Frequently Asked Questions on Financial Instruments based on Distributed Ledger Technology

CONTENTS

GLOSSARY OF TERMS

- **"Trading venues"**: regulated markets, multilateral trading facilities, and organised trading facilities, as defined in Article 42 of Law 6/2023, of 17 March, on Securities Markets and Investment Services.

- **"CNMV"**: Comisión Nacional del Mercado de Valores (Spain's National Securities Market Commission).

- **"Smart contracts"**: programmes stored in networks based on distributed ledger technology ("DLT") that are executed when predetermined conditions are met.

- *"Issuance smart contracts"*: those used for the issuance of crypto-assets, including DLT-based financial instruments.

- **"CSDR"**: Regulation (EU) No 909/2014 of the European Parliament and of the Council of 23 July 2014 on improving securities settlement in the European Union and on central securities depositories, amending Directives 98/26/EC and 2014/65/EU and Regulation (EU) No 236/2012.

- **"EMIR"**: Regulation (EU) No 648/2012 of the European Parliament and of the Council of 4 July 2012 on over-the-counter derivatives, central counterparties, and trade repositories.

- **"ESMA"**: European Securities and Markets Authority.

- **"Electronic money token (e-money token)"**: a type of crypto-asset regulated under MiCAR that, in order to maintain a stable value, is referenced to the value of an official currency.

- **"Asset-referenced token"**: a type of crypto-asset regulated under MiCAR that is not an e-money token and is intended to maintain a stable value referenced to another asset or right, or a combination of both, including one or more official currencies.

- **"Gas"**: a unit of measurement that enables the operation of all types of actions within a DLT-based network. This element is used to quantify the cost of the work of any transaction, operation or smart contract performed.

- **"DLT-based financial instruments"**: financial instruments issued, recorded, transferred or stored using distributed ledger technology or other similar technologies to support those actions.

- **"DLT-based market infrastructures"**: the following market infrastructures authorised by the CNMV in accordance with the Pilot Regime Regulation: DLT-based multilateral trading facilities; DLT-based settlement systems; and DLT-based trading and settlement systems.

- **"Civil Procedure Act"**: Civil Procedure Act 1/2000 of 7 January 2000 ("Ley de Enjuiciamiento Civil").

- **"Collective Investment Undertakings Act"**: Collective Investment Undertakings Act 35/2003, of 4 November ("Ley de Instituciones de Inversión Colectiva").

- **"Corporate Enterprises Act"**: Royal Legislative Decree 1/2010, of 2 July, approving the recast text of the Corporate Enterprises Act ("Ley de Sociedades de Capital").

- **"LMVSI** Spanish acronym of Law 6/2023, of 17 March, on Securities Markets and Investment Services ("Ley de los Mercados de Valores y de los Servicios de Inversión").

- **"MiCAR"**: Regulation (EU) 2023/1114 of the European Parliament and of the Council of 31 May 2023 on crypto-asset markets and amending Regulations (EU) No 1093/2010 and (EU) No 1095/2010 and Directives 2013/36/EU and (EU) 2019/1937.

- **"MiFID II"**: Directive 2014/65/EU of the European Parliament and of the Council of 15 May 2014 on markets in financial instruments and amending Directive 2002/92/EC and Directive 2011/61/EU.

- **"MIFIR"**: Regulation (EU) No 600/2014 of the European Parliament and of the Council of 15 May 2014 on markets in financial instruments and amending Regulation (EU) No 648/2012.

- **"Royal Decree 814/2023"**: Royal Decree 814/2023 of 8 November on financial instruments, admission to trading, registration of transferable securities and market infrastructures.

- **"Royal Decree 815/2023"**: Royal Decree 815/2023 of 8 November, implementing Law 6/2023 of 17 March on Securities Markets and Investment Services Act, in relation to the official registers of the National Securities Markets Commission, cooperation with other authorities and supervision of investment services firms.

