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UK Jurisdiction Taskforce of the LawtechUK Panel

Via email to: UKJT@justice.gov.uk

UKJT Consultation Paper on the Issuance and Transfer of Digital Securities under English Private Law

Response of the City of London Law Society

This response of the City of London Law Society ("CLLS") has been prepared by a working party drawn from the Financial Law, Company Law and Regulatory Law Committees to the questions raised in the UKJT Consultation Paper on the Issuance and Transfer of Digital Securities under English Private Law. It deals, first, with the ancillary questions in the Annex to the Consultation Paper and, then, with the overarching question raised in the Consultation Paper itself. Information given in footnotes to the Annex has been incorporated for ease of reference. Further information about the CLLS and the members of the working party appears at the end of this response.

Introductory remarks

The CLLS welcomes this initiative by the UKJT. As blockchain and DLT-based systems become mainstream, their technological, operational and resilience benefits mean that they are likely to be used more widely in the financial, capital and other markets. Records of security issues and ownership or other title to them have already been recognised as potential applications for such systems by several common law and civil law jurisdictions.

The principal policy issue for English law is how much change at the legislative and regulatory level should be necessary to clarify that such issuance and register functions can be validly and effectively performed by, or by reference to, a distributed ledger or other structured record. The combination of English common law, statute and regulatory provisions must ensure a clear, well-founded and enforceable legal basis for the issuance, holding and transfer of title to digital securities that is transparent and attractive for issuers, investors and other market participants to use, without hidden pitfalls. In this regard, regulatory considerations cannot be ignored.

This will involve not only issues for the laws of the United Kingdom, where Scots law related to property aspect of holding in securities differs significantly from English law (while that of Northern Ireland is broadly similar to English law), but also issues concerning relationships between English and other systems of law, as it is commonplace for securities or interests in securities issued under English law to be held or traded in other jurisdictions, and vice-versa. There may also be cases when aspects of a security, e.g. the terms and conditions relating to it are governed by one system of law (e.g. English law) but issues of holding or transfer are governed by a different law (e.g. Swiss law); this is particularly the case at a time when some jurisdictions have laws which are considered more effective for particular purposes. These considerations must be borne in mind when considering the operation of English law in this field.

Different operating and legal models

We think that in responding to the questions that the UKJT sets itself, it will be important to distinguish between the different operating and legal models that might be used to support the issue, holding and transfer of title to securities on or through a blockchain or DLT-based system.

Direct-holding models

Under a "direct-holding" model, there is a direct contractual or other legal relationship between the issuer of the security and the investor (as a shareholder or other holder of a unit of the security).

In the UK, we sub-divide such direct-holding models between those relating, on the one hand, to "certificated" units of a security and, on the other hand, to "uncertificated" units of a security. Certificated units of a security are held outside of the CREST system¹. The CREST system is the only current "relevant system" under the USRs. For certificated units of a share or other security, the issuer (or its registrar as agent of the issuer) will maintain, keep and enter up the relevant issuer register of securities (as the primary record of entitlement to the relevant securities as against the issuer i.e. as constitutive or *prima facie* evidence of the holder's legal title). For uncertificated units of a security, EUI (under its statutory obligations as Operator of a "relevant system" under the USRs) will maintain, keep and enter up the Operator register of securities (as the primary record of entitlement to the securities as against the issuer).

In relation to either model, we consider it should be possible to utilise some form of blockchain or DLT-based system for the valid issuance, holding and transfer of digital securities under English law.

However, English company law does not permit the transfer of legal title to UK shares or units of a UK debenture (debt security)², otherwise than in response to a "proper instrument of transfer", when they are held in certificated form outside of the CREST system³. This will raise legal and practical issues for the use of blockchain or DLT-based technology where the system is not a "relevant system" under the USRs⁴. Specifically, as a proper instrument of transfer must be "stampable", its form, content and any rules, protocols and systems used to generate and process such an instrument must be acceptable to HMRC/the Stamp Office and be compatible with the HMRC/Stamp Office's own systems. A similar issue arises in relation to any electronic evidence of the payment of stamp duty that may be required by an issuer to be lodged with it (or its registrar) as a condition to the registration of a transfer of legal title. In addition, unless the terms of issue governing the UK share or UK debenture provide that no (paper) share certificate (or other certificate of title) will be issued or required as a condition to registration of a transfer of legal title⁵

¹ The CREST system is the UK securities settlement system for the holding and transfer of title to securities (constituted under the laws of England and Wales, Scotland and Northern Ireland) without a written instrument. The system is operated by Euroclear UK & International Limited ("EUI"). In relation to its operation of the CREST system, EUI is supervised and recognised by the Bank of England as a central securities depository (a "CSD") under section 288A of the Financial Services and Markets Act 2000 ("FSMA") and Article 17 of the (on-shored) UK Central Securities Depositories Regulation (the "UK CSDR"). The CREST system, as a computer-based system and procedures enabling title to units of a UK security to be evidenced and transferred without a written instrument and which is operated by EUI as a recognised CSD, is a "relevant system" under the Uncertificated Securities Regulations 2001 (the "USRs"). We use the term "UK security" to refer to a security (whether a share, debenture or other type of security) which is constituted under the laws of England and Wales, Scotland or Northern Ireland.

² In this paper, when we refer to a "UK debenture", we are contemplating a UK debenture whose terms of issue require the maintenance of a register of debenture holders on, subject to and in accordance with the requirements for the holding and transfer of legal title set out in the Companies Act 2006. It is, of course, perfectly possible for a UK company to issue units of a debenture otherwise than in such registered form and which are not, therefore, subject to the formality requirements of UK companies law for the holding and transfer of title across a register of debenture holders.

³ Such a transfer in relation to certificated UK shares or units of a UK debenture must be effected in response to the delivery of a "proper instrument of transfer": see s. 770(1)(a) of the Companies Act 2006. For this purpose, a "proper instrument of transfer" is required to be in a document capable of attracting stamp duty: see Palmer's *Company Law* at paras. 6.427 and 6.432. Generally this is a paper document, although HMRC/the Stamp Office now has the capacity to deal with an electronic security transfer form which may be signed electronically, but must contain the same elements that are required to constitute the form as a "proper instrument of transfer" under English law.

⁴ A "relevant system" under the USRs can only be operated by: (a) a recognised CSD within the meaning of section 285(1)(e) of FSMA, or (b) a third country CSD within the meaning of section 285(1)(g) of FSMA: see the definition of "Operator" in regulation 3(1) of the USRs.

⁵ See section 769(2)(a) of the Companies Act 2006. This provides that the conditions of issue of shares, debentures or debenture stock may disapply the requirement of section 769(1) for the company, within two months after the allotment of any of such securities, to complete and have ready for delivery the relevant share certificates (or other certificates of title). A

(which condition does not apply to a transfer of legal title to uncertificated units of a security in the CREST relevant system), a blockchain or DLT-based system that is not a "relevant system" (under the USRs) will need to be able to handle and process any required physical share or other certificate of title before it can effect a valid transfer of legal title to relevant certificated shares or certificated units of another security.

These legal and practical issues for the use of a blockchain or DLT-based system (which is not a "relevant system") may well be capable of being overcome to enable the efficient and effective processing of an electronic "proper instrument of transfer". Any such solution will require proper engagement with HMRC/the Stamp Office and relevant issuers of UK shares or other securities. Even if such a solution cannot be found in any particular case (outside of the USRs) to support a blockchain or DLT-based system for the processing of electronic "proper instruments of transfer", the relevant technology could (subject to the additional points we make in response to the specific questions below) still be used as the relevant issuer register of securities, with transfers of title to the certificated units being registered on the distributed ledger or other structured record in response only to a proper instrument of transfer duly executed by or on behalf of the transferor.

If a blockchain or DLT-based system were to operate as a "relevant system" under the USRs, for example if it were to include functionality to allow for the transfer of uncertificated units of a UK security on the distributed ledger or other structured record in response to an electronic instruction generated, received and processed by the system (exclusively on and subject to the rules, protocols and security or other processing standards of the system and without the requirement for an electronic or other "proper instrument of transfer" and paper certificate of title), then we consider it likely that consequential statutory changes would be desirable or need to be made to the USRs and/or authoritative, permissive formal guidance provided by the Bank of England (as the relevant supervisory authority for Operators of "relevant systems") and/or other competent authority (in relation to wider UK company law issues) to allow for such functionality to operate validly and effectively with respect to such uncertificated units. We outline some of these potential consequential statutory changes and/or possible formal guidance in our responses to the specific questions below.

For completeness, we would note that in principle it might be possible for an investor to hold a UK bearer security (in definitive form) under a direct contractual or other legal relationship with an issuer. However, as a practical matter, domestic debt securities (debentures) are generally issued in registered form⁶. International UK bonds or other instruments creating or acknowledging indebtedness will not usually be issued in definitive form (they are issued as a global note, which is a bearer instrument, held for the investor under an indirect-holding model as we discuss below). Further, as we explain further in our response to Question 2 below, we do not believe that English law currently recognises the issuance and transfer of a bearer, negotiable security in intangible form under a direct-holding model using blockchain or DLT-based technology (i.e. other than by converting such a security into a registered security – as discussed above⁷). As a result, we do not see any immediate and obvious use-case for a blockchain or DLT-based system for the *direct* holding of UK bearer negotiable securities and they are not considered further in this response.

Indirect-holding models

In contrast to direct-holding models, "indirect-holding" models operated by CSDs (that "immobilise" relevant shares or other securities) or by global or local custodians or other intermediaries in relation to "intermediated securities", break the direct contractual or other legal relationship between the issuer of the underlying security and the investor.

corresponding provision is contained in section 776(3)(a) of the 2006 Act with respect to the transfer of shares, debentures or debenture stock.

⁶ This includes the issuance, holding and transfer of "eligible debt securities" in CREST under the USRs. An "eligible debt security" is a short-term (registered) debt security issued by corporate bodies under UK law. Eligible debt securities are the uncertificated equivalents of securities that, in the certificated environment, would be negotiable, paper-based money market instruments (i.e. certificates of deposit, bankers' acceptance and commercial paper).

⁷ This legal process under which a security, which is held in bearer form in the certificated environment, is converted into a registered security for holding and transfer through CREST was used for the dematerialisation of UK money market instruments by their conversion into "eligible debt securities" under the USRs.

In such cases, the CSD, custodian or other intermediary (or its nominee) will have the direct contractual or other legal relationship with the issuer or a higher-tier intermediary.

In the case of registered UK securities, this will require entry of the name, address and other relevant details of the CSD, custodian or other (higher-tier) intermediary on either: (a) (if the underlying securities are held outside of the CREST system) the issuer register of securities, or (b) (if the underlying securities are held in the CREST relevant system) the Operator register of securities.

In the case of bearer UK securities, this will require the actual or constructive possession of a negotiable, paper-based global note constituting the security by or for the CSD, custodian or other (higher-tier) intermediary. The entitlement of the investor-clients in or in relation to the underlying security so held will, generally, be constituted as an equitable or beneficial proprietary entitlement under an English law trust or sub-trust (with the CSD, custodian or other intermediary acting as the trustee or sub-trustee for the benefit of its investor-clients) or as some form of statutory entitlement (under foreign law)⁸.

