to assess whether this is appropriate with regard to the size, scale, nature and range of its business.
Q19: In Art. 68(8), CASPs are required to take into account the scale, nature, and range of crypto asset services in their internal risk assessments. Is there support for this general principle on proportionality in Article 6? Do you support the proposed self-assessment under Article 6(2) and in the Annex of the draft RTS?	We consider that Article 6 should explicitly refer to a CASP's requirement to take into account the scale, the nature and range of cryptoasset services they provide when establishing their business continuity policy. We consider the self-assessment under Article 6(2) to be a key and helpful exercise to assist CASPs with preparing their business continuity policy in a proportionate manner.

Chapter 5 (CASP operating conditions and pre- and post- trade transparency provisions)

Q20: Do you agree with the description provided for the different types of CEX and DEX listed?	Yes, we agree with the description provided for the different types of CEX and DEX listed.
Q21 : <u>For trading platforms</u>: Please provide an explanation of (i) the trading systems you offer to your users, (ii) which type of orders can be entered within each of these trading systems and (iii) whether you consider these trading systems to be a CEX or a DEX (please explain why)?	Coinbase is a global platform offering a broad range of products and services in a number of cryptoassets / cryptoasset trading pairs, and cryptoasset / fiat currency trading pairs, including spot exchange services. Users have the ability to transfer fiat currency and cryptoassets into their account in order to buy or sell cryptoassets on the spot market for the available trading pairs. Without prejudice to Coinbase's future determination as to its products and services scope in the EU under MiCA, the Coinbase trading platform (currently operating in the US) can be described as follows: (i) Trading engine

	The Coinbase trading platform operates a central limit order book with a matching engine that matches bids and offers on a price and time priority basis. By way of further detail, orders submitted to the matching engine that: (a) isn't immediately traded (maker) gets placed in the order book as a resting order; and (b) can immediately trade (taker) will match against resting orders in the order book, using price priority starting from the best price first and trade at the price of the resting order until reaching the price or quantity constraints of the submitted order. If multiple resting orders exist at the same price, then matching occurs using time priority based on the time the resting order was submitted to the order book. The above-described matching model is commonly utilised in both the cryptoasset market and TradFi. (ii) Orders Users can place market, limit, and stop limit orders on the Coinbase platform. Market orders execute immediately at the best available market price. A limit order allows the user to set a minimum price for the order to execute. A stop-loss order allows a user to specify the stop price an order should execute at. If the market order price falls to the stop price, the order will trigger a trade. (iii) Trading system The Coinbase trading platform is a CEX with Coinbase as the central operator of the platform. Trading on the Coinbase platform is organised around one main interface or pool, where all trading interests are centralised. As stated above, we offer a central limit order book which is very similar / identical to those offered on traditional TradFi exchanges. As on traditional exchanges, the liquidity provision process is centralised and the market is "made" by professional market makers.

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Q22: Do you consider the trading systems described, and the transparency obligations attached to each trading system, in Table 1 of Annex I of the draft RTS appropriate for the trading of crypto-assets? Do you offer a trading system that cannot meet the transparency requirements under the provisions in this Table? Please provide reasons for your answers.	We consider the trading systems described in Table 1 of Annex I of the draft RTS appropriate for the trading of cryptoasset. We also consider the post-trade transparency obligations attached to each trading system to be appropriate. With respect to pre-trade transparency, we refer ESMA to our comments at Q24.
Q23: Regarding more specifically AMMs, do you agree with the definition included in Table 1 of Annex I of the draft RTS? What specific information other than the mathematical equation used to determine the price and the quantity of the asset in the liquidity pools would be appropriate to be published to allow a market participant to define the price of the assets offered in the liquidity pool?	N/A.
Q24 : Do you agree with ESMA's proposals on the description of the pre-trade information to be disclosed (content of pre-trade information) under Table 2 of Annex I of the draft RTS? If not, please explain why. If yes, please clarify whether any elements should be amended, added and/or removed.	We understand that MiFID includes comparable pre-trade transparency requirements for TradFi. However, the MiFID regulatory technical standard on "*Transparency requirements for trading venues and investment firms in respect of shares, depositary receipts, exchange-traded funds, certificates and other similar financial instruments*" ("MiFID RTS 1") does not prescribe what information must be reported for pre-trade transparency. Rather it includes a description of the information to be made public by each type of trading system. We would welcome a similar and flexible approach for the cryptoasset market and for ESMA to remove the prescribed list of details (which has 14 fields) from the RTS, in favour of descriptions, similar to those used in MiFIR RTS 1 which are:

