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WHITE PAPER

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Setting Up Crypto Funds in the European Union

While the crypto market is still in its early stages, the number of asset managers offering funds investing in cryptocurrencies and companies using blockchain or distributed ledger technology (“DLT”) is constantly growing. With few exceptions, however, most of this growth is occurring outside the European Union. This opens the question of whether regulation that specifically addresses the new technology could change that. Other jurisdictions, such as Switzerland, France, Gibraltar, Liechtenstein, Malta, and the United States, have adopted laws that promote the use of DLT or at least provide greater regulatory clarity for the industry.

This Jones Day *White Paper* analyzes the current regulatory and economic environment for crypto funds and provides an overview of the general functioning of DLT, also touching upon its potential impact on financial markets and infrastructures.

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While the crypto market is still in its early stages, the number of asset managers offering funds investing in cryptocurrencies and companies using blockchain or distributed ledger technology¹ (“DLT”) is constantly growing. With few exceptions,² however, most of this growth is occurring outside the European Union. This opens the question of whether regulation that specifically addresses the new technology could change that.³ Other jurisdictions, such as Switzerland, France,⁴ Gibraltar,⁵ Liechtenstein,⁶ Malta,⁷ and the United States, have adopted laws that promote the use of DLT or at least provide greater regulatory clarity for the industry.

Even without such laws, however, asset managers operating in the European Union should consider DLT business for at least three reasons:

- DLT attracts venture capital because it has the potential to “disrupt” the financial system and other economic areas.⁸
- Fund shares can be issued and traded more efficiently via DLT without using costlier intermediary structures, and fund administration can be optimized.
- Costs for custody of shares, clearing, and settlement of securities and derivatives and the exchange of collateral can be reduced significantly.

While media attention still focuses primarily on speculation with cryptocurrencies and their conversion rates to euros or dollars, more and more use cases are scrutinized and turn out promising. Developers in commercial and governmental environments are working on blockchain solutions to increase transaction efficiency in the financial sector. This deserves a closer look at the technical and regulatory aspects of DLT and the current and potential future environment for launching crypto funds, building DLT trading platforms for fund shares or other assets, and custody solutions.

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KEY ASPECTS OF DLT

On the most fundamental level, DLT consists of software applications by means of which data is stored and exchanged or

that automatically executes predefined rights and obligations (so-called “smart contracts”), sometimes with the option to include legal language. A commodity, asset value, or asset is represented by so-called “tokens,” as, for example, the arithmetic units of cryptocurrencies.

DLT builds on databases that are structured chronologically, decentralized, and cryptographically secured. It combines cryptography, peer-to-peer networks (“P2P”)—hence avoiding transaction intermediaries—and consensus algorithms (as a method to prevent fraud). DLT enables a large number of parties to securely share and process data without having to resort to a central data management system.

A blockchain can be: (i) “public” (permissionless); (ii) “private,” with access being restricted to a specific group of users; or (iii) “semi-private,” where the user group is in principle open but where the network has a “doorman service” that enforces rules regarding the information that users must provide before being admitted to the network. For trading platforms, a private or semi-private network seems more suitable than a public network, as networks with limited access facilitate compliance with regulatory requirements significantly. For example, obligations under anti-money-laundering and privacy laws are easier to meet and solvency risks can better be assessed by using access criteria to join the network. However, not every network has a designated operator who would be subject to regulatory requirements. Such responsibilities would have to be assessed on a case-by-case basis.

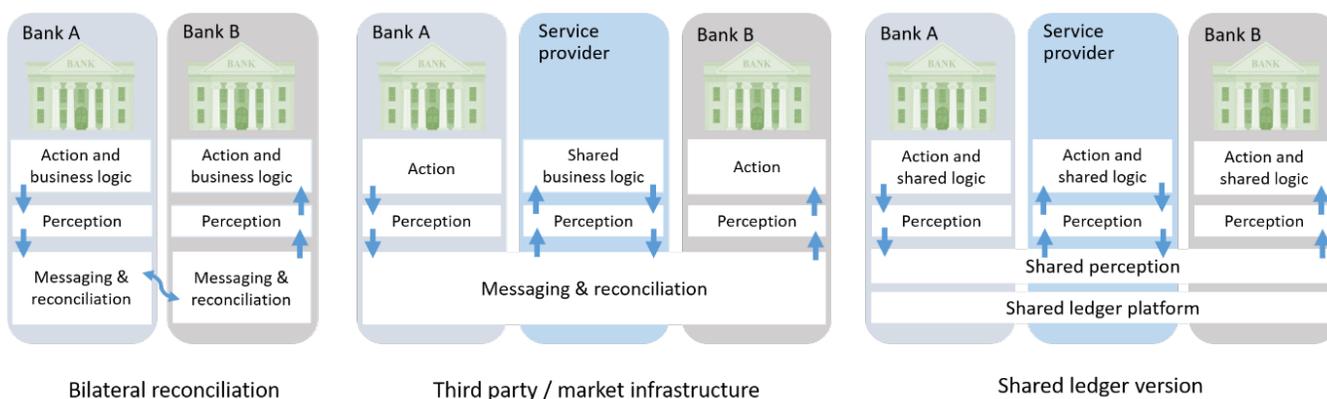
Since DLT databases are shared, the data is either stored identically on each computer within the network—called “nodes”—or at each “gateway” to proprietary (or other) business logic executors. Gateways are businesses that provide an entry point into the relevant network, which do not contain a “blockchain” in the traditional sense as developed in the Bitcoin system but use a linear chain concept, as for example in the Corda framework.⁹