- **"Pilot Regime Regulation**: Regulation (EU) 2022/858 of the European Parliament and of the Council of 30 May 2022 on a pilot scheme for market infrastructures based on decentralised ledger technology and amending Regulations (EU) No 600/2014 and (EU) No 909/2014 and Directive 2014/65/EU.

- "**Whitelist**": list of addresses pre-validated in accordance with certain rules, for subscription, purchase or other rights to crypto-assets, including DLT-based financial instruments.

1. What is Distributed Ledger Technology or DLT?

As defined in MiCAR Article 3.1, Distributed Ledger Technology (DLT) is "a technology that enables the operation and use of distributed ledgers," where distributed ledgers are defined as "information repository that keeps records of transactions and that is shared across, and synchronised between, a set of DLT network nodes using a consensus mechanism".

Consensus mechanisms are the "rules and procedures by which an agreement is reached, among DLT network nodes, that a transaction is validated".

2. What is a crypto-asset?

According to Article 3.1.5 of **MiCAR**, a crypto-asset is defined as "a digital representation of a value or of a right that is able to be transferred and stored electronically using distributed ledger technology or similar technology".

3. What are financial instruments based on distributed ledger technology or DLT-based financial instruments?

There is no definition of a financial instrument in EU or Spanish law. However, in transposition of MiFID II, Articles **2 of the LMVSI and 3 of Royal Decree 814/2023** establish a list of different categories of financial instruments. One of these categories of financial instruments is **transferable securities**, which are classes of securities that are capable of generalised and impersonal trading in financial and capital markets, with the exception of payment instruments, such as:

– shares in companies and other securities equivalent to shares in companies, partnerships or other entities, and depositary receipts in respect of shares;

– bonds or other forms of securitised debt, including depositary receipts in respect of such securities;

– any other securities giving the right to acquire or sell any such transferable securities or giving rise to a cash settlement determined by reference to transferable securities, currencies, interest rates or yields, commodities or other indices or measures;

In addition to transferable securities, the following are also considered financial instruments: money market instruments; units and shares in collective investment companies, including those in venture capital and closed-end collective investment undertakings; options, futures, swaps, forward rate agreements, and other derivative contracts related to financial instruments, currencies, financial variables, commodities, or emission allowances; derivative instruments for the transfer of credit risk; financial contracts for differences; and emission allowances .

DLT-based financial instruments are the financial instruments listed above that are issued, recorded, transferred, or stored using distributed ledger technology or other similar technologies to support these actions.

This definition comes from the transposition into Spanish law of the amendment to the MiFID II definition of financial instrument, introduced by **Article 18(1) of the Pilot Regime Regulation**, which establishes that those issued using distributed ledger technology are also to be considered financial instruments.

4. What criteria should be used to classify crypto-assets as DLT-based financial instruments?

The legal classification of crypto-assets as financial instruments depends on their specific characteristics and the rights derived from the crypto-asset, irrespective of the technology on which they are based Therefore, to determine whether a crypto-asset should be considered a transferable security or another type of financial instrument, a case-by-case analysis of its characteristics and the rights it grants must be carried out, independently of the technological aspects of the product.

Crypto-assets that qualify as financial instruments according to the above criteria will be treated as such from a regulatory perspective, based on the principles of "same activity, same risks, same rules" and technological neutrality.

However, given the broad definition of crypto-asset included in MiCAR, there will be instances where the legal nature of the crypto-asset and its classification as a financial instrument (regulated by **MiFID II** and other applicable financial regulations), as a crypto-asset regulated by **MiCAR**, or as another type of crypto-asset falling outside the scope of this Regulation, may be unclear.

In order to promote supervisory convergence among Member States on the classification of crypto-assets, ESMA has approved and published on its website guidelines on the conditions and criteria for considering crypto-assets as financial instruments (hereinafter, the **"Guidelines"**)[1].

Once these Guidelines have been adopted by the different competent national authorities (in Spain, the CNMV), there will be common criteria for the classification of crypto-assets across the EU.

