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EFRAG Research project on Crypto-assets Outreach findings

Purpose of this session

- 1 The objective of this session is to provide EFRAG TEG members with a summary of the outreach conducted by the EFRAG Secretariat on EFRAG's Research project on the accounting for crypto-assets (hereafter referred to as EFRAG project).

Objective and approach to conducting outreach

- 2 The outreach aimed to corroborate the desktop research conducted in the EFRAG project and reflected in past papers presented to the EFRAG TEG ([see ICOs paper](#) and holders [paper](#)). The outreach aimed to enhance the EFRAG project team's analysis of the following key focus areas:
 - (a) Feedback on crypto-assets accounting guidance applied in different jurisdictions and/or perspectives on appropriate accounting approaches;
 - (b) Any data that could illustrate the significance or otherwise of crypto-assets issuance, holding and related services activities;
 - (c) Identification of crypto-assets characteristics, rights, obligations and contractual arrangements and examples of crypto-assets with economic characteristics that may pose accounting challenges;
 - (d) Feedback on crypto-assets related regulation, investor and consumer protection applied in different jurisdictions;
 - (e) Crypto-assets market developments and trends to help assess whether the next generation of crypto-assets may have features that make them unique assets deserving of a new asset category (i.e. whether there could be development of crypto-assets and other digital assets that might not be addressed under existing IFRS Standards and/or national GAAP asset categories-intangibles, inventory, financial instruments, or prepayment assets).
- 3 In September 2019, EFRAG issued a public call for crypto-assets experts to participate in a one-hour outreach interview (hereafter referred to as respondents).
- 4 To allow for an effective and structured interview process, the EFRAG Secretariat developed a questionnaire which was shared with and approved by EFRAG TEG. The questionnaire was divided into the areas listed in paragraph 2. It was intended to help respondents to identify and focus on the questions that they were well suited to address.

- 5 Respondents were not required to answer all the questions but only those that they could readily address from their existing knowledge and where they did not need to undertake research and data gathering efforts.

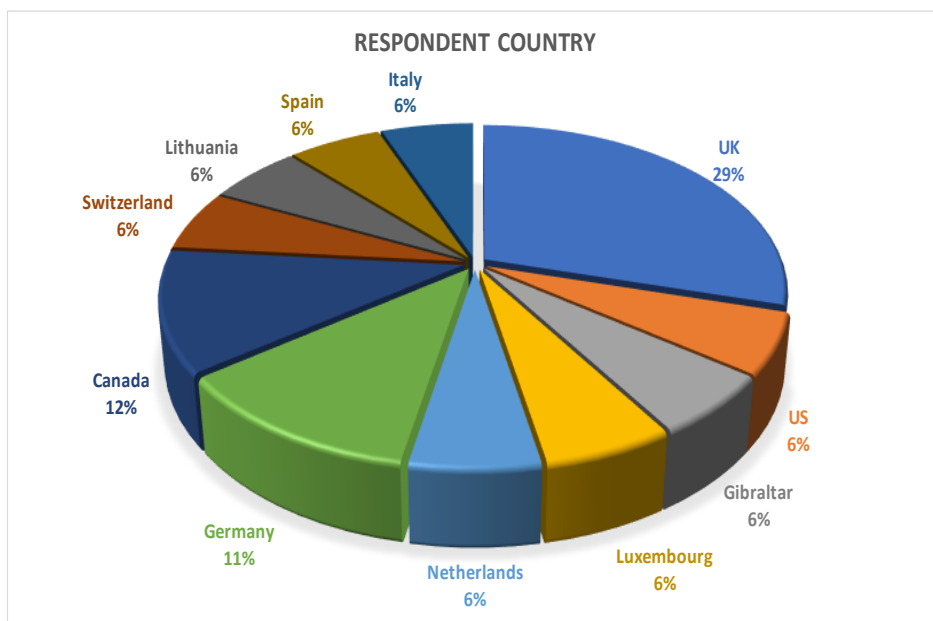
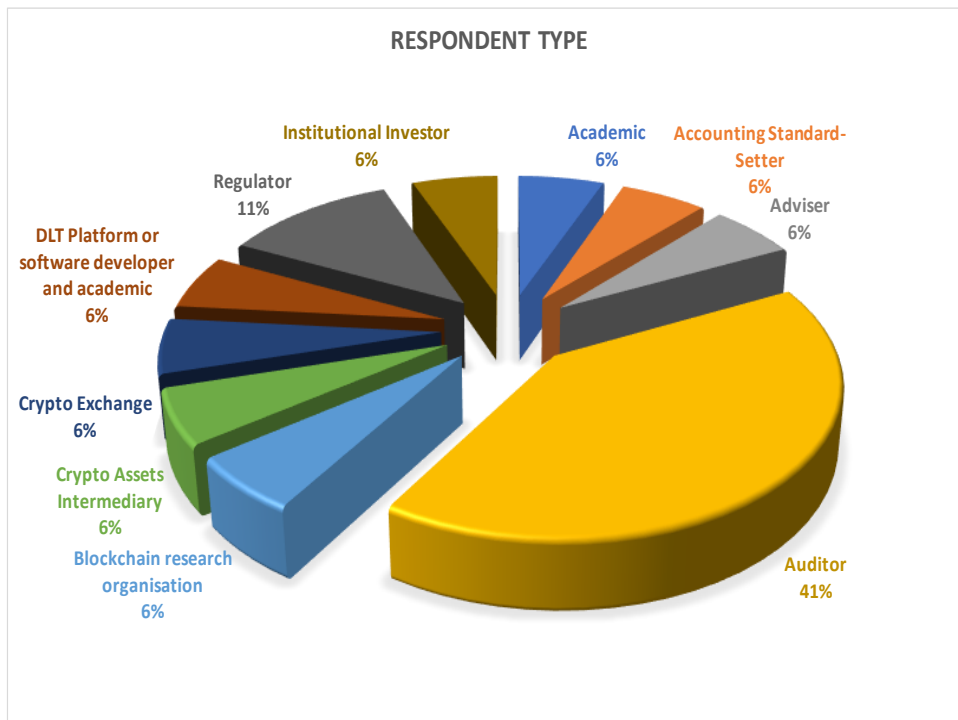
Executive summary