DISRUPTIVE POTENTIAL FOR FINANCIAL INFRASTRUCTURES

As several initiatives and projects show, DLT has the potential to change or “disrupt” the financial sector. It challenges the established infrastructures operated by central banks,

central securities depositories (“CSDs”), and central counterparties (“CCPs”) as it provides for secure P2P processing of data among parties unknown to or competing with each other. Because DLT is not creating a need for large central confidence-building intermediaries, it eliminates the concentration risk of single ledger systems, as for example loss of deposits/claims in the insolvency of a bank, a CSD, or a CCP. DLT also prevents manipulation of data processing systems or the loss of securities through false bookings, as in P2P networks, there would be no bank providing a securities account. Against this backdrop, one of DLT’s greatest promises is to reduce the settlement cost and risk for securities significantly and to eliminate *en passant* other constraints of current trading environments, such as trading hours of traditional exchanges.¹⁰

Among the ideas currently promoted in the industry are authoritative systems of record that are securely shared between firms. Such architectures could transform the economics of financial firms, particularly but not exclusively in post-trade services. This would be accomplished by way of a new shared platform for the recording of financial events and processing of business logic where a single global logical ledger is authoritative for all agreements between firms recorded on it. The progression toward such system is shown in the diagram below:



In bilateral-reconciliation systems, parties to shared facts record and manage their own records, with associated discrepancies and duplications. Alternatively, parties can delegate control and responsibility over critical processing to centralized utilities—i.e., a third party or market infrastructure. Through DLT, parties can collaborate to maintain a shared record, ensured to be consistent between them, consuming the services of existing and new service providers and market infrastructure providers on an open and competitive basis (“Shared Ledger Vision”).¹¹ This means that transactions could be monitored in real time by granting the depository or supervisor access to the shared ledger platform.

Renowned personalities, institutions, and advisors keep predicting either the rise or downfall of crypto assets and DLT when contributing to the popular debate culminating in the question of whether it is a hype or not. If there is one lesson to be learned from author and former option trader Nassim Taleb’s widely recognized 2007 book *The Black Swan*, prophecies—especially with regard to complex systems driven by myriad causalities—usually do not have much value, as we are unable to predict what will happen even in the next weeks, let alone months. As a matter of fact, nobody knows what DLT really means for the global financial and nonfinancial

economy and whether it will disrupt the current infrastructures. Nevertheless, it is significant and promising enough to be taken seriously, and being prepared for a certain impact on financial infrastructures and exploring its options unbiasedly seems a better strategy than relying on someone else’s prophecies. DLT may well be a black swan event.

AUTOMATED CONTRACT PERFORMANCE THROUGH SMART CONTRACTS

Through the automated performance of contractual obligations, smart contracts may facilitate several processes linked with asset management, as for example delivery of securities

for margining or payments under a swap agreement, as soon as the conditions for predefined trigger events are fulfilled. The decentralized nature of DLT networks makes them significantly more resilient against uninvited external manipulation or system failures than single ledger systems. It is thus a lot less likely that a process is interrupted or carried out wrongly under smart contracts. For the residual risk of error—which may occur in any contract performance—an appropriate legal mechanism for remedy has to be implemented.

ISSUING TOKENS: ICOs AND STOs

Traditionally, new tokens are created and first distributed through initial coin offerings (“ICOs”).¹² DLT companies like to use ICOs as an alternative to traditional funding methods. Technically, an ICO is a smart contract that ensures that investors making a payment to the issuer in one of the cryptocurrencies get the new token in return. This token has a fixed exchange rate and a fixed amount in the smart contract.

