Blockchain and other forms of distributed ledger technology (DLT) are generating considerable interest both within the financial services industry and in other sectors, such as healthcare. A particular area of focus is in the capital markets community, as FinTech start-ups, market infrastructure providers and global banks evaluate technology and potential use cases.

But there remain many unanswered questions as to: how DLT solutions will evolve to fit into the current regulatory and legal infrastructure of the capital markets; the optimum governance models; and how to balance the technology opportunity against potential risk. The value of transactions involved means that while the potential prize to be delivered by increased market efficiency is considerable, ensuring robust risk management is essential. For the technology to progress towards productivity in 2017, broad industry collaboration, solutions which mitigate risk and emerging regulatory certainty will be critical. DLT is at a point of convergence where the technology, commercial and legal worlds need to evolve to work together to deliver practical solutions.

In October 2016, Hogan Lovells, Innovate Finance and EY published a white paper, Blockchain, DLT and the Capital Markets Journey: Navigating the regulatory and legal landscape, (the “Report”) to help progress the understanding of the key legal and regulatory issues which will need to be addressed if blockchain, or other forms of DLT, are to deliver viable and valuable solutions in the complex, high risk and highly-regulated environment of capital markets. Achieving success in this area will either require developing solutions which conform to the regulatory framework or engaging with policymakers to reshape its contours. Although the report focuses on the UK’s regulatory and legal environment (including, where applicable, by reference to EU law) it acts as a stepping-stone to understanding the analysis to be applied in other markets as the issues and concepts identified in it tend to give rise to similar concerns in other jurisdictions.

As with any FinTech solution, DLT will need to comply with the regulatory and legal framework which applies to the activity it supports. This is a particular challenge for a “distributed” technology which, in most capital markets use cases, would need to operate across national boundaries to be meaningfully useful. Significant elements of the regulatory landscape in the UK relating to capital markets are defined by EU law, such as the Markets in Financial Instruments Directive (MiFID), European Market Infrastructure Regulation (EMIR), and Central Securities Depositories Regulation (CSDR), none of which were drafted to accommodate DLT. Regulators and policy-makers will need to understand where and how DLT can deliver benefit without introducing additional risk. The European Securities and Markets Authority (ESMA) recently confirmed it will not rush to regulate but rather monitor how the technology evolves. Its report expresses the view that DLT could bring a number of benefits to financial markets, including more efficient post-trade services, enhanced reporting capabilities and reduced costs but it faces some important challenges “in terms of interoperability, governance and privacy issues and risk creation”. ESMA expects the early applications of DLT to focus on optimising processes using the
Exist within the matrix of contract law, which needs to be understood in order that the intended benefits are secured.

**Regulatory uncertainty and potential compliance benefits:** DLT solutions may have the potential to enable the reporting of transactions and positions directly to the regulator via direct access to the shared ledger, which could potentially disintermediate Trade Repositories (TRs) and Approved Reporting Mechanisms (ARMs). DLT solutions could also reduce trade errors, operational risk, and counterparty risk by introducing true straight-through processing and instantaneous execution and settlement. However, use of DLT solutions need to be examined against applicable financial services law to ascertain whether additional compliance measures are necessary.

**How does competition law apply to permissioned DLT systems?** Competition law will be a relevant factor to consider for DLT consortia when developing and operating a DLT solution.

**Transparency and data privacy:** There is a distinction between market data transparency (it cannot be opaque) versus private data transparency (needs to be safeguarded). Under EU General Data Protection Regulation (GDPR), DLT solutions that hold personal data should have specific contractual terms in place to govern data processors. Data encryption is not sufficient to excuse obligations for data protection. The right of erasure is a key consideration. The complex matrix of legal issues suggests a need for recommendations for industry and regulators covering legal, market impact, operational and regulatory matters. Key recommendations in the Report cover two main areas:

**Regulatory collaboration** Engaging regulators and policy makers is imperative to ensure that regulatory regimes do not create barriers to innovation and that DLT solutions are developed with the necessary risk mitigation in mind. For example, industry and regulatory sandboxes could be a powerful tool to enable participants to develop robust solutions and gain rapid regulatory feedback in a controlled environment.

**Industry-level system design decisions** Important design considerations include clear governance structures to ensure the orderly functioning of a DLT system. Legal and operational uncertainties can be further mitigated by express agreements on issues such as smart contract intent and dispute resolution.

As DLT progresses its journey in capital markets, the key to unlocking its potential involves navigating the regulatory and legal landscape, while building on industry collaboration, to deliver interoperability and robust governance structures.

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