	• *Continuous auction order book trading system*: The aggregate number of orders and the cryptoassets that they represent at each price level for at least the five best bid and offer price levels. • *Quote-driven trading system*: The best bid and offer by price of each market maker in cryptoassets traded on the trading system, together with the volumes attaching to those prices. The quotes made public shall be those that represent binding commitments to buy and sell the cryptoassets and which indicate the price and volume of financial instruments in which the registered market makers are prepared to buy or sell. In exceptional market conditions, however, indicative or one-way prices may be allowed for a limited time. • *Periodic auction trading system*: The price at which the auction trading system would best satisfy its trading algorithm in respect of cryptoassets traded on the trading system and the volume that would potentially be executable at that price by participants in that system. • *Request for quote trading system*: The quotes and the attached volumes from any member or participant which, if accepted, would lead to a transaction under the system's rules. All submitted quotes in response to a request for quote may be published at the same time but not later than when they become executable. • *Any other trading system*: Adequate information as to the level of orders or quotes and of trading interest in respect of cryptoassets traded on the trading system; in particular, the five best bid and offer price levels and/or two-way quotes of each market maker, if the characteristics of the price discovery mechanism so permit.

Q25: Do you agree with ESMA's proposals to require a specific format to further standardise the pre-trade information to be disclosed (format of pre-trade information)? If not, please explain why and how the pre-trade information can be harmonised. If yes, please clarify whether any elements should be amended.	We refer ESMA to our comments at Q24.
Q26: Do you agree with the proposed approach to reserve and stop orders?	We understand that ESMA cannot create an exemption to the pre-trade transparency requirements in the RTS, particularly for large orders, as this is outside of ESMA's mandate. Notably, we assume that ESMA either considers that exemptions for large orders, is not required or can be solved by trading venues introducing risk management tools, such as reserve orders, which allow traders to split their large orders into small orders, and therefore reducing moving the price in the market, and accordingly protect investors from the impact of unexpected price movements. However, and as recognised by ESMA, the types of orders and order management tools, require a certain level of resources and expertise, and therefore are utilised almost exclusively by sophisticated and institutional investors. Given this, even if trading venues were to introduce reserve orders and similar order management tools for mass retail investor, we have reservations over whether they would be utilised. Therefore, retail investors would continue to place large orders and be exposed to price movements (including as a result of pre-trade transparency disclosures made by trading platforms) in a way that institutional investors will not be. Given the above observations, we consider exemptions to the pre-trade transparency requirements to be crucial. We refer ESMA to the various references in the Level 1 text which requires a proportionate and measured approach to MiCA obligations (which includes transparency requirements), notably Recitals 6 and 112. Therefore we would welcome ESMA introducing exemptions in reliance on the overarching requirement for the cryptoasset regulatory

	framework to be proportionate, support innovation and fair competition, give rise to equal opportunities in respect of market entry and the ongoing and future development of the market in cryptoassets, and not go beyond what is necessary.
Q27: Do you agree with the proposed list of post-trade information that trading platforms in crypto assets should make public in accordance with Tables 1, 2 and 3 of Annex II of the draft RTS? Please provide reasons for your answers.	Yes, we agree with the list of post-trade information that trading platforms in cryptoassets should make public. For example, the fields requiring disclosure of the cryptoasset, quantity, time, and the trading system, will allow for comparison of trade data of executed cryptoasset trades. In addition, the information required is similar to those disclosed as part of post-trade transparency in the equity markets under MiFID, which is working well. However, we consider that the timing requirements related to making post-trade reports, within 30 seconds after the execution of the transaction may not be achievable at all times. Coinbase supplies post-trade messages via FIX on a near-instantaneous basis. However, there may be latencies for a variety of reasons some outside our control such as increased onchain volume and delayed block settlement. We would welcome ESMA extending the timing requirements to one minute, so as to be consistent with the requirements under MiFID for the post-trade transparency of equity products.
Q28: Is the information requested in Table 2 of Annex II of the draft RTS sufficient to identify the traded contract and to compare the reports to the same / similar contracts.	Yes, we consider the information requested in Table 2 of Annex II of the draft RTS is sufficient to identify the traded contracts.
Q29: Is there any other information, specific to crypto-assets, that should be included in the tables of Annex II of the draft RTS? Please provide reasons for your answers.	We propose to refer ESMA to our comments at Q28.