A new trend that aims to remedy some shortcomings of ICOs when used to fulfill the function of a security issuance are security token offerings (“STOs”). STOs are a fundraising tool similar to ICOs but with certain regulations that hold the token issuers accountable for their actions. Security tokens are designed to fulfill the same function as securities by confirming ownership through blockchain transactions. With the aim of being digitized conventional securities, they grant equity, profit dividends, income shares, vote casting, and access to many other investment mechanisms by using several smart contracts. Under U.S. law, a security token is subject to several legal acts.¹³ Also, France has recently enacted a piece of legislation governing ICOs and service activities relating to digital assets (to the extent they do not qualify as financial instruments).¹⁴

REGULATORY CHALLENGES

When a new technology enters regulated territories, it challenges the existing rules in their fitness and propriety to capture its specific risks and opens the question of whether amendments directly addressing that technology are necessary. If there are diverging opinions on the technology’s impact and dangers, as in the case of algorithmic and high-frequency

trading under the European Markets in Financial Instruments Directive (“MiFID II”), such technology-tailored approach may, however, come rather late.¹⁵

Crypto funds challenge EU investment fund regulation by the uncertainties of the specific risk profile of the new crypto assets and DLT projects. Thus, they require a careful design of the investment conditions, investor documentation, valuation methods, custody requirements, and depositary agreement.

In any case, EU investment fund regulation, as it stands, does not seem a natural candidate for large amendments tailored to DLT. Rather, other options would comprehensively cover the need for regulation: (i) a general framework for the financial sector requiring certain minimum due diligence and transparency standards; (ii) a specific regime to calculate risk weights for own funds purposes as developed for securitizations, for example; and (iii) carefully tailored amendments in the AML framework.

At least with regard to AML, such framework will be implemented in the European Union as of January 2020. The 5th EU Anti-Money Laundering Directive (“AMLD5”) extends the scope of AML duties to any “digital representation of value that is not issued or guaranteed by a central bank or a public authority and does not possess a legal status of currency or money, but is accepted by natural or legal persons as a means of exchange and which can be transferred, stored and traded electronically.”¹⁶ The definition captures not only cryptocurrencies but also investment and security tokens that may qualify either as securities or debt instruments, asset investment, or investment fund units but explicitly excludes electronic money, vouchers, and payment services of electronic network providers.

PORTFOLIO MANAGEMENT

There are basically two strategies in DLT-related portfolio management: One is to take long or short positions on crypto assets issued in an ICO or STO, which can be done not only through direct holdings but also synthetically through the use of derivatives. The other is to invest in companies active in the DLT sector. Both strategies may overlap when investing in a DLT-focused company that has issued ownership or participation rights on a DLT platform. In addition, at this stage, there are also funds that invest in mining pools that verify blockchain transactions.

Among the most debated issues is the classification of crypto assets as a financial instrument and the consequential application of the regulatory framework designed for them. In some cases, the nature of a crypto asset provides for a straightforward classification as financial instrument, and the application of capital markets regulation does not raise much doubt or obstacles. In other cases, it is rather obvious that certain rules would have been designed differently in light of the typical features of crypto assets. As regards the Alternative Investment Fund Managers Directive (“AIFMD”),¹⁷ the availability of tokenized financial instruments would open the possibility to add such assets to the portfolio of retail funds, potentially even for UCITS. This requires that security tokens be subject to the same regulatory requirements as traditional securities, as well as for the purposes of investment limits for investment funds. At least for now, there seem to be no indications to the contrary.

Tokenization of Financial and Real Assets

While it may—or may not—take some time until the current market infrastructures are disrupted by the new technology, a substantial number of crypto assets and FinTech or DLT/block-chain companies are already available.¹⁸ These assets are not limited to cryptocurrencies such as Ripple, Bitcoin, and Ether. The possibilities to digitalize or “tokenize” not only financial assets including derivatives and fund shares but also any real asset, like diamonds and buildings, seem—with different levels of legal obstacles to be resolved—limitless, and several “tokenizations” of real assets have already been applied or are currently being tested in pilot projects.¹⁹

A token can be a means to exchange value (i.e., a currency) within a DLT platform, out in the “real world,” or both. Such tokens are often referred to as “payment” or “currency tokens” or “coins.” Where the token represents some other external real-world asset, such as a security, a commodity, a legal right, or an identity, it may be called an “asset token.” Such tokens may be a security, depending on (*inter alia*) the reference asset. Tokens can also be a means of raising capital for the development of a DLT platform and may qualify as securities under the relevant national law. Finally, tokens providing access to a feature or benefit currently available on the related DLT platform often are referred to as “utility tokens”—if not deemed to be a security.

Cryptocurrencies

Trading opportunities for cryptocurrencies are stable and increasing.²⁰ As long as cryptocurrencies function as volatile

means of speculation rather than a means of payment, they are interesting as an investment object for high-yield strategies. It should be remembered, however, that the expectation behind the acquisition of a specific cryptocurrency is—apart from selling it at a profit—that it will at some point reach a stage where speculation is coming more or less to an end and a certain level of price stability is achieved. In this regard, cryptocurrencies are no different from the legal tender issued by central banks. This is also shown by the fact that functions of fiat money, in particular “store of value” and “medium of exchange”—may well serve as metrics for the valuation of cryptocurrencies.²¹

Several approaches currently try to combine the best of both worlds, i.e., the trust in the price stability created through the efforts and tools of a central bank and the enhanced DLT trading environment. This is accomplished by firmly linking cryptocurrency tokens to central bank money, with the effect that dollars or euros are practically available in DLT trading networks. Such concepts may create benefits not only in terms of a more cost-efficient portfolio management but may also provide opportunities for infrastructure investments, if the developers look for external funding.