Regarding the criteria to be followed and applied for the classification of crypto-assets until the Guidelines are finally adopted by the CNMV following the "comply or explain" procedure[2], it is considered reasonable that the criteria contained in the Guidelines may serve as guidance when analysing the legal nature of crypto-assets and their classification, where appropriate, as DLT-based Financial Instruments. In any case, this analysis must be carried out on a case-by-case basis and can be consulted via the fintech portal of the CNMV or by email at fintech@cnmv.es.

5. What is the difference between DLT-based Financial Instruments and other financial instruments? Does it involve different rights?

The difference between DLT-based Financial Instruments and other financial instruments lies solely in the medium through which they are implemented. Therefore, the same type of financial instrument confers the same rights regardless of the medium in which it is implemented (i.e., the principles of "same activity, same risks, same rules" and technological neutrality).

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[1] Final Report on the Guidelines on the conditions and criteria for the qualification of crypto-assets as financial instruments, published by ESMA on 17 January 2025. ESMA75453128700-1323_Final_Report_Guidelines_on_the_conditions_and_criteria_for_the_qualification_of_CAs_as_FIs.pdf

[2] Article 16 OF REGULATION (EU) No 1095/2010 OF THE EUROPEAN PARLIAMENT and OF THE COUNCIL of 24 November 2010 establishing a European Supervisory Authority (European Securities and Markets Authority), amending Decision Nº 716/2009/EC and repealing Commission Decision 2009/77/EC.

For example, transferable securities (which are a type of financial instrument) can be represented in paper format (registered or bearer securities), book-entry securities held by certain financial institutions and market infrastructures, or DLT-based systems.

All three forms of representation are legally recognised in the Spanish legal system, and the use of one or the other does not affect the rights and obligations deriving from the transferable securities.

However, the form of representation of transferable securities is very important because it has consequences regarding their legal configuration, which will determine aspects such as the legal recognition of rights as transferable securities, their method of constitution and transfer, their form of legitimisation before third parties, the creation of charges and encumbrances, and their legitimisation and certification before third parties.

Thus, transferable securities represented in paper format (registered or bearer) are not transferred in the same way as securities represented by DLT systems or book-entry systems**.**

6. Can Financial Instruments based on DLTs be issued in Spain with full legal certainty?

Yes. The **LMVSI**, which entered into force on 7 April 2023, introduces, among other provisions, the following:

(i) It transposes the **new MiFID II financial instrument configuration** into Spanish law, which includes DLT-based Financial Instruments.

(ii) It recognises in Spanish law the representation of transferable securities by means of DLT-based systems as a **third form of representation of transferable securities** and establishes the **basic legal framework** for this new form of representation.

7. What is the legal regime for transferable securities represented by DLT-based systems?

Similar to the book-entry regime, articles 6 to 15 of the **LMVSI** regulate, among other issues: (i) the creation of transferable securities; (ii) the transfer of transferable securities; (iii) the creation of rights in rem and other encumbrances; (iv) the entity responsible for the management of the register; (v) registration legitimacy and successive registration; (vi) certificates of registration; and (vii) the transfer of transferable securities in the event of insolvency of the entity responsible for the register.

The **LMVSI** has been further developed by:

– Article 5.2 of **Royal Decree 814/2023** which establishes the obligation for **entities responsible for the administration of the registration and record-keeping** of transferable securities represented by DLT-based systems (hereinafter "ERIR", by its acronym in Spanish) to have a **contingency plan** to manage registry incidents.

– Article 2 b) of **Royal Decree 815/2023**, which establishes an **official registry of ERIRs**, corresponding to each of the issues of securities represented by systems based on distributed ledger technology (more details in question 13).

In addition to the above, the new securities representation regime is expressly recognised in the **Corporate Enterprises Act** (Articles 23 and 407), the **Collective Investment Undertakings Act** (Articles 7, 9 and 46), and in the **Civil Procedure Act** (Article 517).