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Q30: Do you expect any challenges for trading platforms in crypto assets to obtain the data fields required for publication to comply with pre- and post-trade transparency requirements under Annex I and Annex II of the draft RTS?	N/A.
Q31: What do you consider to be the maximum possible delay falling under the definition of "as close to real-time as is technically possible" to publish post-trade information in crypto-assets? Please provide reasons for your answer.	N/A.
Q32: Do you agree with ESMA's approach on the requirements to be included in the draft RTS in relation to a trading platform's operating conditions? Please provide reasons for your answer.	We agree with ESMA that trading platforms should publish the information on the operating rules for the trading platform free of charge and in a manner that is easily accessible, non-discriminatory, prominent, comprehensible, fair, clear and not misleading. We also agree with ESMA that the operating rules should be provided in a single document. Presenting the operating rules in this way will help facilitate issuer and investor understanding and will promote fair and open access of cryptoassets to the trading platform.
Q33: Do you consider that ESMA should include in the RTS more specific disclosure rules regarding a trading platform's operating conditions, in particular in relation to co-location and access arrangements?	We do not consider that more specific disclosure rules regarding a trading platform's operating conditions, for example in relation to co-location and access arrangements, are required.
Q34: From your experience, are all crypto-assets trading platforms making their data available free of charge? If not, what specific barriers have you encountered to access the data (e.g., price, level of disaggregation).	N/A.

Q35: Do you agree with the level of disaggregation proposed in the draft RTS? Please provide reasons for your answer.	N/A.

Chapter 6 (Record keeping obligations for CASPs)

Q36: In the context of large number of CASPs and possible different models of data access, what kind of measures (common messages, common APIs, others) would you consider feasible to ensure effective and efficient access to data?	N/A.
Q37: Do you agree with using the DTI for uniquely identifying the crypto-assets for which the order is placed, or the transaction is executed? Do you agree with using DTI for reporting the quantity and price of transactions denominated in crypto-assets?	We agree with using the DTI as described in this question Q37 as we support the use of standardised reference data where possible. We note that DTI codes have been issued for over a thousand of the most popular cryptoassets, however not all cryptoassets will have a DTI. In addition, although a DTI will be helpful when providing transaction and order data to a regulator, investors will rather identify cryptoassets by reference to the token long name or short name (e.g. Bitcoin or BTC). Therefore, we consider that a token short name be the key identifier, which is supported by a DTI where this is available. Linked, we consider it prudent that ESMA adds in thresholds to be met before a DTI is compulsory (based on cryptoasset volume / value / market capitalization, within a period e.g. annually or within a three-year period).
Q38: Are there relevant technical attributes describing the characteristics of the crypto-asset or of the DLT on which this is traded, other than those retrievable from the DTIF	N/A.