Crypto-Derivatives and Leveraged Products

There is already a number of cryptocurrency-linked derivatives available, for example futures or Contracts for Difference (“CfDs”) using Bitcoin as the underlying cryptocurrency and exchange traded notes (“ETNs”) on Bitcoin and Ether in Europe. The latter are tradeable over-the-counter with prospectuses approved by the Swedish Financial Inspectorate.²² Such derivatives work no differently from other instruments of such kind and usually do not require purchase of the underlying asset. Leveraged products like CfDs increase the already high volatility of cryptocurrencies, which indicates high margin requirements. Leverage is offered by the majority of brokers, while most cryptocurrency exchanges—with some exceptions²³—do not support this option.

As with securities, the infrastructure for derivatives could be largely facilitated through DLT, as mentioned above. This is particularly the case because smart contracts provide for the automated execution of payment and delivery obligations potentially arising under swaps, options, or forwards. However, we have already seen some EU regulators take steps to limit the sale of crypto-derivatives to consumers due to their complexity and volatility.²⁴

DLT Companies and White Papers

Finding efficient or meaningful criteria for investments in DLT companies (through buying tokens or traditional participation rights) appears to be a serious challenge for private equity or venture capital driven-crypto funds. All the more so because investing in rising technologies inevitably brings up memories of the burst of the dotcom bubble in 2001, producing billions in losses. There are indeed a few parallels to be observed; most importantly, just like the internet in the late 1990s, DLT is now considered a game changer.

Beyond a doubt, the internet has reshaped not only the way we trade commodities and securities or do private banking. It has also had an impact on social interaction, academic or legal research, and sharing information in general. In that context, the possibilities of DLT seem less broad and mainly, although not exclusively, suitable for changing infrastructures that are built around a central entity that guarantees their functioning. Such examples include financial systems carried by central banks, central counterparties, central securities depositories, and commercial banks holding deposits for the average person. From a financial perspective, however, this is majorly significant.

In any case, the plain and simple lesson from the dotcom crisis is that a business focusing on a promising technology is not necessarily successful, and the ways and opportunities to commercially exploit such technology are often diluted by the euphoria that creates hypes. For designing a successful portfolio strategy, the result is that such risk must be clearly identified and mitigated. This requires high due diligence standards tailored to the new technology and the specific objectives of the investors.

The white papers in which DLT companies elaborate on their ideas do not necessarily correspond to high information standards that enable a full understanding of the technology and added value of an idea, however. Key questions to be asked prior to investing could be:

- Is the application of DLT necessary or could the business solution be equally (or even better) achieved with conventional technologies?
- Is there sufficient proof of the expertise and integrity of the management/issuer?

- Does the management/issuer assume liability under civil law for misinformation?
- Is the business model sustainable and scalable?
- What are the risks and safeguards regarding cyberattacks?
- What is the legal and regulatory environment?
- Does the application provide for compliance with know-your-customer rules?
- Is the technology patentable and, if so, have all relevant patents been obtained?
- Have licensing requirements been observed and is there a risk that a license expires?
- In the case of open source software-based DLT systems like Ethereum or R3 Corda, must the program code of the application as the basis of the business model be disclosed, and if so, does this jeopardize the success of the business?

White papers are a natural candidate for regulation, as they fulfil the function of a prospectus or key investor information document. Regulation is, in principle, technology neutral. Therefore, where the tokenized asset qualifies as security, fund share, or packaged retail investment product, there is no need for further regulation to the extent that an obligation to issue a document containing the information relevant for an informed investment decision already exists. With regard to cryptocurrencies, however, this is not the case.

Security Tokens

As indicated above, security tokens are a regulatory target, but the question of what actually forms a security token has not yet been answered in most jurisdictions of the European Union. As of today, the availability of security tokens is rather limited. Accordingly, the qualification of security tokens depends on each individual case, and from a portfolio-management perspective, the only possibility as of now is to either rely on an external qualification or work with certain indicators. It may be helpful to take into account whether the issuer considers the token as a security (and hence publishes a securities prospectus). One should also consider whether the token is transferable and tradeable on capital markets and grants its owner a position that is comparable to that of a share or bond holder. Until further legislative action is taken, a diligent legal analysis may bring the necessary certainty.

TYPE AND DISTRIBUTION OF CRYPTO FUNDS

When choosing the suitable type of fund, the eligible assets and investors and the depositary play a key role. Under the EU framework, funds can be established as both open-ended and closed-ended as well as listed and unlisted vehicles.