Regarding the last-mentioned legal provision—Article 517 of the Civil Procedure Act—it is particularly relevant as it recognises as *título ejecutivo* (i.e., enforceable title) the unexpired certificates issued by ERIRs in respect of securities represented by DLT-based systems.

Finally, it should be noted that the LMVSI empowers the Spanish Government to develop the legal regime applicable to DLT-based Financial Instruments. It is therefore foreseeable that, once there is greater knowledge of the functioning of this technology applied to the field of financial instruments, among other aspects, additional provisions applicable to the representation of transferable securities by means of DLT-based systems will be established.

8. Is it possible to represent only partially an issue of transferable securities through DLT-based systems?

No. Pursuant to Article **6.1 of the LMVSI**, the form of representation chosen must be applied to all the securities included in the same issue. This applies to all forms of representation valid under Spanish law.

In the case of equity securities, shares belonging to the same class must be represented by the same form of representation, irrespective of the number of issues made for the configuration of each class of shares. The foregoing shall also apply to the classes of units of collective investment funds.

9. Where are transferable securities represented by DLT-based systems registered? How are they recorded?

Transferable securities represented by DLT-based systems are registered and recorded on the relevant DLT network or system used for the specific issuance.

This technology inherently ensures the immutability, traceability, and resilience of the ledger, so it is not necessary for an entity (trusted third party) to actively manage each registration related to the transferable securities. In other words, unlike book-entry securities, an entity does not need to perform the "book entries" or record each transaction for a particular security.

However, in accordance with Article 8 of the LMVSI, it is mandatory to designate an **entity responsible for the administration of the registration and record-keeping (ERIR)** of transferable securities represented by DLT-based systems. This entity is mandated with certain functions and responsibilities by the LMVSI.

Unlike the book-entry system in Spain, where the record-keeping of listed securities is a two-tier system—a central registry run by the central securities depository (CSD) and a detailed registry run by the CSD participants—the record-keeping of transferable securities represented by DLT-based systems, both listed and unlisted, is managed through a single ledger (the distributed ledger in question), overseen by the ERIR.

10. Who is required to designate the ERIR and when?

According to Articles 7, 8.4, and 14 of the LMVSI, it is the issuer of the transferable securities represented by DLT-based systems who must designate the ERIR responsible for the record-keeping of the respective issue.

Specifically, the issuer must include the following in the **issuance document**:

– Information required to **identify the ERIR**.

- Details about the transferable securities included in the issuance.

- Sufficient information regarding the **systems where the securities are registered**, including, but not limited to, key aspects of their **operation and governance**; and

- Mechanisms implemented to prove **ownership of the rights** to the transferable securities represented in the system.

The issuance document must be submitted to the ERIR, and, in the case of transferable securities admitted to trading on a trading venue, a copy must also be submitted to its market operator.

Both the issuer and the ERIR must keep a copy of the issue document available at all times for the holders and the general public.

11. What are the functions of the ERIR in relation to transferable securities represented by DLT-based systems?

According to Articles 6, 8, 12, and 14 of the LMVSI, the ERIR has the following functions:

- Ensuring the integrity and immutability of the issuances of transferable securities.

- Identifying, either directly or indirectly, the holders of the rights to the transferable securities.

- Determining the nature, characteristics, and quantity of the transferable securities held by each holder.

- Guaranteeing holders access to the information about their transferable securities, as well as details of any transactions carried out on them.

- Managing the registration, establishment, and execution of various legal acts and transactions that must be recorded in accordance with the law. This includes, but is not limited to, limited real rights, seizures, other encumbrances, forced transfers, and transfers by inheritance.

- Issuing certificates that confirm the rights to the transferable securities.

- Managing the rights to receive interest, dividends, and other financial corporate events of economic nature.