register? Please detail which ones.	
Q39: Do you agree with using the transaction hash to uniquely identify transactions that are fully or partially executed on-chain in orders and transactions records? Please clarify in your response if this would be applicable for all types of DLT, and also be relevant in cases where hybrid systems are used.	We agree with using the transaction hash to identify on-chain transactions. However, as off-chain transactions will not have a transaction hash, a different unique transaction identification code will need to be attributed to those off-chain transactions. Where off-chain transactions are integrated or submitted to the main chain, consideration should be given to how best to link the two transactions for the purposes of identifying the sequencing of orders and events affecting the order. In our view, an additional "Linked Transaction" field could be added and the data type for that field would be a transaction hash or a unique transaction identification code as appropriate.
Q40: Do you agree that a separate field for the recording of "gas fees" should be included for the purpose of identifying the sequencing of orders and events affecting the order?	We do not think that gas fees should be included as a separate field since the fee alone would not achieve the purpose of identifying the sequencing of orders and events affecting the order. Likewise information captured in the other fields (transaction hash, timestamp, etc.) can be used to achieve these goals. Gas fees are transaction processing fees charged by blockchains. Therefore, they form part of the fees or price related to an order and are not comparable to other fields which are used for the purpose of identifying the sequencing of orders (see Draft RTS, Annex I, Table 2, Section E), or for identifying events affecting the order (See Draft RTS, Annex I, Table 2, Section E).
Q41: Do you agree with the inclusion of the above data elements, specific for on-chain transactions, in both RTS?	The Draft RTS requires various on-chain data to be recorded (set out in Annex I, Table 3) including the DTI of a token - we refer to our response to Q37 in relation to DTIs. ESMA is also proposing to require information about whether the transaction was a deposit or withdrawal. In our view, this data field is not relevant to cryptoasset transactions, as the concept of a "deposit" or "withdrawal" is not commonly used in the cryptoasset market. In particular, where an investor utilises an off-ramps service and therefore swaps their cryptoassets for fiat currency, this is often viewed as a swap of cryptoasset for fiat, rather than a withdrawal. The same view is applicable for on-ramp services and the swap of fiat for cryptoassets.

Q42: Are some of the proposed data elements technology-specific, and not relevant or applicable to other DLTs?	N/A.
Q43 : Do you consider it necessary to add a different timing for the provision of identification codes for orders in the case of CASPs operating a platform which uses only on-chain trading?	N/A.
Q44: Please suggest additional data elements that may be included to properly account for on-chain trading.	N/A.
Q45: Do you find the meaning of the defined terms clear enough? Should the scope be adjusted to encompass or exclude some market practices? Provide concrete examples.	We agree with ESMA's observation that it is unclear what "undertaken" means with respect to the obligation under Article 68(9) of MiCA for a CASP to keep records of "*services, activities, orders and transactions*" every time one of these is "undertaken" by the CASP. Accordingly we support ESMA's proposal to clarify in the draft RTS on record keeping the meaning of "transaction", "undertaking a transaction". However, we would not suggest replicating the definitions of MiFID RTS 22, in particular the definition of "executing a transaction". ESMA in following the approach in RTS 22 has defined "undertaking a transaction" to mean "executing a transaction or transmitting an order", and linked to this, that "executing a transaction" means the: **(a) reception and transmission of orders – we note there that transmitting an order is already covered in the definition of "undertaking a transaction" and therefore is being repeated here);** **(b) execution of orders on behalf of clients;** **(c) exchange of cryptoassets for funds or for other cryptoassets;** **(d) making an investment decision in accordance with a discretionary mandate given by a client; and**

	(e) transfer of cryptoassets to or from accounts Other than sub-paragraph (b), the other sub-paragraphs are not commonly understood as the "execution" of a transaction. This is also the case under MiFID, and financial institutions had to come to grips with the fact that "executing a transaction" under RTS 22 (and for the purposes of transaction reporting) has a specific and wider meaning. This created a lot of confusion for the TradeFi market and contributed to errors and omissions with transaction reporting and record keeping. Therefore, a clearer approach could be to simply define "undertaking a transaction" as covering the activities at (a) to (e) above without the need for the "executing a transaction" definition. This has the effect of capturing the same activities, whilst removing the confusion that may arise as described above. In addition, the meaning of an "account" in paragraph (e) is unclear to us. As ESMA is aware, cryptoassets (key pairs) are held in a wallet. A customer may have multiple accounts with a CASP (for example a spot trading account, and a margin trading account) and the transfer of a cryptoasset from one account to another may not necessarily result in: (a) a change of beneficial or legal ownership of the cryptoassets; or (b) a change in the wallet where the cryptoassets are held. Therefore, we would appreciate further clarification over the scope of paragraph (e).
Q46: Are there other aspects that should be defined, for the purposes of this RTS?	We suggest that ESMA clarifies that the record keeping obligation only relates to transactions which the CASP undertakes, and therefore there is no requirement to look through its client or counterparty and similarly no requirement to provide information in relation to persons up or down the transaction chain.
Q47: Do you anticipate practical issues in the implementation of the proposed approach to	We refer ESMA to our comments at Q46.