Eligible Investors

Considering the often high volatility of, and lack of information relating to, crypto assets and the uncertain success of DLT-related business models, crypto funds seem—at least for now—more suitable for experienced investors who are looking for private equity or hedge funds rather than for retail investors seeking safer portfolios in undertakings for collective investment in transferable securities (“UCITS”)²⁵ or alternative investment funds (“AIFs”) with a relatively low risk profile. These are usually those AIFs that under national law may be distributed only to professional investors, like banks, investment firms, insurance companies, national and regional governments, and corporates exceeding certain thresholds.²⁶

Eligible Fund Vehicles

Crypto assets are not yet an established element of fund portfolios and their classification—particularly as security or financial instrument—may bear some uncertainties.²⁷ Therefore, the most suitable types of funds seem to be those for which lower regulatory standards apply and that are less limited in their portfolio strategy. Such AIFs are often not obliged to issue a prospectus but require a limited set of information, are subject to no or less stringent risk management requirements, leverage limits or external audits, and may not require a credit institution acting as depositary but use a trustee instead.²⁸

Against this backdrop, it might be worth considering that the AIFMD provides for a lighter regime for small alternative investment fund managers (“AIFMs”) where the cumulative AIFs under management fall below a threshold of either €100 million with leverage or €500 million without leverage. Those AIFMs are not subject to full authorization but to registration in their home Member State. They must, *inter alia*, provide their competent authority with relevant information regarding the main instruments in which they are trading and on the principal exposures and most important concentrations of the AIFs they manage. Benefits of setting up a small AIFM are that: (i) less compliance and reporting requirements than for a full-scope AIFM apply; and (ii) it is not necessary to appoint a

depository to its AIFs or to apply the AIFMD’s requirements to its delegates or agents. Less beneficial is that many jurisdictions within the European Economic Area (“EEA”) do not fully recognize the small AIFM regime. As a result, it may be difficult to market funds managed by a small AIFM into other EEA jurisdictions. Moreover, if the value of the assets under management of the small AIFM increases to more than the threshold set out above, it will become necessary for the AIFM to apply to become a full-scope AIFM and for all its existing AIFs to be fully compliant.

VALUATION OF CRYPTO ASSETS

The regulatory requirements to establish and maintain “appropriate and consistent procedures” concerning the valuation of an AIF, including valuation policies and procedures that clarify the methodologies,²⁹ are another key challenge for crypto fund managers. This has two reasons: First, the classic valuation methods developed for stocks or derivatives are not necessarily suitable for the valuation of crypto assets. Second, the crypto asset investment community has so far struggled to define a cohesive framework for valuing these assets. This may be one reason why some consider crypto assets mainly as bubbles with no intrinsic value.

However, the development of crypto asset valuation models has made significant progress, especially in the last two years, showing a substantial degree of academic and professional research.³⁰ Because of the diversity of tokens, the methods are adjusted to the specific nature of the relevant token to get a realistic result. This might create a challenge for supervisors (and thus for asset managers seeking supervisory approval) as one classic supervisory concern is that models or methods are specifically developed with the aim of downplaying risk. So far, any such concern is purely hypothetical, however.

As in traditional finance, absolute and relative valuation methods have been developed for crypto assets.

Relative Valuation Methods

Relative methods use metrics that enable a comparison of the historic and the current value of a crypto asset, as, for example, the “network value-to-transaction (“NVT”) ratio,”³¹ which resembles the price-to-earnings ratio commonly used for equities. NVT is calculated by dividing the network value

based on market capitalization by the daily volume transmitted through the blockchain, measured in a suitable legal currency. Another example for a relative method is “Metcalfe’s law,” which was initially used for telecommunication networks and works on the assumption that the value of the network is proportional to the square of the number of connected users of the system (Daily Active Address, or DAA).

Absolute Valuation Methods

Absolute valuation methods aim at finding an intrinsic value to the relevant crypto assets. Their key assumption or hypothesis is that crypto assets (at least the leading ones) today will come to fulfil a hybrid of the medium-of-exchange and store-of-value functions of legal tender. To quantify these functions, such methods look at the supply as well as the transaction and storage demand of a token in the specific use case it was developed or is suitable for.

Transaction demand is determined along the quantity theory of money, i.e., the velocity (transactions per unit within a specific period) of money in an economy.

Storage demand is determined by the total value (in legal currency) that is held by the global population as a means of storing value, which implies that the crypto asset is held on a long-term basis. To have storing value, it is necessary that: (i) there be evidence for trust in the asset that it will broadly be accepted as a carrier of value over an indefinite horizon (comparable to the trust in real estate, gold, or legal currency); (ii) there be a secure way of storing; and (iii) there be confidence that the supply of the asset will not be increased arbitrarily.