In development of the LMVSI, Article 5.2 of **Royal Decree 814/2023**, requires the ERIR to establish a **contingency plan** to manage any incidents that may impact the network's operations and ensure the **continuity of the register**. This must be in place to handle situations where the network might fail or become unviable for any reason as a register system.

12. Does the ERIR require administrative authorisation? Is it a regulated entity?

The ERIR is indeed a regulated entity, as not just any organisation can perform its function.

a) For transferable securities represented by DLT-based systems that are admitted to trading on DLT-based market infrastructures authorised under the Pilot Regime Regulation, the responsibility for the functions assigned to the ERIR will lie with the market infrastructure responsible for the settlement of the securities.

b) For transferable securities represented by DLT-based systems that **are not listed on DLT-based market infrastructures**, the ERIR must first obtain authorisation to provide the ancillary investment service of custodianship of transferable securities as set out in Article 126a of the LMVSI.

Therefore, regarding unlisted securities, the ERIR function does not represent a new category or type of regulated financial institution but introduces a new role or mode of securities custody for entities already authorised to provide custody services for transferable securities.

If a regulated entity wishes to act as an ERIR but does not have the administrative authorisation to offer the ancillary service of securities custody, it must apply for the necessary authorisation, specifying that it will carry out the ERIR function.

For investment firms already authorised to provide the ancillary service of securities custody, being authorised as an ERIR entails amending their programme of activities, which requires the corresponding administrative process.

For credit institutions authorised to provide securities custody services, the CNMV will process the relevant administrative procedure when registering in the official ERIR register the issuances of transferable securities represented by DLT-based systems for which these institutions have been designated as ERIRs (see next question).

13. Is there an official ERIR register?

Yes. Article 2(b) of Royal Decree 815/2023 establishes an **official ERIR register** for each issue of securities represented by distributed ledger technology systems.

Therefore, once it has been confirmed that the entity designated as an ERIR has the legal capacity to provide securities' custody services and possesses sufficient resources, the registration process in the ERIR register provided for in the aforementioned provision of **Royal Decree 815/2023** will be initiated.

14. Is the ERIR liable to investors?

Yes, according to Article 8.6 of the LMVSI, ERIRs are liable to those who suffer harm due to the failure to carry out the necessary registrations, inaccuracies, delays, or, in general, the intentional or negligent failure to fulfil their legal obligations.

Additionally, in accordance with Articles 279 and 300 of the LMVSI, ERIRs also bear administrative liability for failing to perform their designated functions. The LMVSI outlines the sanctioning regime for ERIRs.

15. If an issue of transferable securities represented by DLT-based systems falls under Article 36(1) of the LMVSI, regarding the obligation for an investment firm to participate in the placement of certain issues, could the ERIR itself perform the function required of an investment firm as described in that paragraph?

If the ERIR is an investment firm, it may indeed perform this function with respect to these issues in accordance with Article 36(1) of the LMVSI. The chosen form of representation of the securities is irrelevant to the application of this provision.

16. How are transferable securities represented by DLT-based systems constituted?

Transferable securities represented by DLT-based systems are constituted by their initial registration in the relevant DLT-based system in favour of the issuer or the holders of the securities.

17. Are the holders recorded in the DLT-based system where the transferable securities are issued considered to be the legitimate holders of those securities? Are the legitimate holders always the ultimate beneficial owners of the securities?

Yes. According to Article 13 of the LMVSI, the person recorded as the legitimate holder in the distributed ledger technology-based system is presumed to be the legitimate holder of the securities and can therefore demand that the issuer provide the benefits to which the transferable securities entitle them.

Either the ultimate beneficial owner of the transferable securities or an entity authorised to provide the ancillary securities custody service, as stipulated in Article 126(a) of the LMVSI, may appear as the legitimate holder, provided there is evidence that it is acting on behalf of its clients.

18. If shares represented by DLT-based systems are acquired, when is ownership transferred?

According to Article 11 of the LMVSI, the transfer of transferable securities represented by DLT-based systems occur through the registration of the transfer in the name of the acquirer in the relevant DLT-based system, which will have the same effect as the delivery of the securities.