reception and transmission of orders?	
Q48 : What transaction information can be retrieved in cases where a CASP execute the order on a third country platform/entity?	We refer ESMA to our comments at Q46
Q49: Do you anticipate problems in retrieving information about the buyer/seller to the transaction?	We refer ESMA to our comments at Q46.
Q50: Do you anticipate practical issues in the implementation of the methods for client identification that are used under MiFIR?	ESMA has proposed that CASPs when recording information about clients, identify those clients via a LEI code or national identifiers as prescribed under MiFIR. With respect to LEIs, we refer ESMA to our comments at Q67.
Q51: Do you anticipate practical issues in the implementation of the short selling flag?	N/A.
Q52: Do you consider that some of the proposed data elements are not applicable/relevant to trading in crypto-assets?	N/A.
Q53: Do you consider that additional data elements for CAPS operating a trading platform are needed to allow NCAs to properly discharge their supervisory duties?	N/A.
Q54: Do you believe that a specific definition of routed orders should be provided as it applies to orders that are routed by the trading platform for crypto-assets to other venues? Should this definition include CASPs operating a platform which uses only on-chain trading?	N/A.
Q55: Do you believe that fill-or kill strategies as referenced in MiFID II apply to trading in	Fill or kill strategies as referenced in MiFID can apply to cryptoasset trading. However, these types of strategies require a certain level of resources and expertise, and

platforms for crypto-assets? Do they apply to partially filled orders?	therefore are utilised almost exclusively by sophisticated and institutional investors via their own order management trading tools. Given this, the majority of cryptoasset trading platforms do not offer these strategies to mass retail investors.
Q56: Do you agree with using messages based on the ISO 20022 methodology for sharing information with competent authorities?	We agree with using messages based on the ISO20022 methodology for sharing information with competent authorities. However, it should not be a mandated requirement as many CASPs are start-ups or SMEs which may not have the resources to comply with these messaging standards. As with our comments relating to other measures under the RTS, we consider that proportionality is very important, and that ESMA should take into account the costs associated with compliance, and where compliance is practicable for certain populations of cryptoasset market participants.

Chapter 7 (Machine readability of white papers and white papers registers)

Q57: Do you agree with the criteria proposed for identifying a relevant machine-readable format for the MiCA white paper and consequently with the proposal to mandate iXBRL as the machine-readable format for MiCA white papers, subject to the outcome of the study referred to in paragraph 239?	We agree with ESMA that machine readable should be interpreted by reference to the definition of that term in the Open Data Directive which is "*machine-readable format' means a file format structured so that software applications can easily identify, recognise and extract specific data, including individual statements of fact, and their internal structure. […]*". We consider it helpful that ESMA has identified iXBRL as a machine-readable format. However, we would welcome giving white paper authors flexibility over the technology they utilise to ensure their white paper is machine readable, and therefore not limited to iXBRL. In addition, we consider that ESMA removes the requirement for the white paper to be human and machine readable in the same 'file' as this is not required by the Level 1 text. Please refer to Annex A, Introduction and Summary, and Sections 2 and 4 for further detail.