When security is taken over interests of investor/clients, this will normally require the securities to be placed in a segregated account.⁹

In relation to any form of indirect or intermediated holding of UK securities, we consider it should be possible to utilise some form of blockchain or DLT-based system for the valid issuance, holding and transfer of digital securities under English law.

We would note that it is now prohibited for a UK company to issue bearer shares (or "share warrants")¹⁰. As a result, in relation to a UK share, the CSD, custodian or other intermediary (or its nominee) would need to be entered as holder on the relevant register of securities (or in the records of a higher-tier intermediary). Equally, UK domestic debt securities (debentures) will generally be constituted and issued as registered securities subject, in relation to an indirect or intermediated holding of such debt securities, to entry of the CSD, custodian or other intermediary (or its nominee) on the relevant register of holders (or in the records of a higher-tier intermediary). International bonds and other instruments creating or acknowledging indebtedness are, in general, issued by UK companies under English (or other law) in either registered or bearer form. Where such bonds or other instruments are issued in bearer form, the relevant global note will be held by or for the CSD, custodian or other intermediary¹¹.

⁸ The statutory entitlements we have in mind here are the entitlements constituted in relation to the holding of immobilised securities through the International Central Securities Depositories (the "ICSDs"), Euroclear Bank S.A./N.V. and Clearstream Banking S.A. The holding and transfer of title by EB participants to immobilised securities held in Euroclear Bank is governed by the contractual terms and conditions between the participant and Euroclear Bank, as well as the Belgian Royal Decree No. 62 of 1967 (as amended) which constitutes under Belgian law a right *in rem* for such participants in or in relation to the relevant securities held by or for Euroclear Bank for their account. Similar protections are afforded to participants in Clearstream under their contractual terms and conditions with Clearstream Banking and relevant statutory provisions adopted under Luxembourg law. The participants in the ICSDs will be financial institutions acting for themselves or as intermediaries for investors, in relation to each issue of securities. The effect of these legal arrangements is that, while the underlying UK security held by or for the ICSD may itself be constituted or otherwise governed by English law, the rights and entitlements of the participants of the relevant ICSD in or in relation to the security will be constituted under Belgian law or, as the case may be, Luxembourg law. Evidently, none of these are matters of English law, so the adoption of a blockchain or DLT-based system by the ICSDs as an adaptation of their current arrangements is unlikely to be an issue of, or otherwise governed by, English law.

⁹ The Belgian and Luxembourg legislation supporting respectively the Euroclear rules and the Clearstream rules provides for co-ownership of the relevant securities if they are held in omnibus accounts of the participants, hence it is necessary, if you want to take security over the securities, that they are transferred to a segregated account. At some levels of intermediation, however, not all legal systems are clear whether rights are proprietary or merely contractual. However under English law, intermediated rights are normally regarded as creating an equitable interest in the underlying right (however, if that right is held under another legal system, it may not create an equitable interest in the underlying security. English law cannot affect that position.

¹⁰ See section 779(4) of the Companies Act 2006 (as amended by section 84 of the Small Business, Enterprise and Employment Act 2015).

¹¹ For UK bearer securities, the global note and its terms of issue are likely to be governed by English law. The location of the global note may or may not be in England. As a bearer instrument, the global note is capable of possession under English law and, under English conflict of laws rules, the law of the place where the note is located may be relevant in determining proprietary or other questions relating to the instrument itself (and the relationship between the issuer and the holder of the global note or persons claiming through the holder).

We consider that the potential impact of blockchain or DLT-based systems on indirect-holding models for UK shares or UK debt securities needs to be analysed by the UKJT at a number of levels: first, at the level of the issuer-intermediary (i.e. at the level of the relevant register of securities); second, at the (trust) level of the top-tier intermediary-investor (i.e. at the level immediately below the relevant register of securities); and third, at the (sub-trust) level of any lower-tier intermediary-investor.

In this context, we would make the following overarching observations on indirect-holding models that the UKJT might wish to take into account when developing its responses to the questions posed.

- (1) At the level of the issuer-intermediary, any potential application of blockchain or DLT-based technology should only operate on the underlying security as a UK *registered* security. As outlined above, and in further detail in our response to Question 2 below, we do not consider that there is any reasonably robust legal model that could be developed, under current English law, for the direct holding by an intermediary of a UK digital security in bearer form. Such a security must *ex hypothesi* lack the essential quality of tangibility that is required to found a possessory right or interest to enable the holding and transfer of legal title to a UK bearer security¹². As a result, the same considerations that we have outlined above (and in our relevant responses) to the direct-holding of registered securities in a blockchain or DLT-based system will have equal application to any consideration of the relevant issues at the level of the issuer-intermediary under indirect-holding models.
- (2) At the level of the (top-tier or lower-tier) intermediary-investor, we do not believe that any relevant considerations under, or constraints of, UK companies law are likely to affect the validity or effectiveness of the legal model supporting the holding and transfer of title to an entitlement in or in relation to a UK share or unit of a UK debenture. As a general matter, UK companies law¹³ is only concerned to impose relevant requirements and conditions for the maintenance, keeping and entry up of the issuer register of securities (in relation to certificated units of a UK security) or Operator register of securities (in relation to uncertificated units of a UK security), i.e. at the issuer-intermediary level only. However, we consider that there are likely to be other legal considerations that impact upon the validity and effectiveness of transfers of indirectly-held securities at the level of the (top-tier or lower-tier) intermediary-investor which will need to be considered and addressed by the UKJT – and we highlight some of these issues in greater detail in our responses to the specific questions below.
- (3) As we have indicated above, it is possible (if not likely) that under an indirect-holding model for UK shares or UK debt securities, laws (other than English law) may govern the relationship between the relevant intermediary and the investor. In such cases, English private law is unlikely to be relevant (other than, perhaps, indirectly through some application of the private international law of the relevant governing law) to the

¹² We recognise that the Law Commission in its *Electronic trade documents: Report and Bill* (published 16 March 2022) has recommended that certain "electronic trade documents" should be made amenable to possession as a matter of English law. However, the Law Commission's proposals are not intended to extend to UK instruments of the type the subject of the UKJT's proposed Legal Statement on Digital Securities.

¹³ UK companies law includes the USRs as applicable to a "relevant system". Further, although expressed to be outside the scope of the UKJT's proposed Legal Statement on Digital Securities (see paragraph 4 of the Consultation Paper), it is likely that the nature of the regulation or supervision (if any) of the person or persons operating a blockchain or DLT-based system for the issuance and transfer of securities will differ depending upon the nature of the functions that they perform in relation to the securities. For example, if such a system at the issuer-investor level is operating as a "relevant system" under the USRs, the operator of the system will be required to be authorised or recognised as a central securities depository: see the definition of "Operator" in regulation 3(1) of the USRs. Equally, a blockchain or DLT-based system operating at the top-tier intermediary-investor level as a securities settlement system is also likely to be operated by a central securities depository (as the operator will, in addition to operating the SSS, be providing a "central maintenance service" in relation to the securities accounts of its participants: see the definition of "central securities depository" in Article 2.1(1) of the UK CSDR). In contrast, a person providing pure "registrar" functions in relation to UK securities at the issuer-investor level, acting as a ministerial agent for the issuer, is unlikely to require authorisation or regulation under any applicable regulatory system in relation to the simple performance of its registrar functions. A blockchain or DLT-based system operating at the lower-tier intermediary-investor level is unlikely to be operated by a central securities depository. However, we would anticipate that the intermediary at such a lower-tier providing the relevant securities accounts to its investor-clients is likely to require authorisation and regulation as a custodian under applicable law in relation to its safeguarding and administration of the relevant securities for the benefit of its account-holders.

determination as to the conditions for a valid and effective issuance and transfer of the entitlement held by the investor in or in relation to the underlying UK share or UK debenture. As these considerations apply primarily to the holding of UK bearer securities in the ICSDs, our responses (as relating to indirect-holding models) focus primarily on the issuance and transfer of UK registered securities at the issuer-intermediary level when considering such models.

- (4) We should note that it would be possible, subject to applicable regulatory and supervisory considerations, for a CSD operator to establish a system in the UK similar to the systems operated by the Euroclear and Clearstream ICSDs, but governed by English law. However, there is a question whether there would be commercial demand for such an indirect-holding model solution. We doubt that the use of blockchain or DLT-based technologies would make significant difference to the commercial dynamics at this level. We also cannot see much interest in digitisation at the global bond level, recognising that this involves a single instrument and there are highly effective and established systems dealing with interests in each issue, which have widespread international acceptance.
- (5) While CREST members can be individuals or businesses holding securities on their own account, many are financial institutions (or their nominee companies) acting as intermediaries for their clients who are the beneficial owners of the securities or who hold the securities for the benefit of their own clients. There may be many layers of intermediation.

Under English law each tier is treated separately so as to create separate and independent rights, obligations and interests as between the account-holder and its immediate intermediary in relation to the underlying security held at the issuer-(top-tier) intermediary level. Where English law applies to the intermediation arrangements, they are regarded as creating a trust in which the intermediary holds securities (or equitable entitlements in or in relation to securities) for the benefit of the client to whose account the "securities" are credited (where the client has a specific securities account). However:

- in some circumstances the client may have an interest in a pool or pools of securities held by or for its immediate intermediary under a client "omnibus" account, rather than under an "individual" segregated account (and this will affect the nature of the client's equitable entitlement in or in relation to the underlying securities held for its account), or
- if stock lending or similar absolute title transfer arrangements are permitted in favour of the intermediary, the client's rights in relation to the underlying securities may be purely contractual and not proprietary.

If any layer of intermediation involves an intermediary located in another jurisdiction and/or operating under the laws of another jurisdiction, the relationship at that level may be characterised according to the law of that jurisdiction or English law may otherwise take account of the law of that jurisdiction.

- (6) While we think that indirect-holding models could, subject to the relevant considerations we set out in our specific responses below, be operated using blockchain or DLT-based technologies, prudential and conduct of business regulatory/consumer protection requirements will be an important consideration for such systems and their operators. Confidence that:
- the system is sufficiently financially robust and asset-backed to meet the claims and entitlement of clients/users; and
 - there will not be any unexpected application of a foreign law that is not readily ascertainable in advance

would be important to wider adoption. These would be particular concerns if a system is used in which there is no "operator" or other responsible regulated person who acts as trustee of the rights and entitlements held through the system.

Our approach and other relevant contextual considerations

This response addresses constructively the specific questions raised.

We think it is very important to bear in mind that a good deal of the legal excitement about blockchain and DLT-based technologies relates to the use of the relevant technology in such a way that it is impossible to identify either a physical asset (essentially, except possibly in the case of some non-fungible tokens, cryptoassets are constituted as incorporeal assets) or a specific person (as a trusted third party operator) against whom any right or claim (as a private law chose in action) can be exercised or enforced.

In addition, in public, permissionless systems there is unlikely to be any express choice of law/submission to jurisdiction, or other organised operational arrangements that provide a clear, well-founded and enforceable connection between a single country or territory and the location (or *situs*) of the distributed ledger or other structured record. Original records of the system (with equivalent operational validity) simply exist in parallel on "nodes" that can be disparately located across numerous countries and/or territories across the globe.