Measuring supply is easy where it is fixed, as with most crypto assets. It is, however, debatable whether coins not yet issued or large deposits of coins being held on an indefinite timeline should be counted as part of supply. Taking the long-term perspective into account, it seems most appropriate to include every existing coin in circulation.³²

CRYPTO-CUSTODY SOLUTIONS AND DEPOSITARY FUNCTION

Custody solutions for crypto assets are among the latest innovations of the cryptocurrency ecosystem. Their introduction is expected to herald the entry of institutional capital into the

industry. The depositary function is likely to add significant benefit to crypto funds, especially in terms of increasing investor confidence. However, this is not necessarily accomplished by providing external storage of crypto assets, as this may hamper the ability of the fund manager to trade with enough speed. External custody was developed for (paper) securities, while DLT’s original aim is to eliminate intermediary structures like third-party custody. Depending on the asset, however, external crypto custody may be useful, given that it has a low trading frequency. To be able to trade quickly, external custody provided by trading platforms—not with a custodian—might be necessary.

The availability of a depositary for a crypto fund, whose function would not only be to provide crypto custody but also to monitor the funds’ operations as set out in the AIFMD framework, is not guaranteed, however. That may be because there is still a substantial amount of uncertainty as regards the liability risk attached to carrying out the depositary function. It might also happen that smaller players enter the crypto-custody market through the trustee model, which may be applied for closed-end funds.

To mitigate liability risks, depositaries must clearly identify the scope of their obligations, including the features or criteria of a token to be held in the fund and potentially in custody. This requires clear and legally effective contractual rules in the service level agreement between the AIFM and the depositary.

Ownership rights regarding tokens or crypto assets are exercised through access to the database and to the data attributed to each participant, which is stored in so-called eWallets that every node keeps on its device. An eWallet is like an ATM as it shows the current balance of the user’s account when accessed. Every time it is unlocked, the eWallet scans the ledger for transactions that the proprietor made or participated in and tells the account balance. If the blockchain contained more info—as, for example, in a smart contract—it would also be shown. eWallets consist of a public key and a private key. Both are necessary to gain access to the eWallet and initiate a transaction. The public key³³ corresponds to the eWallet address (comparable to an account number) and is communicated to the transaction partner. The private key³⁴ corresponds to the PIN of an account and is required for initializing a transaction and consists of a complex combination of alphanumeric characters. It contains personal information identifying

the node and is used to unlock the public key. Private keys are extremely difficult to remember and can be stolen or hacked if stored online (so-called “hot storage”).

In practice, both hot storage solutions, in which a connection to the internet exists (which increases the liquidity of the deposited tokens), as well as cold storage solutions, which can do without a connection to the internet (thereby increasing safety), are possible. In any case, crypto-custody requires that a depositary should, in any case, be able to provide safeguards on three levels: protection against external attacks, human error, and misuse due to internal possibilities of access.

In the context of segregated cold storage, the private key is stored separately, using special software and hardware solutions. The depositary risk is then limited to the continuous functioning of such hardware and software. In addition, or alternatively, a paper wallet can, of course, be used—the private key is simply printed out and stored as safely as possible, e.g., in a vault.

One technical possibility to minimize depositary risks is the use of so-called hardware-specific modules. These are internal or external peripheral devices for the efficient and safe execution of cryptographic operations. In order to prevent faulty or fraudulent disposals regarding crypto assets, the use of multi-signature applications is possible. In the process, the private key is shared and the transaction made dependent upon the approval of a quorum of designated persons that might be resident in geographically different places.

The recently published German draft act implementing the AMLD5 specifies the application of licensing requirements for depositaries and sets out that safekeeping security tokens qualifies in principle as custody business unless held for AIF, qualifying as limited custody business. For other tokens, a new custody license requirement was implemented. As a result, custody, safekeeping, and administering crypto assets (other than security tokens), or private cryptographic keys that serve to hold, store, and transfer crypto assets for others, qualify as a crypto custody business.³⁵ This brings some certainty but does not clarify whether or to what extent regulatory expectations for depositaries go beyond storage of private keys.

IN BRIEF

Blockchain and DLT have opened new opportunities for the investment fund industry on the asset as well as the infrastructure side. As with every new product, a careful assessment of the regulatory framework and the contractual implications is necessary. Specific regulation on the EU level—potentially similar to the legislation adopted in Malta, Liechtenstein, Gibraltar, or the United States—may enhance investor confidence or protection and facilitate portfolio management. However, a careful design of investment guidelines and policies, including efficient due diligence procedures, may achieve the same effect. Taking into account that several investment funds have already been authorized, there seems to be no particular reason to wait for new rules, except that a new regulatory framework might facilitate approval processes for setting up crypto funds.

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For more information, please contact your principal Jones Day representative or the lawyers below. General email messages may be sent using our “Contact Us” form, which can be found at www.jonesday.com/contactus/.