Q58: If yes, do you agree that the white paper should be required to be a stand-alone document with a closed taxonomy (i.e., without extensions nor complex filing rules)?	Yes, we agree that the white paper should be required to be a stand-alone document with a closed taxonomy.
Q59: If not, please elaborate your answer and propose alternative solutions that would best meet the criteria identified in section 7.3.	N/A.
Q60: Are you currently preparing white paper documents in a different machine-readable format? If yes, which one?	No, we are not currently preparing white paper documents in a different machine-readable format.
Q61: How different is the white paper mandated by MiCA and further specified in this Consultation Paper from any white paper which you have drawn up or analysed prior to MiCA? Do you think that any additional information that used to be included in white papers prior to MiCA but that is no longer allowed under the relevant provisions of MiCA for the white paper will continue to be made available to investors as marketing communication?	White papers currently in circulation vary in the content and level of detail covered. The white paper requirements mandated by MiCA require not only a standardised approach but also an increased level of detail and granularity to the provisions included. We therefore anticipate additional information also being included in marketing communications. However, we do consider that the requirement to "draw up", "notify", and "publish" a white paper could be applied in a more proportionate manner. In comparison to similar requirements for TradFi, notably the requirements for a prospectus for public offers of securities and for admission to trading of securities, the Prospectus Regulation contains more exemptions and wider exemptions than those under MiCA. In our view, ESMA would consider increasing the thresholds which must be met before the obligation to draw up, notify and publish a white paper is triggered. Please refer to Annex A, Introduction and Summary, and Sections 2 and 4 for further detail.
Q62: Do you agree with ESMA's estimate of the cost of preparing a white paper in iXBRL format? If not, where would you put the estimate of a preparing a white paper in iXBRL format (not considering	ESMA has estimated that it may cost up to €33,000 to prepare a white paper in iXBRL format. We consider this to be a high cost and with little upside given that much of the information mandated to be included within white papers will be free text information which will not benefit from

costs of information sourcing which should be considered as base scenario)?	iXBRL tags (in the way that figures in an annual statement might).
Q63: Do you agree with the proposed template for presenting the information as indicated in the Annex to this CP? We welcome your comments on the proposed fields and values/descriptions to be included in the fields - please provide specific references to the fields which you are commenting in your response and pay specific attention to the areas where additional explanatory description of the information is provided.	We agree with the proposed template for presenting the information in white papers. However, we consider it could be clearer that not all fields are mandatory or applicable to every cryptoasset offer / admission to trading.
Q64: Are there additional data elements in the table of fields that would benefit from further explanatory descriptions to ensure that the information provided by a given issuer/offeror is understandable and comparable to the information provided by other issuer/offeror of the same type of crypto-asset? If yes, please elaborate and provide suggestions.	We consider that additional guidance on all of the data elements would be helpful. In particular, fields "*E35 – Where applicable, information about the costs involved*" and "*E36 – Expenses related to the offer to the public of crypto-assets*" could benefit from a clearer explanation as to whether the cost and expenses relate to those borne by the investor, or the offeror, or the person seeking admission to trading of the cryptoasset. It would also be helpful if ESMA could publish examples of good practice.
Q65 : Would you deem it useful for ESMA to provide an editable template to support preparers with the compliance of the format requirements proposed in the draft ITSs?	Yes, we consider that this would be useful. An editable white paper template would reduce variability and inconsistencies in drafting by different authors and help ensure a uniform approach to white paper disclosures. This would also help investors compare white papers across different cryptoassets.
Q66: Are there any other data elements that you would consider relevant to ensure that investors can properly compare different crypto-asset	The Level 1 text of MiCA details numerous mandatory disclosures which must be contained in white papers, apart from sustainability disclosures which are detailed by ESMA in the Level 2 text.

white papers and NCA can perform their classifications on the basis of harmonised information?	The level of detail and granularity of the content requirements as currently drafted means that additional data elements are not required to be included in white papers.
Q67: Do you agree with ESMA's conclusion that an issuer, an offeror or a person seeking admission to trading of crypto-assets should always be eligible for an LEI? If not, please provide a description of the specific cases	We consider that in many cases, an issuer, offeror, or person seeking admission to trading of cryptoassets would be eligible for an LEI. Entities eligible for an LEI include legal entities and entities without legal personality such as partnerships, associations, and individuals acting in a business capacity. It is unclear to us whether decentralized autonomous organisations will be eligible for LEIs under this definition. Therefore, we consider it prudent that ESMA includes an exemption from the requirement for authors of white papers to obtain an LEI, where they are not eligible for an LEI or where one cannot be obtained despite reasonable commercial efforts. Please refer to Annex A, Introduction and Summary, and Sections 2 and 4 for further detail.
Q68: Do you agree with the proposed metadata elements, also considering the mandatory metadata expected to be mandated in the context of ESAP?	We agree with the proposed metadata elements, other than with respect to including a LEI. We refer ESMA to our comments at Q67.
Q69: Do you have any feedback in particular with regards to the metadata on the "industry sector of the economic activities" and its relevance for the ESAP search function?	N/A.