The UKJT has already done a good deal to address the question of choice of law and jurisdiction, as well as the recognition of property where it is unclear who (if any person) owes legal duties in respect of the relevant cryptoasset. The question of how, as a matter of the rules of English private international law, to determine the domestic law that governs proprietary issues affecting digital securities, or digital entitlements to securities, that are recorded on a distributed ledger or other structured record remains to be definitively addressed. Such "proprietary issues" would include the requirements for a valid and effective transfer of title to the digital securities or digital entitlements; the requirements for perfection of any collateral arrangement over such securities or entitlements; whether a person's title to or interest in such securities or entitlements is overridden by or subordinate to a competing title or interest; and the steps required for the realisation of any collateral arrangement over the securities or entitlements following the occurrence of an enforcement event.

We believe that, while (for directly-held securities) the law under which the relevant security is constituted and (for indirectly-held securities) the law governing the system in which the securities are recorded should be significant component elements of any such determination, it is unlikely to be possible to exclude relevant locational (*situs*) considerations.

Specifically, we believe that in practice this "applicable law" (i.e. the law under which the security is constituted or the law of the system) is only likely to be recognised and upheld by an English court if, in addition, there exist certain "connecting factors" that ensure a sufficient nexus between the country or territory of the applicable law and the location or *situs* of the distributed ledger or other structured record. In our responses to Questions 11 and 12 below, we have set out some possible "connecting factors" for the purpose of the relevant rules of English private international law.

In our view, private, permissioned blockchain or DLT-based systems are likely to be able (with reference to relevant regulatory, company law and/or contractual considerations) to put in place operational conditions that satisfy our suggested (or any other relevant) "connecting factors" to link the location or *situs* of the distributed ledger or other structured record to the country or territory of the applicable law.

For UK securities or UK entitlements to securities, we consider that using these "connecting factors" it should be possible to treat the relevant distributed ledger or other structured record as being located in a relevant part of the United Kingdom (as, for directly-held registered securities, will be required under UK companies law) or otherwise subject to English law and the jurisdiction of the English courts. We think that this should be achievable to achieve an appropriate level of market confidence with minor changes to the law, regulatory and (for directly-held securities) other company law requirements. This should ensure that private, permissioned blockchain or DLT-based systems for the issuance and transfer of securities (whether under a direct-holding or indirect-holding model) should be able to operate much as legacy systems do today from the perspective of the holder, with such technological choices not materially affecting the legal analysis.

However, we are less confident that in practice (and in the absence of an accepted domestic or international conflict of laws solution) these beneficial outcomes will currently prove possible for public, permissionless blockchain or DLT-based systems. This is because we have proposed, in

our responses to Questions 11 and 12 below, that the relevant "connecting factors" should be based upon the availability and operation of "master node" functionalities for the relevant operator, issuer or registrar that are unlikely to be available in such systems - although we acknowledge that it may be possible for certain technological implementations to be deployed (e.g. under a smart contract) in a decentralised network that might facilitate analogous functionalities.

In any event, we envisage that any conflict of laws solution that comes to be developed (whether at the domestic or international level) should allow some form of mechanism for the participants in a system to choose a "deemed location" or other governing law to determine proprietary issues affecting the digital UK securities or digital UK entitlements recorded in their system. Such a solution might adopt a specified list of "connecting factors" to link that choice of "deemed location" or governing law to a country or territory that has a sufficient, practical connection with the deemed location or governing law. Those "connecting factors" might also be used to establish practical, workable rules to determine the law that should govern proprietary questions in the absence of an express choice by the participants. A satisfactory conclusion to these matters would be an important step to acceptance of blockchain and DLT-based technologies as a mainstream operational option in the financial, capital and other markets.

We would add that if a blockchain or DLT-based system involves "shadow" or "synthetic" interests not backed by assets, then it should not give rise to any relevant entitlement or interest in or in relation to the securities to which it corresponds at all. Any other approach results in more securities being in circulation than have been issued by the issuer(s). On the other hand, there may be a question whether these interests, however represented, including by a token issued by a DLT system, are in themselves a form of security, on which regulatory requirements, eg for the issue of a prospectus, should bite.

Response to specific questions raised in Consultation

Questions to be addressed in the Legal Statement on Digital Securities: each of the following questions is posed as a matter of English law.

Consideration will also be given as to whether there are distinctions in the responses between different types of securities, such as, between debt and equity securities. The UKJT are liaising with the Law Commission to ensure that our work aligns with its projects in this area.

Issuance

1 Can digital securities be validly issued under English law using a blockchain or DLT-based system?

"Issuance", in relation to a digital security, is the process by which an issuer *confers* title to new units of the security, or new entitlements in or in relation to the security, on a person. Conceptually, and subject to the specific issues and solutions we propose below in our responses, this should be possible as a matter of English law.

Under a direct-holding model, the issuer could confer legal title to new units of a UK security either: (a) (in the case of "certificated" units held outside of a "relevant system" for the purposes of the USRs) by entering (or by procuring that its registrar enters) the name, address and other relevant details for the first holder(s) on the relevant issuer register of securities¹⁴, or (b) (in the case of

¹⁴ It is clear from ss. 1135(1)(a) and (2) of the Companies Act 2006 that "company records" may be kept by a UK company in electronic form, provided (a) the information entered up on the records is "adequately recorded for future reference", and (b) the records are capable of being reproduced in hard copy form. Such records may be arranged in such manner as the directors of the company think fit (s. 1135(1)(b)). Under s. 1138, adequate precautions must be taken to guard against falsification and to facilitate the discovery of falsification. Under s. 1134, "company records" includes the register of members and any register kept by a company of its debenture holders. We see no reason why these requirements cannot be satisfied by a distributed ledger or other structured record, acting as the issuer register of securities, which is maintained in a blockchain or DLT-based system with operates appropriate functionality for such recording, reproduction and security of the relevant information and records.

"uncertificated" units held through a "relevant system" under USRs e.g. CREST) by requiring the Operator of the relevant system to enter the name, address and other relevant details for the first holder(s) on the relevant Operator register of securities¹⁵.

It would also be possible for an issuer to confer legal title to new units of a UK security to a CSD, custodian or other intermediary (or their nominee) by entry up (or procuring the entry up of) their relevant details as first holder in the relevant issuer register of securities (for certificated units of the security) or in the relevant Operator register of securities (for uncertificated units of the security). The relevant CSD, custodian or other intermediary could then issue corresponding entitlements in or in relation to the underlying securities (as equitable entitlements under a trust, contractual rights or as statutory entitlements under foreign law) to the initial investors as its participants or clients in the relevant CSD's, custodian's or other intermediary's system.

Under such an indirect-holding model, blockchain or DLT-based technologies could be utilised for any or all of the relevant issuer register of securities, relevant Operator register of securities and (assuming English law to be the applicable law¹⁶) the records kept by the relevant CSD, custodian or other intermediary to constitute or evidence the participant's or client's equitable entitlement or contractual rights in or in relation to the underlying UK security.

2 In what legal form(s) are digital securities capable of being issued, in addition to registered form?

We do not consider that it would, under the current state of English law, be possible to issue digital, negotiable securities under a direct-holding model. In order to qualify as a negotiable security currently recognised under English law, an instrument must be capable of being "possessed". The recognition of an intangible security as "negotiable" would, therefore, require an extension of the current English law of negotiable instruments. English law does not presently recognise an intangible asset as being amenable to possession¹⁷; nor, in contrast to some legal systems, does it recognise the possibility for an instrument to be both co-extensively a registered security and a negotiable security. A UK security can currently be issued either in registered form (with the legal title of a holder constituted or evidenced by entry up of the holder's relevant details in the relevant register of securities as the primary record of entitlement as against the issuer), or in negotiable

¹⁵ See regulation 34 of the USRs. We have not identified any specific requirements set out in the USRs that would prevent or impede the relevant Operator register for a digital security to be maintained by the Operator using blockchain or DLT-based technologies. Indeed, the same considerations that apply to an issuer register of securities in relation to certificated units of a UK security (under ss. 1134, 1135 and 1138 of the Companies Act 2006) apply equally to an Operator register of securities in relation to uncertificated units of a UK security: see paragraph 18 of Schedule 4 to the USRs. However, we should note that as regulation 34(3) of the USRs contemplates the giving of an "issuer-instruction" by or on behalf of the issuer of a UK security for new issues in uncertificated form, some of the points we identify further below in our responses on the supervisory requirements applicable to instructions made by means of a "relevant system" under the USRs will apply: see the definition of "issuer-instruction" in regulation 3(1), regulation 3(2) and paragraph 5 of Schedule 1 to the USRs. Accordingly, new issues of a UK security in uncertificated form in a "relevant system" under the USRs are only likely to be practically possible, with the high degree of legal certainty required for the operation of systemically important financial market infrastructure (see Principle 1 (*Legal basis*), Key Consideration 1 of the CPMI-IOSCO Principles for financial market infrastructures), if a suitable statutory amendment is made to the USRs and/or the UK CSDR, and/or suitable formal guidance is given by the Bank of England as the relevant competent authority, to clarify the requirements that the security and communication protocols used in a blockchain or DLT-based system must satisfy in order to comply with Article 35 of the UK CSDR (as to "international open communication procedures") and any relevant requirements of the USRs applying to "properly authenticated dematerialised instructions".

¹⁶ As a matter of English law, we have not identified any relevant private law considerations that might prevent or impede the valid entry up of equitable entitlements or contractual rights in or in relation to UK securities on a record maintained by the CSD, custodian or other intermediary for its participants or clients. However, there may be relevant private law considerations that affect the *transfer* of such equitable entitlements or contractual rights after issue (see our responses to Questions 7 and 8 below); and there may be relevant regulatory or supervisory obligations to which the CSD, custodian or other intermediary is subject in relation to the form, content and security of the records that it keeps in a blockchain or DLT-based system and/or the standards for the communication procedures used in the system (on this point, see for example our comments above in relation to the requirement for a CSD to use "international open communication procedures" under Article 35 of the UK CSDR). Further, if the records of the CSD, custodian or other intermediary record a statutory or other entitlement constituted under a foreign law, relevant considerations under that foreign law will determine whether it is possible validly to create such an entitlement in or in relation to the underlying UK security on a distributed ledger or other structured record utilising blockchain or DLT-based technologies.

¹⁷ As we have previously noted, the Law Commission has proposed that certain "electronic trade documents" should be recognised as being subject to laws on negotiability, bailment and possessory security interests in the same way as their paper equivalents: see *Electronic trade documents: Report and Bill* (published 16 March 2022). However, these proposals do not extend to shares, debentures or any other types of security that will be the subject of the UKJT's proposed Legal Statement on Digital Securities.

form (with the legal title of a holder to the rights embodied by the instrument constituted or evidenced by its possession of the instrument).

As a result, if an issuer wishes to issue a digital UK security under a direct-holding model, even if its economic equivalent in the traditional paper-based environment would be a negotiable security¹⁸, that UK security would need to be issued either onto a relevant issuer register of securities (as "certificated" units of the security outside of a "relevant system" under the USRs) or on a relevant Operator register of securities (as "uncertificated" units of the security in a "relevant system", such as the CREST relevant system).