- 6 To a large extent, the outreach was a success as it both corroborated the team Desktop research findings and analysis included in the May and September 2019 issues' papers presented to EFRAG TEG and provided additional insights on key aspects of the EFRAG project. It also reflects a breadth of perspectives from 17 experts with diverse functional backgrounds and type of organisations and from 11 different countries including some leading markets.
- 7 The outreach feedback conveyed that the European Economic Area (EEA) countries considered to be "*crypto-asset friendly*" included Luxembourg, Switzerland, Gibraltar, Malta, and the UK (including the British Virgin Islands).
- 8 However, the outreach feedback only reflects views of the 17 experts from 11 countries who responded to the call for participation. It does not include other sought-after views including from legal professionals, crypto-asset rating agencies and large jurisdiction regulators who did not participate in the outreach and who might have additional insights on: crypto-assets specific rights and obligations; and the nature of prevailing or forthcoming regulation in some key markets. The outreach might also have benefited from participation by a greater number of crypto-asset platform developers and issuers. They may have been able to highlight more specific examples of crypto-assets with unique economic characteristics and therefore potentially pose accounting challenges.
- 9 Below is a high-level summary of findings across the aspects covered in the outreach, which is later followed by a more detailed description of the feedback.
- 10 *Significance of crypto-assets:* There was a noted decline in Initial Coin Offering (ICO) based issuance but respondents had a view that this was not necessarily indicative of a permanent decline. On a global basis, only a small number of large IFRS reporting companies are engaged in crypto-assets and related activities. In addition it is unusual for big financial sector companies to hold crypto-assets. Some companies hold very immaterial quantities of such assets and apply a prudent view to engaging in these activities. Mining activities are insignificant in the EU.
- 11 *Accounting guidance:* The May and September 2019 issues' papers presented to EFRAG TEG included an analysis of both the IFRS Interpretation Committee (IFRS IC) clarification on accounting for cryptocurrencies and national standard setters (NSS) guidance on the accounting for issuers and holders of crypto-assets. It was observed that there is a variation in categorisation of crypto-assets across existing guidance:
- (a) unique asset category as required by the Accounting Standards Board of Japan;
 - (b) intangible asset;
 - (c) inventory;
 - (d) financial asset (including long-term and short term investment); and
 - (e) prepayment assets.
- 12 There is also variation in measurement approaches including:
- (a) FVTPL if there is active market (e.g. Japan);
 - (b) measurement based on intention of acquirer (e.g. France);