Chapter 8: Technical means for appropriate public disclosure of inside information

Q70: Do you agree with the listed definitions? Would you consider useful to clarify any other term used in the ITS?	The ITS applies to issuers, offerors and persons seeking admission to trading for cryptoassets. We consider that the ITS could provide further detail on the role of an "offeror" (for example in a recital) as the Level 1 text simply refers to

	offerors as "*natural or legal person, or other undertaking, or the issuer, who offers crypto-assets to the public*". As currently drafted, an "offeror" may be interpreted to capture operators of trading platforms, and in particular centralised cryptoasset exchanges, which work closely with token issuers to assist them in their compliance with applicable regulatory requirements, security measures related to a cryptoasset, in the refinement of the cryptoasset's tokenomics etc. The trading platform's role in this regard is not one where it is making an offer of crypto-assets to the public and accordingly they should not be considered offerors. In comparison with offers in TradFi, issuers generally enter into an arrangement with a financial institution for them to carry out the offer to the public. The financial institution would make communications to persons and present information on the terms of the offer and the securities to be offered, and therefore intermediate between the issuer and the public. However, in the scenario described in the paragraph above, the operator of a trading platform does not take on a public facing role, and is more akin to a corporate finance advisor, and the token issuer is the offeror.
Q71: Do you agree with the proposed requirements for publication on the website of the issuer, offeror or person seeking admission to trading? Would you consider necessary any additional requirements regarding the publication on the website?	ESMA explains that the purpose of publishing inside information on the website of the issuer, offeror or person seeking admission to trading is to ensure that there is a reliable source which third parties can pick up the information and further spread it, and permits publications to check the information. We note that not all issuers, offerors, and persons seeking admission trading will have a website, and therefore may not be able to publish the inside information in this way. In addition, in TradFi, listed companies generally disclose inside information via a regulatory news service ("RNS") which is a part of a stock exchange. We understand cryptoasset exchanges do not currently offer a RNS system. However, we anticipate that such services could be offered by cryptoasset exchanges in future. We would therefore welcome ESMA giving participants more flexibility and allow them to RNS-like services where available.

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Q72: In your view, is there any obstacle for the website of the relevant parties to allow for specific alerts?	We refer ESMA to our comments at Q71.
Q73: In your view, what are the media most relied upon by the public to collect information on crypto-assets? In case you are an issuer, offeror or person seeking admission to trading, please specify/add which media you would normally use to communicate with investors and the reasons supporting your choice.	Cryptoasset market participants rely on a variety of sources to collect information on cryptoassets. In our view, online news blogs and forums (e.g. Reddit) is a prevalent news source. Information through friends and family 'word-of-mouth' is another popular source of information. We do not consider that mass (retail) investors often utilise professional services to obtain information on cryptoassets such as financial advisors.
Q74: Should a social media or a web-based platform be media reasonably relied upon by the public, what are the risks that you see when using them to achieve dissemination of inside information in relation to crypto assets? Should the dissemination rather take	N/A
Q75: Please comment the proposed means for dissemination of inside information? Please motivate your answer by indicating why the means they are/are not valuable tools for dissemination purposes.	N/A
Q76: Would you add any means of communications for the persons subject to the disclosure obligation to consider when disseminating inside information? Please motivate your answer.	N/A
Q77: Do you agree with the technical means for delaying the public disclosure of inside information as described?	Yes we agree with the technical means for delaying the public disclosure of inside information.

	The requirements regarding the delayed disclosure of inside information in the draft RTS are borrowed from, and nearly identical to, those which currently apply to TradFi under MiFID and MAR. Accordingly these requirements are currently well understood by TradFi participants, their advisors, and therefore can be leveraged into the cryptoasset market.