However, under an indirect-holding model, it would be possible to issue a negotiable (bearer or order) UK security¹⁹ into the possession of a CSD, custodian or other intermediary (or their nominee) and for the relevant intermediary to create equitable entitlements, contractual rights or (under foreign law) some form of statutory entitlement for its participants or clients in or in relation to the underlying negotiable security. Under such a model, the relevant entitlements or rights exist as independent equitable or legal choses in action or rights *in rem* separate from the corresponding rights constituted by the possession of the underlying negotiable UK security (although, being legally and economically "derivative" from the underlying security, the totality of the rights constituted by any intermediated holding cannot exceed the totality of the rights held by or for the relevant CSD, custodian or other intermediary through the possession of the underlying security).

3 Can a blockchain or DLT-based system be used as a register of digital securities?

Yes, for the reasons we have outlined in our response to Question 1 above, it should be possible in principle for a blockchain or DLT-based system to be used as a register for digital UK securities (i.e. under a direct-holding model).

However, we would make the following additional observations in relation to our response.

- (1) As we have already indicated, and as we discuss in greater detail in our responses below, in order for an Operator register of securities (under the USRs) to use blockchain or DLT-based technologies, we think it likely that certain modifications to the USRs and related legislation will be desirable or need to be made, and/or supportive formal guidance issued by the Bank of England as the relevant competent authority. Specifically, this will be necessary to provide the high degree of legal certainty that systemically important financial market infrastructures require for the operation of their systems²⁰ with particular reference to the communication procedures, account structures and settlement finality requirements to which a CSD (and operator of a "relevant system") is subject under the applicable UK statutory framework. It is not, in our view, sensible, helpful or practicable to analyse the status of a register of digital UK securities (constituted as an Operator register of securities under the USRs) separately or in isolation from the communication networks, technological structures and broader system integrity considerations that support the safe, efficient and effective holding and transfer of legal title to uncertificated units of a security (with finality) across the register.
- (2) While it would be possible in principle for a blockchain or DLT-based system to act as a simple issuer register of digital UK securities, unless the system qualifies as a "relevant system" under the USRs, no valid transfer of title to units of the security could be effected across the issuer register in response to an electronic instruction received by or by means of the system unless that electronic instruction qualifies, as a matter of law, as a "proper instrument of transfer" (and, if required by the relevant terms of issue for the share or other security, a paper share certificate or other certificate of title is lodged with the transfer). As we have indicated in our introductory remarks to this response, such a proper instrument of

¹⁸ We have already noted that this is the legal mechanism by which money market instruments (which, in physical form, are issued as negotiable instruments) are issued and held in "uncertificated" form as "eligible debt securities" in the CREST relevant system: see the definition of "eligible debt security" in regulation 3(1) of the USRs.

¹⁹ However, as we have noted above, it is no longer lawful for a UK company to issue a share as a negotiable, bearer security: see section 779(4) of the Companies Act 2006 (as amended by section 84 of the Small Business, Enterprise and Employment Act 2015).

²⁰ See Principle 1 (*Legal basis*), Key Consideration 1 of the CPMI-IOSCO Principles for financial market infrastructures (April 2012).

transfer will (as a matter of law) need to be "stampable". This legal requirement, and the practical considerations associated with HMRC's/the Stamp Office's operational standards for the processing of a proper instrument of transfer before stamping (and the production of evidence of payment stamp duty) will, in our view, create a number of practical (although potentially not insurmountable) issues for a blockchain or DLT-based system (which is not a "relevant system" under the USRs) that wishes to provide an efficient and effective straight-through-process for the holding and transfer of legal title to (certificated) UK shares or certificated units of another UK security. Only a system that qualifies as a "relevant system" under the USRs may permit the holding and effective transfer of title to a UK security (solely upon and subject to the rules, protocols and operating standards of the system) without a share certificate or other certificate of title (where required by the terms of issue for the security) and a paper or electronic "proper instrument of transfer"²¹. We note that recently HMRC/the Stamp Office has been prepared to stamp an electronic form of a share transfer executed electronically and this (or a print-out of it) may be accepted by company registrars. In practice, this is not yet much used and we understand that registrars generally expect to receive a paper transfer form, duly executed, and delivery of any relevant share certificates. We would, however, expect any relevant electronic forms to be accepted by HMRC/the Stamp Office if they satisfy HMRC's/the Stamp Office's own operating rules, protocols and standards (which, currently, are unlikely to be compatible with those used in and for a blockchain or DLT-based system).

This means that, while blockchain or DLT-based technologies could be used for an issuer register of securities, in practice it may presently prove difficult to register a transfer of title to certificated units of a UK security in a register otherwise than in response to (and by manual processing of) the receipt of a "proper instrument of transfer" executed by or on behalf of the transferor (and any relevant share or other certificate of title). Any purported transfer of title in the issuer register in response to a purely electronic instruction received by or through the relevant blockchain or DLT-based system (that does not otherwise satisfy the legal requirements for a "proper instrument of transfer") would be void and ineffective. If it is determined to be impracticable to process a "proper instrument of transfer" under a straight-through-process on and subject to the rules, protocols and operating standards of the blockchain or DLT-based system, the system would need to operate as a "relevant system" under the USRs. As a "relevant system", the person responsible for the operation of the blockchain or DLT-based system would need to be authorised or recognised as a UK or third country CSD (see the definition of "Operator" in regulation 3(1) of the USRs) and the system would need to comply with the requirements of the USRs (including the operating and other conditions set out in Schedules 1 and 4 to the USRs).

- (3) Authorisation or recognition as a CSD is a considerable regulatory ask: it is not for a lightly capitalised fintech company or other business that is expecting a "light-touch" regulatory burden when seeking to be a system for the holding and transfer of title to digital UK securities.

In reality, unless a practical solution (in co-operation with HMRC/the Stamp Office) can be found to allow the use of an electronic "proper instrument of transfer" to effect a transfer of legal title under a straight-through-process using blockchain or DLT based system rules and protocols outside of the USRs (and the terms of issue do not require the lodging of a paper certificate of title) and/or the law were to be amended, in relation to the recording of legal or equitable title to digital UK securities, a blockchain or DLT-based system (without an operator authorised or recognised as a CSD under the UK CSDR and, where applicable, FSMA) would need to be operated (maintained, kept and entered up) by a business acting either:

- (a) as a "simple" registrar receiving and updating its blockchain or DLT-based registrar (as the issuer or, more likely, as agent for and on behalf of the issuer of the securities) in response to (electronic or paper) proper instruments of transfer

²¹ See section 770(1)(a) of the Companies Act 2006 and Palmer's *Company Law* at paras. 6.427 and 6.432.

lodged with it by the transferring member or other holder of the relevant securities²²; or

- (b) as a custodian under an indirect-holding model, in which the custodian would maintain blockchain or DLT-based records for its clients of their equitable entitlements constituted under trust in or in relation to the underlying UK security (and/or of their contractual rights where, for example, absolute title to the underlying security has been transferred to the custodian under a stock loan, repo or similar absolute title transfer arrangement).

Any person carrying on the business of a custodian in the UK would, unless exempt, need either to be authorised under FSMA (and its regulatory permissions would need to include "safeguarding and administering investments" within Article 40 of the RAO) or authorised or recognised as a CSD.

A business acting as an immobilising CSD under an indirect-holding model in relation to UK securities would need to be authorised or recognised as a CSD under the UK CSDR and (if a UK CSD) FSMA – but it would not be an "Operator" under the USRs. It would not be an Operator under the USRs because its blockchain or DLT-based system would not be the legal register or primary record of entitlement to the UK securities as against the issuer – that being the register on which the CSD or its nominee is entered as holder – and so the CSD's records would not constitute the relevant "Operator registers of securities" under the USRs.

Transfers of a participant's or client's equitable entitlements or contractual rights through such "intermediated" systems under an indirect-holding model would not require a "proper instrument of transfer" (as the transfer would be effected outside of s. 770 of the Companies Act 2006). However, any such transfers would potentially raise ss. 136 and 53(1)(c) LPA concerns (which we discuss further in our response to Questions 7 and 8 below).

4 Is a blockchain or DLT-based system for digital securities required to comply with the requirements of the Uncertificated Securities Regulations 2001?

As we have explained in our response to Question 3 above, if the functionality of the blockchain or DLT-based system is intended to support the valid transfer of title to a UK share or units of a UK debt security without the requirement for a paper or electronic "proper instrument of transfer" (and, if required by the relevant terms of issue, lodging of the relevant paper share or other certificate of title and HMRC/Stamp Office evidence of the payment of stamp duty), then the system would indeed need to comply with the requirements of the USRs (unless a new regulatory or statutory approach were established).

In our response to Question 3, we have outlined some alternative models which might be operated as part of a blockchain or DLT-based system that is not a "relevant system" for the purposes of the USRs.

In the case of a direct-holding model, unless a practical solution can be found (in co-operation with HMRC/the Stamp Office) to support the straight-through-processing of an electronic "proper instrument of transfer" solely under the rules and protocols of the blockchain or DLT-based system, this would require the operator to maintain, keep and enter up the issuer register of UK securities (using blockchain or DLT-based technologies) in response to delivery of "proper instruments of transfer" (and any relevant certificates of title) lodged with it as *registrar*.

In the case of an indirect-holding model, the operator would maintain its records (using blockchain or DLT-based technologies) to constitute or evidence its participants' or clients' equitable

²² The performance of pure registrar functions is not in itself a regulated activity in the UK requiring authorisation under the UK regulatory system. However, depending upon the model used and any additional functions performed by the registrar, it might need to be determined whether the registrar is "arranging deals in investments" within Article 25 of the Financial Services and Markets Act 2000 (Regulated Activities) Order 2001 (the "RAO").

entitlements (or contractual rights), or statutory entitlements (under foreign law), in or in relation to the underlying UK securities. Under English law, and subject to our observations in our responses to Questions 7 and 8 below, any transfer of such equitable entitlements (or contractual rights) could be validly effected in response to an electronic instruction received by or through the operator's blockchain or DLT-based system.

Stapling

"Stapling" here refers to one or more legal techniques whereby the holder of legally enforceable rights is identified by reference to the holder of a cryptoasset.

5 By which mechanisms can rights and interests (including legal and equitable interests) be legally stapled to a cryptoasset or other entry in a blockchain or DLT-based system in order validly to constitute a digital security?

In the broad sense of "stapling" as used for the purposes of Questions 5 and 6, we consider that the following mechanisms are available under English law for the valid constitution of a digital UK security or a digital UK entitlement to a security.