- (c) lower of cost or net realisable value when crypto-assets are recognised as inventories;
 - (d) cost or revaluation approach for subsequent measurement of crypto-assets recognised as intangible assets.
- 13 Some outreach respondents had feedback on guidance in their jurisdictions or views on the appropriate accounting treatment for holders. These respondents expressed mixed views that fell within the approaches of the IFRS IC clarification and existing NSS guidance. There was feedback on considerations for determining whether holders of crypto-assets on behalf of others require balance sheet recognition of these. There was also feedback on several considerations for the accounting for issuers of crypto-assets (i.e. whether they are to be recognised as equity, liabilities, revenue or under another category).
- 14 *Crypto-assets rights, obligations and contractual arrangements:* As noted earlier, identifying rights and obligations helps to assess whether there are any implications for the accounting treatment of crypto-assets. The outreach feedback highlighted challenges in identifying the full range of crypto-assets related rights and obligations due to poor documentation and inadequate regulation. It was also challenging to obtain from the outreach respondents' specific examples of crypto-assets where accounting challenges may arise due to their economic characteristics. This aspect of the research is being further addressed by an ongoing consultancy support assignment and through an extended selective outreach to identified regulatory bodies.
- 15 *Crypto-assets related regulation:* The outreach confirmed the variation and need for enhancement in regulation across jurisdictions that was also noted in the May and September 2019 issues' papers presented to TEG. Several respondents anticipated significant developments in regulation in their jurisdictions in the near term.
- 16 *Market development and trends:* The outreach feedback on market development and trends was fairly limited with mixed views on possibilities of greater uptake of crypto-assets in their jurisdictions but with consensus that greater institutional uptake would depend on enhancements to regulation/oversight, scalability and processing speeds of crypto-asset transactions. It is generally challenging to get a detailed insightful forward-looking outlook for this fast-moving and innovative topic. There were limited insights from the outreach on how enhancements in technology might influence innovation of the next generation of crypto-assets or whether the next generation of crypto-assets would have features that would necessitate their consideration as a unique type of assets under IFRS Standards and NSS guidance.

Respondents profile

- 17 The EFRAG Secretariat interviewed 17 respondents, from different backgrounds and jurisdictions, during the month of October 2019. A list of respondents is provided in Appendix 1. The paragraphs below provide a breakdown of respondent by type and country.



Detailed findings

- 18 The findings are presented in the following order
- (a) crypto-assets accounting guidance;
 - (b) crypto-assets issuance, holding and related services activities;
 - (c) crypto-assets characteristics, rights, obligations and contractual arrangements;
 - (d) crypto-assets regulation, investor and consumer protection;
 - (e) crypto-assets market developments and trends.

Crypto-assets accounting guidance or perspectives on appropriate approaches

- 19 Respondents acknowledged the lack of comprehensive guidance under IFRS Standards, noting that the IFRS Interpretations Committee had not gone beyond crypto-currencies in its agenda decision published in June 2019.
- 20 One auditor respondent considered that it would be necessary to refer to the scope of individual IFRS Standards and IAS 8 *Accounting Policies, Changes in Accounting Estimates and Errors* and to the extent possible apply the general principles of accounting to crypto-assets.

Accounting by holders

- 21 One of the respondents referred to the PwC publication *Cryptographic assets and related transactions: accounting considerations under IFRS* (PwC Publication) that sets out factors to be considered in the accounting for holders of crypto-assets, holding on behalf of others, valuation and other accounting matters. This respondent also noted that in Canada the AcSB had issued non-authoritative guidance on the accounting for holdings of cryptocurrencies under IFRS and the Canadian Accounting Standards for Private Enterprises financial reporting frameworks¹.
- 22 Respondents generally confirmed that the accounting for holders (on own behalf and/or on behalf of others) and by issuers would depend on the rights and obligations set out in a contract between the respective parties or the whitepaper (if any) and whether these rights and obligations are contractually enforceable.