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- 1 See Jones Day *White Paper* “Blockchain for Business” (Sept. 2017, updated Nov. 2018). Further reading: “Blockchain Trading for Nonlisted Securities: The New French Regime Is Achieved,” “ICOs and Token Regulation from a German Perspective,” Jones Day Talks Technology: “How Regulations Could Help Cryptocurrencies Grow,” “Game Changer for Cryptocurrency in Germany? Court Holds No License Required to Trade Bitcoins,” “Of Blockchains and Supply Chains,” “What Is Blockchain and How Is It Used?,” “What General Counsel Need to Know about Blockchain,” “Does Blockchain Technology Work?”
- 2 On February 26, 2018, Liechtenstein’s supervisor FMA authorized the first crypto AIF (Postera Fund Crypto). On April 16, 2018, Germany’s BaFin authorized the BITREAL Real Estate Crypto Opportunities Fund 1.
- 3 EU legislative processes may be accelerated by ESMA’s [Advice to the EU Commission, Council, and Parliament on ICOs and crypto assets](#) (Jan. 2019). It is based on a survey of national supervisory authorities analyzing risks and benefits of various crypto asset-related business models and how they fit into the existing regulatory framework. This Advice was preceded by the EU Commission’s “FinTech action plan: For a more competitive and innovative European financial sector” (Mar. 2018).
- 4 [Decree n° 2018-1226](#) (Dec. 2018) provides rules on the use of DLTs for trading non-listed securities in France. [Ordinance n° 2017-1674](#) (Dec. 2017) contains rules allowing the trading of non-listed securities using DLT, amending the procedures previously in place for securities credited to securities accounts.
- 5 Becoming effective in January 2018, the [Distributed Ledger Technology Providers Regulations](#) (“DLT framework”) were added to the Financial Services (Investment and Fiduciary Services) Act. Any firm carrying out by way of business, in or from Gibraltar, the use of DLT for storing or transmitting value belonging to others (“DLT activities”) needs to be authorized by the Gibraltar Financial Services Commission as DLT provider.
- 6 The draft “[Act on transactions systems based on trustworthy technologies](#)” (Blockchain Act, Trustworthy Technologies Act) (Nov. 2018). The purpose of the law is to protect users, to ensure confidence in digital transactions, and to describe the rights and obligations of service providers as regards expertise, transparency, and registration. To that end, the draft act also contains provisions on supervision and sanctions.
- 7 The “[Act to regulate the field of Initial Virtual Financial Asset Offerings and Virtual Financial Assets and to make provision for matters ancillary or incidental thereto or connected therewith](#)” (“VFA”) entered into force on November 1, 2018, and outlines requirements for launching cryptocurrencies, as well as for other services including brokerage, portfolio management, custody (eWallet), investment advice, and providing cryptocurrency exchanges.
- 8 John Pfeffer, “[An \(Institutional\) Investor’s Take on Cryptoassets](#)” (Dec. 2017).
- 9 See Richard Gendal Brown, James Carlyle, Ian Grigg, Mike Hearn, “[Corda: An Introduction](#)” (Aug. 2016).
- 10 Among the most prominent projects is the transformation of the Australian Securities Exchange (“ASX”)’s equity transaction system into a DLT environment, which has been announced for April 2021. Deutsche Börse has invested in the development and introduction of services using blockchain. The activities include a blockchain solution for cross-border securities transfer as well as a functioning prototype for the blockchain-based settlement of securities transactions in cooperation with Deutsche Bundesbank, Germany’s central bank.
- 11 Richard Gendal Brown, James Carlyle, Ian Grigg, Mike Hearn, “[Corda: An Introduction](#),” p. 4.
- 12 ICOs generated approximately \$6 billion in worldwide start-up capital throughout 2017, with an estimated 80 percent of scams, however.
- 13 The Commodity Futures Trading Commission (“CFTC”) views bitcoin as a commodity, the Internal Revenue Service (“IRS”) defines “cryptocurrency” as property, and the Securities and Exchange Commission (“SEC”) has indicated that many ICOs are securities. Commodities exchanges providing a spot market or currencies do not need to be licensed as a regulated entity, while a platform that offers securities are required to register as a national exchange or alternative trading system (“ATS”) or apply as a broker-dealer. Companies that are involved with financial assets, such as stocks, bonds, bank deposits, and the like, are examples of financial assets. They are required to comply with consumer protection laws and the Bank Secrecy Act and the USA Patriot Act.