- (1) In a blockchain or DLT-based system operating as a "relevant system" under the USRs, legal title to a UK security may be constituted or evidenced by maintaining, keeping and entering up a relevant "Operator register of securities" that complies with the requirements of regulations 20 to 31 of the USRs (and the related provisions of Schedules 1 and 4 to the USRs). As noted previously, we consider below some potential modifications to the USRs (and related legislation) that (together with or in the alternative to formal supportive guidance from the Bank of England as competent authority) we believe would be necessary or appropriate to support the holding and transfer of title to UK securities by means of a blockchain or DLT-based system that is operating as a "relevant system" under the USRs.
- (2) In a blockchain or DLT-based system for the holding and transfer of legal title to UK securities (that is not a "relevant system" under the USRs), such title may be constituted or evidenced by maintaining, keeping and entering up the relevant issuer register of securities that complies with the relevant requirements of Part 8, Chapter 2 of the Companies Act 2006 (for certificated shares); Part 19 of the 2006 Act (for certificated debentures); and sections 1134, 1135 and 1138 of the 2006 Act and the Companies (Company Records) Regulations 2008 (for both certificated shares and debentures).
- (3) In a blockchain or DLT-based system for the holding and transfer of equitable title to UK (or other) securities, or the holding and transfer of English law contractual rights in relation to such securities, a deed poll (or other legal instrument or contractual agreement) could be executed by the issuer to create a "constitutive" link between the underlying security or pool of underlying securities held by or for the relevant CSD, custodian or other intermediary and the holder of the relevant cryptoasset in the system. Under such a "constitutive" link, the relevant CSD, custodian or other intermediary would declare an English law trust over the underlying security or pool of underlying securities for the benefit of its participants or clients that hold cryptoassets that are identified (in the system) as representing entitlements in or in relation to the underlying security or securities. The quantum of each participant's or client's equitable entitlement would be determined by reference to the informational values of each cryptoasset as recorded in and by the system (and by reference to the terms of the trust instrument or agreement²³). Equally, where or to the extent that the relevant CSD, custodian or other intermediary has been granted absolute beneficial title to the underlying security (or pool of securities) held by or for it for the account of a participant or client, the same records (and legal arrangements) could be

²³ Where the underlying securities are held by or for the CSD, custodian or other intermediary on a "pooled" basis, the relevant participants or clients are likely to be constituted as equitable "co-owners" (equitable tenants in common) of the securities that make up the pool. The holding of a cryptoasset by a participant or client will, in such circumstances, constitute or evidence a fractional equitable entitlement in relation to the underlying pool of securities. Where the underlying security is held specifically for the account of the participant or client alone, its interest in the security is likely to be constituted as an absolute, beneficial entitlement to the security and the value of its cryptoasset will be determined accordingly.

used to constitute or evidence that participant's or client's contractual rights in relation to the underlying security (or pool of securities) – or, more accurately, the contractual obligation of the "issuer" to deliver or otherwise account for "equivalent" securities (to the relevant underlying security or pool of securities) to the participant or client.

- (4) In principle, although we think in practice less likely or commercially attractive under modern operating models, a blockchain or DLT-based system could be used to constitute "possessory" title to an underlying negotiable security²⁴. This could be based on a legal model which was utilised in the former Central Moneymarkets Office for money market instruments (operated by the Bank of England and, subsequently, CRESTCo Limited²⁵). Under this model, underlying definitive, identified and segregated UK negotiable instruments could be held in a vault or other secure location in the UK by (or on behalf of) the CSD, custodian or other intermediary (as the depositary) on a non-fungible basis. The depositary would, in its capacity as a bailee, "attorn" (under a deed poll or other legal instrument) its actual possession of each individual, identified and segregated instrument to the bailor holding the cryptoasset (linked by number or other suitable identifying mechanism to that specific instrument) on the relevant distributed ledger or other structured record. However, as we say, we do not consider that the likely administrative and other costs associated with such a definitive note, non-fungible model are likely to make this a viable solution under modern conditions for the holding and transfer of title to securities.

We would add that, in our view, it would not be helpful (and would in fact lead to legal uncertainty and potential operational complexities) to regard the cryptoasset that is "constitutively" linked to a share or other security to be a separate or independent item of property from the share or security (or related contractual obligation) itself. In our view, under such "stapling" or "tethering" arrangements, the relevant cryptoasset should be viewed in law (and in equity) as a mere mechanism for (or an incident of) the holding and transfer of title (equitable, contractual or possessory) to the underlying share(s) (or contractual obligation to deliver or account for "equivalent" shares or other securities). There remains only one relevant asset – the share, security or contractual obligation. The method for the holding and transfer of title to that asset should be governed exclusively by the terms of issue of the share or other security (or the agreement governing the relevant contractual obligation). Subject to any relevant requirement for applicable "connecting factors" (see our responses to Questions 11 and 12 below), we consider that any proprietary issues affecting any such asset should be determined exclusively by reference to the law under which the share or other security is constituted (or the governing law of the agreement for the contractual obligation concerned).

It would be possible, of course, to have a purely "synthetic" holding and transfer system in which there are no underlying assets, but simply a shadowing of performance of a security or a portfolio of securities in the market place. In that event the participant in such a system does not hold a security or an interest in a security, so there is no security or interest in a security that needs to be "stapled" to the rights the system may give the participant. Any other approach would result in excess claims against the issuer: e.g. for repayment on maturity of more capital than raised by a bond issue or of claims for dividends or interest in relation to more securities than are in issue.

6 Are digital securities capable of having the effects of a negotiable instrument? If so, in what circumstances could a digital security instrument acquire negotiable status?

We consider the intangible nature of a digital UK security (or a digital UK entitlement to a security) to be inimical to the categorisation of the asset as a negotiable instrument under current English law. It is not generally possible to "possess" a purely intangible digital security and, under current English law, amenability or reducibility to possession is a necessary component of negotiability.

In essence registered securities are not negotiable instruments. While bearer instruments may be regarded as negotiable, we note that present systems dealing with bearer instruments for security reasons do not involve the transfer of physical bonds and coupons, nor is there any demand for

²⁴ The model could not be used where the underlying security is a registered security. A registered security lacks the essential quality of "possessability" which is fundamental to the bailment proposition set out in this paragraph.

²⁵ CRESTCo Limited was the former name for EUI before CRESTCo's merger into the Euroclear Group of companies. The CMO ceased operation when money market instruments "migrated" (as eligible debt securities) to the CREST relevant system in 2003.

this. Where there are satisfactory systems of record for entitlements in relation to the whole issue, this provides an effective method for dealings in interests in those securities and negotiability would add nothing. We cannot see any need for securities held in this way to have the characteristics of negotiability, whatever digital technology is involved in recording those interests.

We think bearer instruments are not necessary for dealings in the securities of English companies and we believe government policy is in accord with that view.

We would also note that the absence of the availability of the rules or principles of negotiability under English law for digital securities should not reduce or vitiate the protections afforded by English law for the integrity and finality of the title of a transferee to such securities. In this context, for example, when money market instruments (held in certificated form as negotiable securities) migrated as uncertificated "eligible debt securities" under the USRs to the CREST relevant system, an opinion was obtained from Richard Sykes QC to the effect that the "innocent acquirer" provisions of (what is now) regulation 35 of the USRs ensured that a transferee of an uncertificated unit of an eligible debt security was in no worse position (as against any prior defects in title of the transferor) than a transferee (as a holder in due course) of a certificated negotiable money market instrument²⁶.

Similar innocent acquirer rules apply at common law to shares or other registered securities constituted under English law where the transferee is able to get in the legal title to the shares or other registered securities²⁷. However, we recognise that there is no current innocent acquirer rule for the transfer of UK equitable entitlements in or in relation to a security (or pool of securities). We have, previously expressed our support for the extension of such a rule to intermediated securities (and we would, equally, support such an extension irrespective of whether such intermediated securities are recorded on a distributed ledger or other structured record or in older, legacy systems)²⁸.

Transfers

7 By which mechanism (such as negotiation, legal assignment, novation or equitable assignment) are rights to digital securities capable of being transferred by reference to a blockchain or DLT-based system?

We have previously expressed the view that, under English law, the "on-chain" transfer of a digital asset is effected under a legal process that is equivalent or analogous to a novation²⁹. Equally, we consider novation to be the legal process by which legal title to UK shares or other UK securities recorded on a legal register, and equitable title to shares or other securities constituted or evidenced by a UK intermediated security, is transferred³⁰. Accordingly, we consider that novation is the legal process by which legal title to a digital UK security, or equitable title to a digital UK entitlement to a security (and any related or substituted contractual right), is transferred by way of a state change to the distributed ledger or other structured record as the relevant legal register of securities or record of equitable entitlements (contractual rights).

We do not consider a transfer of title effected by means of a state change to the relevant distributed ledger or other structured record maintained as part of a blockchain or DLT-based system to be effected, as a matter of English law, by way of negotiation, legal assignment or equitable assignment.

However, in principle and unless the terms of issue of the relevant digital security or the terms that constitute the relevant equitable entitlement (or related or substituted contractual right) prohibit such action, we consider that an "off-chain" transfer of rights in or in relation to digital securities might be effected by an equitable assignment, trust, charge or equitable mortgage. For example, in

²⁶ See the Bank of England, *The Future of Money Market Instruments: A Consultation* (1999), Appendix II.

²⁷ See *Dodds -v- Hills* (1865) 2 H&M 424; and *Ireland -v- Hart* [1902] 1 Ch. 522.

²⁸ See Chapter 7 of *Intermediated securities: who owns your shares? A scoping paper* (published by the Law Commission on 11 November 2020).

²⁹ See our paper, *Digital assets: the limits of the concept of "possession"* at paragraph [10] and footnote 6. In recent Consultation Paper on *Digital Assets* (published on 28 July 2022), the Law Commission also found the analogy to novation when considering the transfer of digital assets to be helpful: see paragraphs 13.117 to 13.124.

³⁰ See our paper, *Digital assets: the limits of the concept of "possession"* (supra).

much the same way as an equitable mortgage can be taken over certificated shares by deposit of the share certificate (and any related stock transfer form and security power of attorney) by way of security with an equitable mortgagee³¹, so we believe an equitable mortgage might be effected over a digital UK security by giving exclusive control to the mortgagee (or its agent) over the private key associated with the mortgagor's legal title to the digital security (or equitable title to the digital entitlement to a security).

An equitable interest or right can be created by change of control of the relevant private key without any state change to the distributed ledger or other structured record (on which the mortgagor/chargor will still be recorded as holding legal title or its equitable entitlement). Equally, subject to any prohibitive terms of issue or contract governing the equitable entitlement (or related or substituted contractual right) it would be possible under English law to effect "off-chain" a contractual equitable assignment (not supported by a change in control of the relevant private key) or create a trust over a transferor's legal title (or sub-trust over its equitable title) once the transferor has done everything in its power to divest itself of its title under the principle in *Re Rose [1952] Ch. 499*³².

However, issues of the perfection and the priority of any "off-chain" transfer of rights in or in relation to a digital security under an equitable process (whether by way of equitable assignment, trust, charge or equitable mortgage) are likely to arise because:

- (1) in relation to uncertificated units of a security held in a blockchain or DLT-based system as a "relevant system" under the USRs, there are limitations on notices of any trust (expressed, implied or constructive) that may be entered on the relevant Operator register of securities (see regulation 23(3), USRs) or that may be receivable or recognised by the Operator (see regulation 40(3), USRs);
- (2) similar considerations apply in relation to certificated units of a security held in a blockchain or DLT-based system that is not operating as a "relevant system" under the USRs: see, for example, section 126 of the Companies Act 2006; and
- (3) we would expect, in practice, similar prohibitions on the entry and receipt of notice of trust and other equitable interests to be included in the terms under which a CSD, custodian or other intermediary agrees to maintain records of equitable entitlements (and related or substituted contractual rights) as part of a blockchain or DLT-based system operated by it under an indirect-holding model.