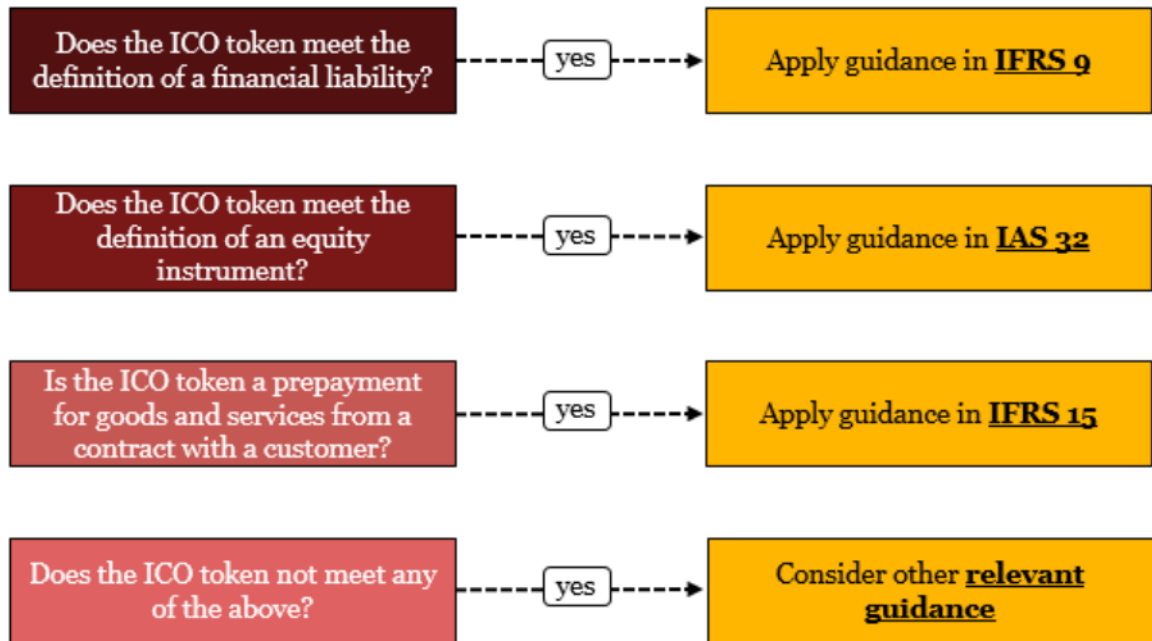
Accounting by holders on behalf of others

- 23 Regarding custodial services (holding on behalf of others) respondents indicated several factors that would need to be considered in determining whether the custodial holding should be on or off-balance sheet. For example:
- (a) Whether the custodian has the right (explicit or implicit) to 'borrow' the crypto-assets to use for its own purposes;
 - (b) The rights of customers to crypto-assets held on their behalf if the entity is liquidated;
 - (c) The level of segregation of the customers' crypto-assets from the assets of others including the assets of the custodian, including traceability to a dedicated blockchain address, the use of cold or hot wallets and who held the 'private key'.

Accounting by issuers

- 24 One respondent in Canada referred to the below framework in the PwC publication, that lays out the accounting treatment that may be applicable for ICO issuers:

¹ [Introduction to accounting for cryptocurrencies under IFRS](#) and [Accounting for cryptocurrencies under accounting standards for private enterprises](#).



25 An auditor respondent based in Germany informed that there have been cases of crypto-bond issuances by German financial institutions and insurance companies. These tokens were classified as loans, not as securities, and were accounted for at amortised cost.

Valuation considerations

26 Respondents noted a lack of standardised valuation of ICO tokens and tokens more generally even when exchange listed.

27 Respondents shared different views on whether there was currently an '*IFRS 13 Fair Value Measurement*' active market for crypto-assets even if they were traded in an exchange(s).

28 One auditor respondent considered that there was no active market under the definition of IFRS 13 for crypto-assets. In the view of this respondent, the asset needs to be exchangeable in its current form for fiat currency only (not for other crypto-assets). If it's exchanged for other crypto-assets, which is generally the case, it means the asset has changed and is not in a 'current form' any longer.

29 One academic crypto-asset researcher in the US was aware of at least two common ways to value crypto-assets:

- (a) Burniske model – values tokens in similar manner to currencies and is often used to value tokens issued in an ICO.
- (b) Secondary market approach – reference to the market cap for similar tokens.