19. Can limited rights in rem, pledges, or other encumbrances be created on transferable securities represented by DLT-based systems?

Yes, just as with other transferable securities represented in other legally recognised forms, limited rights in rem and other encumbrances can be created on transferable securities represented by DLT-based systems.

According to Article 12 of the LMVSI, distributed ledger technology systems used for the representation of transferable securities must have the necessary mechanisms and functionalities to allow the ERIR to effectively register and enforce limited rights in rem, liens, and other encumbrances, as well as any forced or compulsory transfers required by current legislation, such as transfers mortis causa.

The registration of the pledge is equivalent to the possessory transfer of the title.

As the entity responsible for the record-keeping, the ERIR must have the necessary capabilities and permissions within the record-keeping system to ensure that the aforementioned actions are performed in accordance with the law.

20. How can rights to transferable securities represented by DLT-based systems be evidenced?

Similar to the book-entry system, Article 14 of the LMVSI provides that the ERIR issues certificates of entitlement to prove the various rights attached to transferable securities represented by DLT-based systems.

These certificates must be capable of being issued in accordance with the mechanisms implemented in these registry systems. The LMVSI does not impose any specific format for issuing these certificates, allowing the technology itself to provide the appropriate solutions. The issuer must specify in the issuance document the mechanism implemented in the DLT-based system to provide unequivocal evidence of ownership of the rights.

Where a certificate has been issued for specific securities, these securities will be locked in the system and cannot be transferred or encumbered until the certificate is returned or rendered void.

As the entity responsible for the record-keeping, the ERIR must have the necessary capabilities and permissions within the record-keeping system to ensure that the aforementioned actions are performed in accordance with the law.

21. What happens if an ERIR is declared insolvent?

Pursuant to Article 15 of the LMVSI, if an ERIR is declared insolvent, the holders of transferable securities registered in the distributed ledger-based system will have the right to separate their transferable securities and may exercise this right by requesting their transfer to another ERIR.

22. Is the form of representation via DLT-based systems reversible?

Yes, it is reversible, like any other form of representation. The change from title-based representation to a DLT-based system is provided for under Article 6.3 of the LMVSI and can be executed as holders consent to the conversion. However, the change from DLT-based systems to titles or book-entry systems, as well as transitioning from book-entry systems to DLT-based systems, is subject to future regulatory development.

23. Can there be listed and unlisted DLT-based Financial Instruments?

Yes, DLT-based Financial Instruments do not necessarily have to be listed on a trading venue. If they are unlisted, transfers of these financial instruments are conducted privately between two parties outside of any trading venue. In any case, each issuance must have a responsible ERIR.

24. What types of DLT-based Financial Instruments can be traded on trading venues and what is their regulatory framework?

Certain DLT-based Financial Instruments can be traded and settled on **DLT-based market infrastructures** authorised by the CNMV in accordance with the **Pilot Regime Regulation**. In this case, the rules set out in the Pilot Regime Regulation will apply. This Regulation grants authorised DLT-based market infrastructures the possibility to apply for certain exemptions from the traditional trading and post-trade regulations for "traditional" transferable securities, provided they offer specific compensatory measures accepted by the national competent authority.

This Regulation establishes an ad hoc legal framework that provides for three types of DLT-based market infrastructures:

(i) **DLT-based multilateral trading facilities**, which are multilateral trading facilities that only admit DLT-based Financial Instruments for trading;

(ii) **DLT-based settlement systems**, which are settlement systems that settle transactions in DLT-based Financial Instruments and allow for the initial registration or custody of DLT-based Financial Instruments; and

(iii) **DLT-based trading and settlement systems**, which are systems that combine the services provided by the two aforementioned types of infrastructures. This latter type of market infrastructure is innovative as it does not exist in the traditional trading and post-trading system for book-entry financial instruments, which is regulated by MiFID II, CSDR, EMIR, and other national and EU trading and post-trading regulations.