8 Would a transfer of digital securities necessarily be required to meet the requirements of s.136(1) or s.53(1)(c) of the Law of Property Act 1925? If those requirements apply, is a blockchain or DLT-based system capable of meeting them?

Under a direct-holding model under which the digital securities are recorded on an Operator register of securities under the USRs, any transfer through the blockchain or DLT-based system would not be required to meet the conditions set out in s. 136(1) or s. 53(1)(c) of the Law of Property Act 1925. The formality requirements specified by these sections are disapplied (if they would otherwise apply), in relation to a transfer of title to uncertificated units of a security by means of a "relevant system", under regulation 38(5) of the USRs.

Under a direct-holding model under which the digital securities are recorded on an electronic issuer register of securities (i.e. the relevant blockchain or DLT-based system is not operating as a relevant system under the USRs), any transfer of legal title to the securities may only be effected in response to the lodging and due execution by or on behalf of the transferor of a "proper instrument of transfer" (that is, a stock transfer form) and any related certificate of title (e.g. a share certificate). We consider this procedure, in any event, to be an incident of a legal process for novation – and not for an assignment of a chose in action under s. 136 or the disposition of an equitable interest under s. 53(1)(c).

³¹ A corresponding procedure for the taking of an equitable mortgage or charge over uncertificated units of a security is made available through the "escrow account" facility in the CREST system.

³² See the discussion on the principle in *Re Rose* in Underhill & Hayton, *Law of Trusts and Trustees* at paragraphs [11.31] to [11.34].

Under an indirect-holding model, we consider the better view (as outlined in our response to Question 7 above) to be that the transfer of any equitable entitlement (and any related or substituted contractual right) in or in relation to a security by means of a blockchain or DLT-based system to be effected by a process of novation. On this basis, we do not consider that the formality requirements of s. 136 of the LPA³³, or s. 53(1)(c)³⁴, would have to be satisfied in order to make the transfer effective as against the relevant CSD, custodian or other intermediary or any third party.

However, if we are wrong in our views in relation to the formality requirements of ss. 136 and 53(1)(c) as applicable to digital UK securities or digital UK entitlements to securities, we consider that a blockchain or DLT-based system would indeed be capable of meeting the requirements. On this, we broadly align with and adopt the analysis set out by the Law Commission in its Consultation Paper on *Digital Assets* at paragraphs 17.36 to 17.39.

In view of the importance of resolving these issues to support market confidence in the UK financial, capital and other markets (and the need for a high degree of legal certainty as to the validity and effectiveness of transfers in systems governed by English law, both domestically and internationally), we would strongly recommend (notwithstanding what we consider to be the "better view" above) that there be statutory law reform for intermediated securities (whether held in blockchain or DLT-based systems or legacy system) to clarify that the formality requirements of ss. 136 and 53(1)(c) do not apply (if they would otherwise do so) to any transfer of title to intermediated securities (whether constituted as English law equitable entitlements or as contractual rights governed by English law).

Corporate requirements for UK companies

9 In relation to transfers of digital securities, is a "proper instrument of transfer" for the purposes of s.770 Companies Act 2006 ("CA") required? If so, what may amount to such an instrument in the context of a blockchain or DLT-based system?

As we have explained in our responses to Questions 3, 4 and 8, we consider that under current English law it is not possible to make a valid and effective transfer of legal title to digital UK securities without the lodging of an electronic or paper "proper instrument of transfer", unless the relevant blockchain or DLT-based system is operated as a "relevant system" under the USRs. If the system is not such a "relevant system", a "stampable" proper instrument of transfer (together with any required paper certificate of title and evidence of the payment of stamp duty) would need to be received and processed by the operator of the blockchain or DLT-based system (or the issuer) in order to effect a valid transfer of legal title to the securities. As we have discussed in our introductory remarks and elsewhere in this response, we consider that the legal requirement for a stampable proper instrument of transfer (and, if required by the terms of issue, a paper share or other certificate of title) may create material (but potentially not insurmountable) issues for the use of a blockchain or DLT-based system for the straight-through-processing of an electronic instrument to transfer legal title to a UK share or other UK security (solely on and subject to the system's rules, protocols and operating procedures).

If the blockchain or DLT-based system is operating as a "relevant system" under the USRs, a transfer of title to uncertificated units of a UK security (by registration of the transfer on an Operator register of securities) may be effected in response to a "properly authenticated dematerialised

³³ In this context, we note that s. 136 of the LPA could in principle apply to the assignment of the *equitable* choses in action constituted by the equitable entitlement recorded on the distributed ledger or other structured record as intermediated securities: see, on this point, *Chitty on Contracts (34th ed.)* at para. 22-012. Clearly, to the extent a distributed ledger or other structured record constitutes or evidences a legal chose in action (e.g. the connected or substituted contractual rights under an indirect-holding model where the CSD, custodian or other intermediary has absolute title to the underlying security or securities), s. 136 could apply if the "on-chain" transfer of those rights was considered to be effected by way of a process of assignment.

³⁴ In this context, we agree with the *obiter dicta* of Hildyard J. in *SL Claimants -v- Tesco PLC [2019] EWHC 2858 (Ch.)* at para. [116].

instruction" that is a "system-member instruction" attributable to the transferor in accordance with paragraphs 20 and 21 of Schedule 1 to the USRs³⁵.

10 Is an allotment of shares or debentures capable of being registered by means of a blockchain or DLT-based system, for the purposes of s.554 and s.741 CA?

If the distributed ledger or other structured record maintained in the blockchain or DLT-based system is constituted as the issuer register of securities (see our responses to Questions 1, 3 and 5), then the answer is yes. We see no reason why the requirements of ss. 554 and 741 CA cannot be satisfied through the operation of the system.

Equally, subject to the considerations we outline below in relation to the communication procedures used by blockchain or DLT-based systems as "relevant systems" under the USRs, we consider that such systems could be used for new issues of uncertificated units of a UK security under regulation 34 of the USRs.

It may, however, be useful to have a clarification of what exactly is an "offer to the public" of securities for the purposes of s 755-56 of the Companies Act 2006. This could be helpful in expanding the size and range of companies able to attract investment.

11 Can a blockchain or DLT-based system serve as a register of members or debenture holders for the purposes of compliance with s.113 and 743 CA?

In our view, the key qualifying element in both sections 113 and 743 of the 2006 Act is that the register of members or debenture holders must be "*kept by the company*"³⁶. In decentralised systems, where certain functions may be performed by participants (or different groups of participants) other than a centralised, trusted "operator", there may therefore be a question as to whether the performance of these functions by persons other than the issuing company (or its agent) results in the conclusion that the relevant register is not being "kept by the company". We acknowledge that this will ultimately depend upon the structure of the arrangements, and certain technological advances (such as smart contracts capable of being deployed by or on behalf of a company on a decentralised system) may facilitate compliance with this requirement.

We consider that, in order for a UK company to be considered properly to "keep" the relevant register for the purposes of ss. 113 and 743, it (or its agent) must assume and exercise (sole) legal and operational control for the performance of the following minimum functions (the "register maintenance functions"³⁷):

³⁵ See the definitions of "dematerialised instruction" and "system-member instruction" in regulation 3(1) of the USRs. The requirements for "proper authentication" of a dematerialised instruction and for the "attribution" of a dematerialised instruction to a person are explained in regulation 3(2) of, and paragraphs 5(3) and 5(4) of Schedule 1 to, the USRs. As we discuss further below in our response to the UKJT's overarching question, although the scheme of the USRs (and related legislation) is technology-neutral, there are certain elements of the statutory framework that may not fit easily with the communication protocols, operational structures and settlement finality considerations applicable to some blockchain or DLT-based systems. This is why we recommend below a review and potential amendments to the relevant statutory framework and/or the issue of formal supportive guidance from the Bank of England (as the relevant competent authority) on certain, specific issues. This is especially the case in light of the fact that systemically important financial market infrastructure, such as a "relevant system" operated by a CSD, is required to be operated under a legal framework that delivers a "high degree of legal certainty": see Principle 1 (*Legal basis*), Key Consideration 1 of the CPMI-IOSCO Principles for financial market infrastructures (April 2012).

³⁶ Equally, in relation to an Operator register of securities maintained by an Operator of a relevant system under the USRs, legal and operational control of the functions contemplated by regulations 20 to 23 of, and the relevant paragraphs of Schedule 4 to, the USRs to "maintain, keep and enter up" the Operator registers must be vested in the Operator and in no other person in order to satisfy the Operator's statutory obligations under those regulations.

³⁷ In relation to uncertificated units of a security, we believe that the corresponding functions imposed upon an Operator of a "relevant system" in relation to the Operator registers of securities should be performed by the Operator in order to satisfy its "maintenance, keeping and entry up" obligations under the USRs. However, in relation to the obligation to keep open for inspection and the taking of copies, this function is modified by Schedule 4 to the USRs in relation to uncertificated units of a security. The scheme of the USRs is to require the participating issuer of an uncertificated security to maintain a "record" of uncertificated shares or uncertificated corporate securities. The record is to be regularly reconciled with the related Operator register of securities: see paragraphs 5(2) and 15(2) of Schedule 4. It is this record, and not the Operator register of securities, that must be made available for inspection by the public and for copies: see paragraphs 6 and 15(5) of Schedule 4.

- (1) keeping the relevant register available for inspection and copies in accordance with ss. 114 (in relation to shares) and 744 (in relation to debentures)³⁸, as well as the requirements of the Companies (Company Records) Regulations 2008;
- (2) registering on the relevant register of securities a transfer of title to a share or units of a debenture (which, subject to the discretionary powers of correction, refusal or prevention outlined (5) and (6) below, we believe could be an automatic process that would not require a conscious "approval" by the issuer or its agent to each relevant entry up on the relevant register);
- (3) entering up relevant details of a member or other holder of securities to whom title to the securities has been transmitted by operation of law³⁹;
- (4) removing stale entries from the relevant register under, for example, section 121 of the 2006 Act⁴⁰
- (5) making correcting entries to the relevant register – whether to correct administrative, minor errors (without the requirement for a court order) or to correct material errors in response to an order for rectification made by the court under s. 125 of the Companies Act 2006⁴¹;
- (6) refusing or preventing the registration of a transfer of title to shares or units of a debenture on the relevant register of securities if it has notice that the transfer is (a) prohibited by order of a court in the United Kingdom, (b) prohibited or avoided by or under an enactment or (c) a transfer to a deceased person⁴² and, potentially, in other circumstances⁴³; and
- (7) taking adequate precautions (a) to guard against falsification, and (b) to facilitate the discovery of falsification of the relevant register under section 1138 of the 2006 Act⁴⁴.

We believe, therefore, that if under the operational procedures, protocols and rules of the relevant blockchain or DLT-based system, these "register maintenance functions" can properly be considered to be under the exclusive legal and operational control of the issuer (or its registrar), then the relevant register will be considered to be "kept by the company" for the purposes of sections 113 and 743 of the 2006 Act⁴⁵.

12 Can a DLT-based system serving as a register of members or register of debenture holders meet the requirements applicable to such registers, including that the register be located in the registered office or single alternative inspection location of an issuer, as well as requirements under the Companies (Company Records) Regulations 2008/3006, amongst others?