30 The above respondent considered that for some tokens, like the Binance Coin, a cash flow model could be used based on transaction volume and fees charged. However, this respondent. Overall, this respondent observed that there is diversity in valuation approaches and there was no single approach for token valuation.

Significance of crypto-assets issuance, holding and related services

Issuance – ICO's and similar initial offerings

- 31 Most respondents stated that there has been a substantial decline in ICO activity in 2019, within and outside of the EU. This is mainly because of the increased regulatory scrutiny of ICOs and a move towards Securitised Token Offerings (STO's) subject to securities regulations.
- 32 Some respondents indicated a shift in the last year or so from ICO's to Initial Exchange Offerings (IEO's)². IEO's are essentially ICO's but in the sense that they are more 'regulated' as reviews are conducted by the exchange before a token is listed. Several respondents provided examples of ICO's and IEO's they are familiar with.
- 33 Despite the decrease in ICO's, many respondents did not consider the decline in ICO's to be permanent. However, most respondents highlighted that for ICO's and similar offerings to evolve, there is a need for changes in the regulation and oversight covering ICO's and crypto-assets more generally, particularly in the EU where regulation on crypto-asset activities remains fragmented (there is no single set of regulation in the EU) and in many cases needs enhancement as highlighted below in the feedback on regulation.
- 34 As noted in the feedback on regulation, some respondents anticipate regulatory developments/changes in the near term.

Holding of crypto-assets

- 35 On a global basis, only a small number of large IFRS reporting companies are engaged in crypto-assets and related activities and that it is unusual for big financial sector companies to hold crypto-assets. Some companies hold very immaterial quantities of such assets and apply a prudent view to engaging in these activities.
- 36 Respondents considered that crypto-assets are generally held by retail customers, not institutional investors. However, one respondent highlighted that in Canada the number of institutional investors interested in crypto-assets is increasing (although currently there is only limited capital allocation to cryptos).

Exchanges and custodial services

- 37 Several respondents noted that some large financial institutions offer custodial services to broaden the range of services in demand from their customers.
- 38 Financial institutions holding crypto-assets on behalf of customers have different types of safeguards to ensure customer protection. The types of safeguards depend on the applicable regulation. For example, in Switzerland, custodial services are regulated and special client protect measures are in place whereby 'safekeeping' legal requirements apply in which the customer will receive the equivalent amount of capital invested plus (minus) the increase (decrease) in value, but not the crypto-assets *per se* unless in the case of bankruptcy.
- 39 One respondent explained that the Canadian Securities Exchange, an alternative stock exchange, launched a blockchain-based platform for companies to issue STO's, which are subject to all applicable Canadian securities regulations. The

² IEO's is a new approach to crypto issuance that is slowly catching the interest of ICOs and traders across the world. In an IEO, tokens directly on an exchange. This new system provides a different type of exchange where the exchange acts as middleman between projects and contributors.

development of STO platforms may explain the noted recent decline in ICO activity and a shift towards STOs.

- 40 One key issue regarding custodial services is who has control and legal ownership over the crypto-assets and these do not always fall with the exchange. Another issue noted by several respondents with implications for client protection and legal ownership determination is whether customers' crypto-assets are held 'separately' for each customer or commingled with those of other customers. In some jurisdictions (such as Switzerland) this was a concern for clients' asset protection and other legal ownership issues.

Mining activities

- 41 All respondents noted that crypto-asset mining was not a significant activity in the EU due to the high electricity costs associated with proof of work mining approaches. Mining generally occurred in China, Canada and Iceland. One respondent noted that mining had been popular in 2018 but had become less interesting as a result of the crash of the crypto-asset prices that made it unprofitable to undertake mining activities. A few respondents indicated that there is a shift from the energy-intensive proof of work mining to proof of stake approaches for validating DLT transactions.