- 14 See Pacte Act (law n° 2019-486) of May 22, 2019, articles 85 and 86.
- 15 See Martin Schulte, “The price of stable markets and investor confidence: some thoughts on MiFID II’s cost benefit ratio,” *ERA Forum* Vol. 19, No. 1 (2018), p. 22 et seq.
- 16 Directive (EU) 2018/843 of the European Parliament and of the Council of May 30, 2018, amending Directive (EU) 2015/849 on the prevention of the use of the financial system for the purposes of money laundering or terrorist financing, and amending Directives 2009/138/EC and 2013/36/EU.
- 17 Directive 2011/61/EU of the European Parliament and of the Council of June 8, 2011, on alternative investment fund managers.
- 18 According to the ESMA Advice on Crypto Assets, p. 8, there are more than 2,050 crypto assets outstanding, representing a total market capitalization of approximately €110 billion as of the end of December 2018—down from a peak of more than €700 billion in January 2018.
- 19 Among the most popular projects in this area is Ravencoin, which is a blockchain as well as a platform optimized for transferring assets from one holder to another. See Bruce Fenton and Tron Black, “[Ravencoin: A Peer to Peer Electronic System for the Creation and Transfer of Assets](#)” (Apr. 2018). Ravencoin tokens may represent real-world custodied physical or digital assets to tokens like physical euros, land deeds or energy credits, shares of any type of company, tickets, licenses, airline miles, or in-game currency and items.
- 20 On December 12, 2018, it was reported that SolarisBank and Stuttgart Exchange Group are jointly developing a crypto exchange to be launched in the first half of 2019.
- 21 Robert Mitchnick and Susan Athey, “[A Fundamental Valuation Framework for Cryptoassets](#)” (June 2018), p. 4.
- 22 In May 2015, the Swedish FSA approved the prospectus for “Bitcoin Tracker One,” an open-ended exchange-traded note that tracks the price of bitcoin in U.S. dollars. The Bitcoin Tracker One initially traded in Swedish krona on the Nasdaq Nordic in Stockholm but is now also available to trade in euro. The Bitcoin Tracker One is available to retail investors in the European Union and to those investors in the United States who maintain brokerage accounts with interactive brokers. See SEC, [Release No. 34-83520](#) of June 26, 2018, p. 19. At the end of July 2018, European ETNs traded at around €335 million, according to Morningstar. At Bank Vontobel, customers can invest in a bearer bond on bitcoin. It is traded on the open market of the Stuttgart and Frankfurt Stock Exchanges.
- 23 Bitmex offers an instrument called “Perpetual Contract,” which replicates the underlying spot market—the BXB (Minutely Bitcoin Price Index)—with enhanced leverage. Other platforms currently offering leveraged products are Kraken and Poloniex.
- 24 See Financial Conduct Authority, “[CP19/22: Restricting the sale to retail clients of investment products that reference cryptoassets.](#)”
- 25 Directive 2009/65/EC of the European Parliament and of the Council of July 13, 2009, on the coordination of laws, regulations, and administrative provisions relating to undertakings for collective investment in transferable securities, or UCITS.
- 26 Professional investors are defined by the size and frequency of their trading, their portfolio size, or professional experience.
- 27 This may be observed lately in the diverging opinions of the German supervisor (BaFin) and the Berlin court of appeals on the question of whether running a bitcoin trading platform requires a MiFID license. BaFin deemed a license necessary as it had qualified bitcoin as financial instrument in the form of “unit of account,” which is a category not required under the MiFID definition. Contradicting the supervisor’s assessment, the Berlin court of appeals stated that BaFin was acting outside its mandate, as the definition of “financial instrument” with the attached licensing requirement shapes the scope of the criminal liability for breaching the licensing requirement.
- 28 One example for such AIF is the German Spezial-AIF, like the BITREAL Real Estate Crypto Opportunities Fund 1, which has already obtained regulatory approval. It invests in AA-Core commercial real estate partially financed by banks, as well as in “established blockchain-technology based tokens and coins and virtual currencies.” Investors may pay the subscription monies in euro, bitcoin or ether. The minimum investment is €500,000. In Liechtenstein, the FMA approved the Postera Fund–Crypto I under the AIFMD, which invests in actively managed cryptocurrencies. The depositary is the Liechtenstein Bank Fink, and the minimum investment is €50,000.
- 29 See Articles 67 to 74 of Commission Delegated Regulation (EU) No 231/2013, which are accompanied by national valuation laws. The key principle is that the policies and procedures ensure a sound, transparent, comprehensive, and appropriately documented valuation process.
- 30 Robert Mitchnick and Susan Athey, “[A Fundamental Valuation Framework for Cryptoassets](#)” (June 2018); Luigi D’Onorio Demeo and Christopher Young, “[Valuing Crypto Assets](#)” (undated draft).
- 31 Willy Woo and Chris Burniske, “[Is Bitcoin in a Bubble? Check the NTV Ratio](#)” (Sep. 2017)
- 32 See Robert Mitchnick and Susan Athey, “[A Fundamental Valuation Framework for Cryptoassets](#)” (June 2018), p. 5 et seq.
- 33 Example: 0xC4D769889dE1E861d55709FB92609FA8461779ac.
- 34 Example: bee29790774c01cf212da470c55d53999e68ba9744ca504bdc65d5f3341d9353.
- 35 Ministry of Finance (*Bundesfinanzministerium*), *Entwurf eines Gesetzes zur Umsetzung der Änderungsrichtlinie zur Vierten EU-Geldwäscherichtlinie [Richtlinie (EU) 2018/843]* of May 20, 2019.

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