Companies law "locational" and other requirements

For the reasons we have set out in our response to Questions 1 and 3, we consider that it should be possible for a DLT-based system serving as a register of member or register of debenture

³⁸ As explained above, in relation to uncertificated units of a security, the company must also maintain a relevant "record" for inspection and copy purposes.

³⁹ See the corresponding function performed by an Operator of a "relevant system" under regulations 27(6) and (7) of the USRs.

⁴⁰ An Operator of a "relevant system" has corresponding functions under, for example, paragraph 4(2) of Schedule 4 to the USRs.

⁴¹ In relation to the corresponding functions to be performed in relation to the Operator registers of securities, the Operator must put in place procedures that enable it to amend the Operator registers to correct an error (see paragraph 21(3) of Schedule 1 to the USRs). See also the Operator's statutory obligation to register a transfer of title to uncertificated units of a security on an Operator register in accordance with an order of a court in the United Kingdom under regulation 27(5) of the USRs.

⁴² See, for example, the corresponding statutory obligations of an Operator in relation to the registration of title to uncertificated units of a security on an Operator register under regulation 27(2) of the USRs.

⁴³ See, for example, the potential circumstances in which the Operator of a relevant system may refuse to register a transfer of title to uncertificated units of a security under regulation 27(4) of the USRs.

⁴⁴ An Operator of a "relevant system" must perform corresponding functions in relation to the Operator registers of securities: see paragraph 18 of Schedule 4 to the USRs.

⁴⁵ Equally, if the corresponding functions in relation to an Operator register of securities are under the exclusive legal and operational control of the Operator, we believe that the Operator using a blockchain or DLT-based system as its "relevant system" can properly be considered to be discharging its statutory obligations to "maintain, keep and enter up" the relevant Operator register of securities.

holders to meet the (non-locational) statutory requirements applicable to such registers under the 2006 Act and the 2008 Regulations⁴⁶.

As far as the "locational" requirements of the 2006 Act and 2008 Regulations are concerned, we consider that these requirements should only be considered satisfied if the "register maintenance functions" (that we have described in our response to Question 11):

- (1) are performed by (or behalf of) a UK company from or through a "master node"⁴⁷ or other technological implementations (such as through smart contracts) facilitating analogous functionality and other equipment that are located in the registered office (or SAIL) of the company; and
- (2) relevant personnel⁴⁸ of the company (or its registrar) are at all times located in the country or territory of the registered office or SAIL of the company and can be made subject to the jurisdiction of the English courts (or other relevant UK courts for the location of the registered office and SAIL) to make *in personam* court orders (including an order for rectification under s. 126 of the Companies Act 2006).

We refer to the requirements we have described in (1) and (2) above as the "connecting factors". If, in relation to any particular register of securities, they point to the performance of the "register maintenance functions" as being undertaken in or from the company's registered office or SAIL (or the country or territory of the registered office and SAIL), then we believe that the relevant "locational" requirements of UK companies law will be satisfied with respect to the relevant register⁴⁹.

As we have previously suggested under "Our approach and other relevant contextual considerations" at the start of this response paper, we would generally expect such "master node" or other analogous functionality only to be made available to a UK company (or its registrar) under a private, permissioned blockchain or DLT-based system (albeit that we acknowledge that it may be possible for analogous functionality to be deployed, for example via a smart contract, on a decentralised network). As a result, we suspect that in practice (and in order to ensure compliance with the key, "locational" requirements applicable to an issuer register of securities under the 2006 Act and the 2008 Regulations), it will not be possible to operate a public, permissionless blockchain or DLT-based system to support the maintenance, keeping and entry up of an issuer register of securities, unless the technological implementation otherwise facilitates analogous functionality⁵⁰.

Considerations of English private international law

We have concluded that it should be possible, for the purpose of satisfying the "locational" requirements of UK companies law, for a UK company (or its registrar) to put in place operational

⁴⁶ We also believe that, subject to the observations we make in our response to the overarching question at the end of this response on recommended changes to the USRs (and related legislation) to deal with possible issues for "relevant systems" as DLT-based systems with reference to communication procedures, operational structures and settlement finality issues, it should be possible for an Operator register of securities using blockchain or DLT-based technologies to meet the corresponding requirements for such a register under the USRs.

⁴⁷ We use the term "master node" to refer to a node forming part of the blockchain or DLT-based system that gives the operational ability to its operator to refuse to register any proposed transfer of title, to correct an error or otherwise to reverse an entry on the distributed ledger or other structured record – and to do so notwithstanding the prior validation of the transaction under the consensus mechanism used in the system. The functionality operable by use of such a "master node" cannot be prevented or interfered with by the operation of any other node forming part of the system.

⁴⁸ "Relevant personnel" for this purpose includes any employee, consultant or agent of the company (or its registrar) that has the capacity, authority and technical ability to operate the "master node" and other relevant equipment to perform all of the "registrar maintenance functions" for and on behalf of the company.

⁴⁹ Equally, in relation to the Operator registers of securities under the USRs, we believe that if the relevant "connecting factors" point to the performance of the relevant "register maintenance functions" from a location in the United Kingdom, then the Operator registers can properly be considered to be kept by the Operator in the UK. While there is now no longer a statutory requirement under the USRs for the Operator registers to be so kept (the former requirement set out in paragraph 16(1) of Schedule 4 having been repealed), we consider that in practice (and to provide a well-founded legal basis for the *situs* considerations that might potentially affect the Operator registers, the validity and effectiveness of transfers across the registers and the determination of proprietary issues affecting relevant uncertificated units of a security), an Operator of a "relevant system" can generally be expected to seek to keep its Operator registers of securities in the United Kingdom. An Operator will also benefit from the "deemed location" provisions for its Operator registers set out in paragraph 16(2) of Schedule 4.

⁵⁰ We reach a similar conclusion for the maintenance, keeping and entry up of Operator registers of securities forming part of a "relevant system" under the USRs.

procedures and structures to ensure that an issuer register (utilising blockchain or DLT-based technologies) can be considered to be located in a specific place i.e. the company's registered office or SAIL.

On the basis of analogous and similar reasoning, we also believe that a UK company (or, indeed, a CSD, custodian or other intermediary recording UK equitable entitlement to securities and related or substituted contractual rights) might adopt the "connecting factors" we have suggested above with regard to the relevant rules for English private international law. In other words, relevant operational or structural arrangements could be put into place to create a sufficient nexus between the country or territory of the "applicable law" (i.e. the law under which the relevant security is constituted or, under an indirect-holding model, the law governing the system or records for the equitable entitlement/contractual rights) and the country or territory in which the relevant register (or records) are to be considered located. If the "register maintenance functions" can, through the "connecting factors", be properly considered to be performed and executed from the same country or territory as the country or territory of the applicable law, there should be compelling indicators that would enable an English court to conclude that (assuming those factors point to England and English law) English law should govern all proprietary issues affecting digital securities recorded on the register or record using blockchain or DLT-based technologies.

Of course, we must recognise that these issues are complex⁵¹. Accordingly, although we have sought to suggest a practical and rational solution to the "locational" issues created by blockchain or DLT-based systems, we cannot be wholly confident that this solution (or something corresponding to it) would ultimately be accepted by an English court when determining which law should govern proprietary issues affecting particular digital securities. It is for this reason, and the overriding need for a high degree of legal certainty on this issue of private international law, that we would strongly favour either or both of:

- (1) domestic legislative reform to UK companies law (including the USRs) to provide certainty on this issue; and
- (2) implementation of an international solution to determine which domestic law should govern proprietary issues for digital securities held in a blockchain or DLT-based system.

For evident reasons, we would favour a solution in each case which is consistent and which, ideally, adopts a broad approach along the lines of the combined "choice of deemed location or governing law" and reality-check "connecting factors" that we have outlined in our responses to Questions 11 and 12.

Overarching question

Are there any material issues of concern to stakeholders in relation to the issuance and transfer of digital securities under English private law, other than those set out in the Annex to this consultation paper?

The conflict of law concern in the wider context

The usefulness of blockchain and DLT-based systems in relation to the issuance and transfer of securities will depend on confidence that these systems will provide proof of ownership/transfer of title such that securities so held can be used as collateral/borrowed against in the same way that securities held in currently available systems can be.

As well as regulatory and company law issues discussed above, one key consideration is the ascertainment of the law governing the system and the question whether that law requires consideration of other legal systems in order to determine the status of a holding in that system. As DLT systems, for example, involve the holding of records simultaneously in computer systems

⁵¹ We would also have to recognise that, whatever position may come to be accepted under the rules of English private international law or whatever domestic statutory solution may come to be adopted, they would not (in the absence of an adopted and ratified international convention or treaty in the UK and the country or territory of the relevant foreign court), be binding upon the court of a foreign country or territory where, for example, a node or nodes (but not the "master node") of a particular blockchain or DLT-based system may be located.

located around the world and so-called public, permissionless systems may lack an administrative body with responsibility for system integrity, the ascertainment of the applicable law will depend on an express choice of law and the importance of a choice of forum for resolution of disputes will be equally important, so as to ensure that matters can be resolved without becoming mired in complex issues regarding these matters. These are issues that the UKJT has recognised and made recommendations to address in its previous work.

Even if, however, the choice of law is English law and there is an English court or arbitral body agreed for dispute resolution, there may be questions of whether English law requires that the law of some foreign legal system is taken into account. This may depend on what the system is doing and how it is managed. It is fair to say that the more the system and its relationship to users mirrors one of the existing methods of holding securities and interests in them, the less troublesome this will be. Thus, where there is a responsible system operator which is the issuing company or EUI as operator of the CREST system or a regulated intermediary operating from an office in England or Wales, there is no reason to think that problems of identifying and applying a foreign law to aspects of the system or its operation should arise.

On the other hand, if the system has a responsible system operator located in another jurisdiction, the law of that jurisdiction is likely to be relevant. If there is no discernible system operator, difficult questions may arise as to which foreign laws, if any, were applicable and this would impair confidence in the system as the law currently stands. This is particularly so as most legal systems have no settled approach to DLT/blockchain and it is impossible to have any confidence about the effect of a requirement to look to a foreign law, exacerbated where the way that the system has been set up makes it difficult to understand which foreign legal systems may be applicable. It would be worthwhile for the UKJT to consider whether an agreement on a choice of English law which expressly excluded any rule of English law which required regard to be had to a foreign law might be effective and suitable to remove that uncertainty. We would anticipate, however, in most cases systems which are primary systems of record for holdings of securities will, for regulatory reasons, be likely to have a responsible operator with a known location, which would provide clarity on whether any foreign legal system needed to be considered.

We also note that the Law Commission has been tasked with looking at the conflict of law issues relevant to digital assets and this study will be important to resolve uncertainties in this area more widely.

The USRs and other aspects of the statutory framework applicable to FMIs

We are conscious that the UKJT has specifically indicated that it will not seek to address matters of regulation or other aspects of public law. We understand that there are sound reasons for that approach and there are other initiatives presently being undertaken to determine whether the UK's regulatory/supervisory system for systemically important financial market infrastructures is "fit for purpose" to all for the use and adoption of blockchain and DLT-based technologies for the issuance, holding and transfer of digital securities through securities settlement systems operated by a CSD⁵².