Crypto-assets characteristics, rights, obligations and contractual arrangements

- 42 Understanding the characteristics, rights, obligations and contractual arrangements applicable to crypto-assets was considered by all respondents as being a significant issue. This was mainly because of the lack of applicable regulation governing token issuance and related services and credible information about the token being sold, the rights of the buyer and the obligations of the seller. Many respondents said that the key issue with crypto-assets is determining the obligations of the issuer.
- 43 Some respondents noted that ICO issuers will typically seek to operate in unregulated markets. The lack of regulation and legally enforceable rights for the holders has left many ICOs and secondary market investors with a lack of clarity of what they are purchasing and what legal rights they hold, if any.
- 44 Respondents generally considered that utility tokens, by definition, have rights – for example allow the holder to use a platform. However, there is no legally enforceable obligation from the platform side – for example Ethereum, as the Ethereum association does not have an obligation to maintain the Ethereum platform.
- 45 A respondent gave feedback on Simplified Agreement for Future Tokens (SAFT³), which are agreements that represent their holders rights to future tokens. SAFTs relate to pre-functional tokens³, are only available in some jurisdictions and considered as equivalent to issued securities. SAFTs bifurcate the securities and token components of a transaction while preserving the many benefits associated with ICOs” and keeping the utility component (the “functional token” not as likely to be a security) separate from the security-like component (the “non-functional token”).

White papers

- 46 Respondents considered that the white paper (typically issued when an ICO is launched and updated along the project-cycle of the respective token) is the main source of ICO information and information about the crypto-asset and its purpose.

³ Direct-token pre-sales' or pre-functional tokens are tokens that are transferable via a protocol on the DLT network, but cannot yet offer utility on the network. Effectively, these are tokens issued before the network is launched and will typically convert to utility tokens once the network is active.

- 47 However, most respondents highlighted that in most the white paper was not a legally binding document. In many cases the whitepapers do not provide a robust understanding of what is being sold and the information provided was generally not of a high quality.

Crypto-assets regulation, investor and consumer protection

- 48 Many respondents considered that regulation would generate investor confidence and incentive crypto-asset activities and the related technology. However, some respondents thought that regulation should be balanced (and not over-strict) in order to allow for market and technology developments.

The EU

- 49 Respondents generally observed that in the EU regulation on activities related to crypto-asset remained fragmented (there is no single set of regulation in the EU) and the lightest in terms of its decisions on crypto-assets.
- 50 The outreach highlighted that in some countries, crypto-asset and related services were subject to regulation – for example creation and marketing of crypto-assets (including ICO's), exchanges, custodial services and retail trading were regulated. However, it seems that only a few countries had regulation in place (examples were: France, Luxembourg, Switzerland, and the UK). The outreach also highlighted that countries had different regulation in place and regulated different aspects of crypto-assets and related services.
- 51 Some respondents anticipated regulatory changes in the near term – for example in Germany crypto-assets custodial services will shortly be regulated. One respondent considered that crypto-exchanges will be regulated by EU regulation in the near term.
- 52 Some EU respondents referred to the work done by the European Securities Markets Authority (ESMA) and the advice it had published on ICO's and crypto-assets noting the need for a common EU-wide approach on crypto-assets to ensure investor protection.⁴
- 53 One UK-based respondent observed that if a token 'looks like a security', then it is deemed to be a security by the UK Financial Conduct Authority (FCA). This assertion is consistent with the UK FCA guidance⁵ issued in July.

The US

- 54 The outreach highlighted that the US is highly regulated in the sense that the Securities and Exchange Commission (SEC) has been either penalising and banning ICO's and similar projects or considering them to be STO's and therefore subject to the Securities Act and its requirements. Compared to many other jurisdictions, there is greater clarity in the US on when a token is considered a security and a higher threshold for any issued token not to be considered as a security.
- 55 Two respondents based in the US observed that ICOs are subject to high scrutiny in the US, given that when they had previously been issued with limited oversight; people typically invested in the future success of non-existent projects and without sufficient information to make informed investment decisions.

⁴ <https://www.esma.europa.eu/press-news/esma-news/crypto-assets-need-common-eu-wide-approach-ensure-investor-protection>

⁵ UK Financial Conduct Authority, July 2019, Guidance on crypto-assets, Feedback and Final Guidance to CP 19/3 <https://www.fca.org.uk/publication/policy/ps19-22.pdf>

Canada

56 A respondent noted that in Canada if an ICO is done without an agreement of the securities commission it was considered a violation of the law. The respondent highlighted that the Canadian Securities Administrators (CSA) has developed a regulatory sandbox specifically for Fintech companies to stay in compliance. The regulatory sandbox allows a fast track for registration or exemption depending on the circumstances. The regulatory sandbox enables a flexible process for complying with the current regulations. An ICO would be subject to securities regulation if it involves:

- (a) an investment of money
- (b) in a common enterprise
- (c) an expectation of profit to come significantly from the efforts of others

57 A respondent cited examples of general misconduct in crypto-assets activities highlighting the need for a more balanced regulatory environment, not only to combat the misconduct but also to allow the market to benefit from the growth in crypto-assets related technologies:

Crypto-assets market developments and trends

58 Respondents considered that crypto-assets are at an early stage of development and it was therefore hard to tell how the technology and the market would involve.