In the case of transferable securities represented by DLT-based systems that are listed on DLT-based market infrastructures, the responsibility for the functions attributed to the ERIR will rest with the market infrastructure that conducts the settlement of the securities.

Not all DLT-based Financial Instruments are eligible for these DLT-based market infrastructures. Only the following financial instruments are eligible for these new infrastructures:

– **Shares** of issuers with a market capitalisation of less than **€500 million**.

– **Bonds** and other **securitised debt**, and **money market instruments** (e.g. treasury bills) with an issuance size of less than **€1 billion**. Instruments that incorporate a derivative or a structure that makes it difficult for the customer to understand the associated risks are excluded.

– **Units of unstructured collective investment undertakings** (undertakings for collective investment in transferable securities (**UCITS**)[3], whose assets under management have a market value of less than **€500 million**.

25. Is it safe to invest in DLT-based Financial Instruments?

DLT-based systems shall provide the same level of investor protection as book-entry registers.

To achieve this, the ERIR must have the necessary capabilities and permissions to ensure the proper functioning of the register, along with a contingency plan to maintain the continuity of the register in the event of a disruption.

From a technological perspective, transferable securities represented in DLT-based systems are crypto-assets[4] issued through a smart contract, which must include the appropriate functions and access permissions to ensure proper registration.

The ERIR should be able to ensure the proper design and deployment of these smart issuance contracts through audits or similar measures. Typically, these incorporate mechanisms that limit

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[3] Regulated in Directive 2009/65/EC of the European Parliament and of the Council of 13 July 2009 on the coordination of laws, regulations and administrative provisions relating to undertakings for collective investment in transferable securities.

[4] The scope of application of MiCAR does not cover all crypto-assets. In fact, Article 2.4 of MiCAR specifies the crypto-assets excluded from its scope, including those considered financial instruments, in which case MiFID II and the rest of the applicable financial services EU legislation will apply. Therefore, the only commonality between a crypto-asset such as bitcoin and a DLT-based Financial Instrument is their technological framework, but not their regulatory framework.

the scope within which transferable securities represented in DLT-based systems can be transmitted, such as the creation of a 'Whitelist' containing the addresses in these systems between which they can be transferred.

Similarly, it should incorporate functions -accessible only to the ERIR- that allow new crypto-assets to be burnt or created at one address, blocked, or transferred to another address. This mitigates any risk of cyber-attack or loss of keys and allows the ERIR to fulfil its functions.

 Thus, while distributed ledger technologies are used to make certain processes more efficient, unlike other crypto-assets such as Bitcoin, their control and governance are centralised in regulated entities (the ERIR).

26. What is the contingency plan that an ERIR must have?

The ERIR must establish a contingency plan to ensure the effective management of incidents or adverse operational situations that may impact the network used and the continuity of the register in the event of operational failure or if its continued use as a record-keeping system is no longer viable for any reason.

There may be attacks on the network that compromise its integrity or continuity of service. Additionally, a network may no longer be viable as a representation system due to its high operational costs (such as gas prices), high latency, or lack of scalability, among other potential operational issues. For these scenarios, the ERIR should have a plan in place to address these contingencies and transition the register to another network.

27. Who safekeeps financial instruments represented in DLT systems, and how are they safekept?

Distributed Ledger Technologies (DLTs) rely on asymmetric cryptography, which involves a pair of keys: a public key and a private key linked to an address. These keys are essential for authorising a transaction.

While the holder themselves can keep these keys, it is common for a third party to provide this service. This third party could be the ERIR or financial intermediaries that are members of the DLT-based market infrastructure, where applicable.

The loss or theft of the keys should not lead to the loss or theft of the financial instruments. The issuance smart contract should include restrictions on the transfer of these financial assets and allow the ERIR to restore the financial instruments to the rightful holder if necessary.