However, we consider that it will be important for the UKJT to recognise in its proposed Legal Statement that there are certain important extraneous considerations (outside the limited scope of English private law) that must ultimately be taken into account when considering the legal and operational viability of issuing and transferring digital securities under English law.

We have identified in our responses above, a number of material issues that arise under UK companies law and the rules of English private international law. These ideally should be addressed by appropriate statutory initiatives and are unlikely to be satisfied, with regard to the high degree of legal certainty that participants in the UK's and international financial, capital and other markets rightly expect, by incremental developments of English common law through the courts.

In addition, and importantly, we have emphasised that there are currently a number of legal and practical considerations that might inhibit the use of a blockchain or DLT-based system to support the efficient, straight-through-processing of a valid transfer of title to digital UK securities in

⁵² See, for example, HM Treasury's *UK regulatory approach to cryptoassets, stablecoins and distributed ledger technology in financial markets* (April 2022) at paragraphs 3.15 to 3.19.

response to an electronic instruction, unless the system is operated as a "relevant system" under the USRs. This consideration alone underscores the point, in our view, that it may not be helpful to consider the English private law analysis as affecting legal registers of securities without acknowledging that the practicality of blockchain or DLT-based systems is likely to be affected by broader regulatory, supervisory and public law considerations that will not be addressed in the proposed Legal Statement on Digital Securities.

The merits or otherwise of the recording of legal (or equitable) title to digital securities in blockchain or DLT-based systems operated by CSDs cannot be considered in isolation from the wider safety, efficiency and effectiveness considerations which impact upon the proper operation of such systemically important financial market infrastructures. Specifically, if the current legislative framework supporting the safe, efficient and effective operation of CSDs⁵³ cannot fully and properly accommodate the adoption of new technologies (so as to apply to them in the same way as legacy technologies), then no amount of assurance that might ultimately be provided as to English private law on the use of such technologies for digital assets will deliver the high degree of legal certainty that market participant will require for the use of blockchain or DLT-based systems operated by CSDs under English law.

In our view, although a number of additional issues will need to be addressed in the relevant FMI statutory framework through other governmental initiatives, there are three principal issues raised by new technologies for the safe, efficient and effective operation of systemically important financial market infrastructure in relation to the issue and transfer of digital assets (and that directly affect the responses that may be given to the questions set out in the UKJT's consultation document).

- (1) ***Communication standards:*** The concept of a "properly authenticated dematerialised instruction"⁵⁴ is central to the operation of the USRs. It is at the foundation of important concepts, such as "Operator-instruction", "system-member instruction", "system-participant" and "sponsoring system-participant"; and of important operative provisions, such as regulations 27(2), 27(4), 27(7) and 35, as well as paragraphs 20 and 21 of the USRs. The authentication specifications set by the Operator, for instructions sent or received by means of the relevant system, will (as the Operator must be a CSD which is either authorised or recognised under the UK CSDR) need to be consistent with the requirements of Article 35 (*Communication procedures with participants and other market infrastructures*) of the UK CSDR⁵⁵. This necessitates the use of "*international open communication procedures and standards for messaging and reference data*". Article 2.1(34) of the UK CSDR defines such procedures and standards as "*internationally accepted standards for communication procedures, such as standardised messaging formats and data representation, which are available on a fair, open and non-discriminatory basis to any interested party*". Messaging standards used in certain blockchain or DLT-based systems may well not satisfy this requirement⁵⁶.

⁵³ This statutory framework includes the USRs, the UK CSDR, FSMA, the Financial Markets and Insolvency (Settlement Finality) Regulations 1999 (the "SFRs") and the Financial Collateral Arrangements (No. 2) Regulations 2003 (the "FCARs").

⁵⁴ A "dematerialised instruction" is an instruction sent or received by means of a relevant system (regulation 3(1) of the USRs). Such an instruction is "properly authenticated" (as a general matter) if it complies with the specifications as to authentication set by the Operator in accordance with paragraph 5(3) of Schedule 1 to the USRs.

⁵⁵ See also the like requirements set out in PFMI 22 (*Communication procedures and standards*).

⁵⁶ The issues created by the corresponding provision in Article 35 of the EU CSDR are examined by ESMA in its response to Question 4(a) in its "*Questions and Answers: Implementation of the Regulation (EU) No. 909/2014 on improving securities settlement in the EU and on central securities depositories*". In that document, ESMA indicates that if: (a) there are cases where such internationally accepted standards are not "*available on a fair, open and non-discriminatory basis to any interested party*" or do not exist, the relevant competent authority may allow the use of other messaging standards, until international standards become available; or (b) there are cases where the use of internationally accepted standards that are "*available on a fair, open and non-discriminatory basis to any interested party*" does not "*facilitate efficient recording, payment and settlement*", the relevant competent authority may allow the use of other messaging standards, as long as such lack of efficiency can be evidenced. It might be helpful, for the purposes of Article 35 of the UK CSDR (and, by extension, for the purposes of the requirements for "properly authenticated dematerialised instructions" under the USRs) either: (a) for the Bank of England, in its capacity as competent authority for the supervision of UK CSDs, recognised third country CSDs and for securities settlement systems governed by English law, to replicate elements of this ESMA guidance in UK guidance, or (b) (which may be less desirable if it is felt appropriate to clarify or expand upon the ESMA guidance for the purposes of UK law) to put the ESMA guidance onto a statutory footing, in either case as far as a relevant system (or other securities settlement system) uses, or proposes to use, DLT or similar technologies.

- (2) UTXO-based systems: The term "book entry" is used in various legislative instruments relevant to FMIs⁵⁷. There is some concern that this term may not be applicable to certain types of blockchain or DLT-based systems. There is a material risk that, in the context of the relevant legislative instruments, the term "book entry" may be interpreted as applying to "double-entry bookkeeping systems" i.e. those where every entry to an account requires a corresponding and opposite entry to a different account⁵⁸. Certain blockchain or DLT-based systems, for example those that use UTXO⁵⁹ models, may not execute transactions by making a debit and a corresponding credit entry to a balance recorded in a distributed ledger or other structured record. Depending on the context, therefore, such systems may not be considered to provide or perform "book entry" functions, even though they provide for the electronic recording of digital securities. We acknowledge that the materiality of this risk will depend on the context, and there may be alternative arguments where there is no express or implied reference to double-entry bookkeeping e.g. that there exist other forms of account-keeping, including the keeping of transaction accounts. There are arguments to the effect that such other forms of accounting are no less "book entries" than double-entry account keeping.
- (3) Settlement finality: The concept of "settlement" as used in relevant legislative instruments⁶⁰ or other normative standards⁶¹ related to FMIs imports a level of "finality", "unconditionality" or "irrevocability" that may not be achievable under certain "probabilistic"⁶² models of settlement used in some blockchain or DLT-based systems.

"Control" and financial collateral

As the CLLS Financial Law Committee will make clear in its response to Question 19 of the Law Commission's Consultation Paper on Digital Assets (Consultation Paper 256), we would support a solution to resolve the current problems associated with the concept of "control" to the extent it is used as a tool for effecting on-chain or off-chain transfers or other dispositions of digital assets (including, digital securities) by way of security. This is a particular issue where multiple parties, with potentially competing interests, may split control over a digital asset. The Financial Law Committee supports the development of the more flexible concept of "provision" of digital assets and proposes a joint statutory and industry, legal and technical expert panel solution. Under this proposal, statute would require the courts to have regard to formal guidance issued by such a panel (as an "appropriate body" for the purposes of the statute) on any relevant issue requiring

⁵⁷ The term "book entry securities collateral" is used in the FCARs (see e.g. regulations 3(1) and 19); and the term "book entry" is used in the UK CSDR (see e.g. the definitions of "immobilisation" and "dematerialised form" in Article 2.1(3) and 4; and Articles 3(1) and (2)).

⁵⁸ This interpretative risk is particularly acute in legislation that defines an "account" held in systems within scope of the legislation by reference to the debit or credit of securities to the account. For example, the term "securities account" for the purposes of the UK CSDR is defined in Article 2.1(28) as "*an account on which securities may be credited or debited*". This may be contrasted with the definition of "settlement account" in regulation 2(1) of the SFRs ("*an account at a central bank, a settlement agent or a central counterparty used to hold funds to securities (or both) and to settle transactions between participants in a system*"). However, under the SFRs, a "payment transfer order" is defined as "*an instruction by a participant to place at the disposal of a recipient an amount of money by means of a book entry on the accounts of a credit institution, a central bank, a central counterparty or a settlement agent*"; and a "securities transfer order" is defined as "*an instruction by a participant to transfer the title to, or interest in, securities by means of a book entry on a register, or otherwise*".

⁵⁹ The term "UTXO" refers to Unspent Transaction Outputs.

⁶⁰ See, for example, the definition of "settlement" in Article 2.1(7) of the UK CSDR ("*... the completion of a securities transaction where it is concluded with the aim of discharging the obligations of the parties to that transaction through the transfer of cash or securities, or both*"); and, a "settlement fail" is defined in Article 2.1(15) by reference to the absence of such a settlement ("*... the non-occurrence of settlement, or partial settlement of a securities transaction on the intended settlement date...*"). See also the definition of "settlement" in regulation 3(1) of the USRs.

⁶¹ See, for example, Principle 8 (*Settlement finality*) of the CPMI-IOSCO Principles for financial market infrastructures. Paragraph 3.8.1 of the explanatory note defines "final settlement" as "*the irrevocable and unconditional transfer of an asset or financial instrument, or the discharge of an obligation by the FMI or its participants in accordance with the terms of the underlying contract*".

⁶² Validation models used in certain DLT-based systems provide an increasing degree of confidence as to the finality, unconditionality or irrevocability of a transferee's title to a digital security, but this may only be achievable over an uncertain or undefined period of time that makes the determination of the "moment" or "point" of finality difficult to determine by an *ex ante* rule governing the operation of the system. This may create particular difficulties for such DLT systems that are seeking to observe PFMI 8, KC 1 ("*An FMI's rules and procedures should clearly define the point at which settlement is final*"); or to define, in their rules, the point at which a transfer order becomes irrevocable (see e.g. paragraphs 5(2) and (3) of the Schedule to the SFRs and Article 39(2) of the UK CSDR). See also Articles 39(5) and (7) of the UK CSDR.

determination by the court. The panel would be able to develop its guidance in response to the complex and evolving issues/practices affecting the use of digital assets as collateral by participants in the UK and international financial and other markets.

Information about the CLLS and the Working Group

The City of London Law Society (“CLLS”) represents approximately 17,000 City solicitors through individual and corporate membership including some of the largest international law firms in the world. Its specialist Committees comprise leading solicitors in their respective fields. These solicitors and their law firms operating in the City of London act for UK and international businesses, financial institutions and regulatory and governmental bodies in relation to major transactions and disputes, both domestic and international.

Members of the Working Group are drawn from 3 specialist Committees, Financial Law, Company Law and Regulatory Law and, as well as the chairs of those Committees include members with particular expertise in relation to the holding and transfer of interests in equity and debt securities and a particular interest in the development of the law in relation to DLT/Blockchain systems

Members of the CLLS Working Group

Dorothy Livingston (Herbert Smith Freehills LLP) (Chair and Chair of the Financial Law Committee)

David Pudge (Clifford Chance LLP) (Chair of the Company Law Committee)

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