Increased adoption and scalability potential

59 There was a general view that market developments in crypto-assets would highly depend on regulatory developments including stronger and more reliable customer and investor protection. As noted in the feedback related to regulation, respondents anticipated important regulatory developments in the near future.

60 There was mixed feedback from respondents in different jurisdictions about the current and potential acceptance of crypto-assets as a means of payment for goods and services, with some jurisdiction respondents (e.g. Italy) being highly sceptical about the need for a payment system in crypto-assets. Respondent from others countries noted the acceptance of them as a means of payment albeit their not being considered as legal tender (e.g. Canada). Limited acceptability is influenced by the earlier noted need for enhancement in regulation and consumer protection regimes. Other respondents also raised the limited scalability and relatively low processing speed of crypto-asset transactions as being an impediment to their greater uptake.

61 Some respondents observed that for stable coins (a less volatile form of cryptocurrency) to be successful, it would need to be launched and controlled by a central authority such as a Central Bank. These respondents considered that centralised control was a necessary feature for crypto-assets to be both trusted and scalable and that multinationals might also be considering launching their own digital currency to facilitate transactions within their worldwide operations. However, some respondents thought that central bank issuance or private companies permissioned network based crypto-assets would be inconsistent with the 'decentralised control' objective that motivated crypto-assets innovation in the first place.

Market development- valuation and price discovery capacity

62 Respondents noted a lack of standardised valuation methods for tokens (including ICO and secondary market tokens). Many respondents considered that normal valuation techniques did not work to value crypto-assets. Valuation tended to be driven by market speculation or what some term 'fear of missing out' factors used in sales and promotional techniques such as capped funding and fixed price subscription.

- 63 Compared to tokens already listed on an exchange, ICO token valuation was even more difficult as they are typically issued at development stage or even pre-development stage before the 'product' was developed and before a market for the 'product' had been established. Furthermore, many tokens have a hybrid nature, for example Ether (it can serve as a utility token and a currency/means of exchange) which brings further complexity with valuation.

Appendix 1 – List of respondents

	Name of respondent	Type	Country
1	Gibraltar Financial Services Commission	Regulator	Gibraltar
2	Ex-Chief Risk Officer of Bitstamp Group	Crypto Exchange	Luxembourg
3	E&Y	Auditor	Netherlands
4	KPMG	Auditor	UK
5	Deloitte	Auditor	Germany
6	University of Sussex Business School	Academic	UK
7	Eight Roads	Institutional Investor	UK
8	MNP - audit firm	Auditor	Canada
9	Grant Thornton	Auditor	UK
10	KPMG	Auditor	Switzerland
11	D-fine	Adviser	Germany
12	Bank of Lithuania	Regulator	Lithuania
13	PwC	Auditor	UK
14	Cecabank	Crypto Assets Intermediary	Spain
15	Smith and Crown	Blockchain research organisation	US
16	AcSB	Accounting Standard-Setter	Canada
17	Franceschetti Studio	DLT Platform or software developer and academic	Italy

Glossary of terms

The below glossary of terms is related to a selection of terms related to crypto-assets.

TERM	DESCRIPTION
Airdrops	Issuance of tokens for free by platform developers/ICOs issuers. It is one of the ways that crypto-assets get into circulation.
Blockchain	One type of distributed ledger technology (DLT) in which details of transactions and smart contracts are recorded on the ledger in the form of blocks of information. Transactions result in new blocks being added to the block chain via a computerised process (i.e. cryptographic process).
Blockchain token economy companies	<p>Companies business models that entail participation or blockchain-based decentralised ecosystems</p> <p>A blockchain-based token economy has emerged, driven by the explosive growth in the value and variety of crypto-assets</p>
Crypto-asset platform developer	Coin developers on own platform (e.g. Bitcoin, Ethereum)
Cryptography/Cryptographic	The conversion of data into private code using encryption algorithms, typically for transmission over a public network.
Distributed ledger technology (DLT)	Technology that allowed a repeated digital copy of the ledger of transactions. DLT is built upon public-key cryptography (publicly known and essential for identification) and confidential private-keys, which are used for authentication and encryption during transactions (i.e. transfer of funds). Block chain is one type of DLT but there are others (DAG, Tempo).
Distributed consensus mechanism	The process of network participants within a DLT environment of agreeing on one state or result in the distributed ledger.
Crypto-asset coin versus token	The difference between a coin and token is that a coin is issued on the crypto-asset developer's platform (e.g. Bitcoin, Ethereum) whereas a token can be issued on other platform

Fork	<p>A fork is a change to the DLT protocol that can arise for several reasons (e.g. security, or if part of the community wants to take the project in a different direction). Hard fork creates two versions of the protocol and an additional alternative crypto-asset. Examples of forks in the Bitcoin DLT are the creation of Bitcoin ALL, Bitcoin Cash Plus, Bitcoin Smart, Bitcoin Interest, Quantum Bitcoin, Bitcoin Lite, Bitcoin Ore, Bitcoin Private, Bitcoin Atom, Bitcoin Pizza and Bitcoin Gold.</p> <p>A soft fork is also an update to the blockchain protocol; however, one version (assumed to be the updated or new version) is supposed to be adopted by the majority and will become the dominant one.</p>
Initial coins offerings (ICOs)	<p>An operation through which companies, developers raise capital for their projects in exchange for crypto-assets. It is one of the key mechanisms for the supply or issuance of crypto-assets.</p>
Mining-Proof of work (PoW)	<p>Mining-is a process of establishing consensus to verify and confirm transactions within a DLT environment. It occurs while updating new transactions on the distributed ledger. PoW requires a cryptographic process and is an energy and computational power intensive process that tends to occur in jurisdictions with cheap electricity. PoW validation is open to all participants in the network.</p>
Proof of stake (PoS)	<p>PoS is a form of consensus mechanism within a DLT environment that requests network participants to demonstrate ownership of a pre-defined crypto-asset. Participants can mine or validate block transactions according to their ownership of crypto-assets. Hence, only participants with ownership stakes in the network can undertake PoS.</p>
Permissioned DLT	<p>A DLT network in which only those parties that meet certain requirements are entitled to participate in the validation and consensus process.</p>
Permissionless DLT	<p>A DLT network in which virtually anyone can become a participant in the validation and consensus process. Common for cryptocurrencies (e.g. Bitcoin)</p>
Private key	<p>Required to send crypto-assets. Anyone with the key has sole access to the funds.</p>

Public key	Public key is the identifier that allows receipt of transferred crypto-assets.
Pre-functional tokens	Direct-token pre-sales' or pre-functional tokens are tokens that are transferable via a protocol on the DLT network, but cannot yet offer utility on the network. Effectively, these are tokens issued before the network is launched and will typically convert to utility tokens once the network is active
Simplified agreements for future tokens (SAFTs)	<p>SAFTs are agreements that represent their holders rights to future tokens. SAFTs are only available in some jurisdictions (e.g. US) and are typically classified as securities.</p> <p>SAFTs work by “bifurcating the securities and token components of a transaction while preserving the many benefits associated with ICOs” and keeping the utility component (the “functional token” not as likely to be a security) separate from the security-like component (the “non-functional token”</p>
Smart contracts	In addition to crypto-assets, some blockchain platforms also support smart contracts. The most prominent smart contract is Ethereum.
Tokens	<p>The below is are some applied categorisation of tokens</p> <ul style="list-style-type: none"> • <i>Cryptocurrencies (coins and payment or exchange tokens)</i> • <i>E-money tokens (proposed by the UK FCA but not yet a widely applied categorisation)</i> • <i>Security tokens-</i> Tokens with specific rights and obligations similar to specified investments (equity, debt, unit investment) • <i>Utility tokens-</i> Tokens that can confer a variety of network-associated rights including granting holders access to a current or prospective product or service • <i>Other (hybrid tokens and pre-functional tokens)</i>
Wallet provider (Hot wallet and cold wallet)	A firm that offers storage services to holders of crypto-assets and these could be online (hot wallet) or offline (cold storage).