Tokenisation of fund units and digital asset management

USER GUIDE

AFG

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⊺ Preamble

The exponential rise of distributed ledger technology (DLT) and blockchain, in particular, is undeniable, and its influence on the traditional financial system cannot be ignored. A growing number of members of the Paris financial marketplace are actively involved in this technological revolution, which is being driven by a demand for digitisation on the part of both retail investor and institutional clients, and by the emergence, particularly in France, of a rich and dynamic ecosystem of innovative FinTechs offering investors and financial market players (issuers, financial intermediaries) new digital products and services that benefit from the main advantages of this technology (resilience and security of a decentralised ledger, audit trail of transactions, possibility of automating the execution of transactions subject to conditions, gains in productivity and efficiency).

In addition to these trends affecting investors, intermediaries and service providers, it is also clear that blockchain has completely taken over the agenda of domestic, European and even international regulators.

For example, under the Blockchain Ordinance of 8 December 2017[1], France recognised the option for an issuer to use distributed ledger technology [known in French as a *dispositif d'enregistrement électronique partagé* or DEEP] for the representation and transmission of financial securities (unlisted shares and bonds as well as fund units). Subsequently, the PACTE Act[2] also conferred a status on digital assets and regulated the activities of digital asset service providers (DASPs).

At European level, the implementation of the pilot regime[3] on 23 March 2023 allows market players to offer trading and settlement/delivery services for tokenised financial instruments, while benefiting from exemptions from certain constraints arising from the Settlement Finality[4], MiFID II[5] and CSDR[6] regulations. Similarly, from mid-2024, digital assets and digital asset service providers shall benefit from a harmonised European regulatory framework under the Markets in Crypto-Assets (MiCA) [7] Regulation. Finally, on the liquidity front, we should mention the work being carried out under the aegis of the European Central Bank (ECB) to define the possible terms and conditions for making settlement assets available in digital currency in order to secure transactions recorded in a DLT (DEEP).

Against this backdrop, asset management companies need to think strategically about the possible use of blockchain. In February 2023, the French asset management association (*Association française de la gestion financière - AFG*) published a white paper on "*Technological innovations: what are the strategies for asset management companies?*".

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1) Ordinance no. 2017-1674 of 8 December 2017 on the use of distributed ledger technology for the representation and transmission of financial securities.

2) Act no. 2019-486 of 22 May 2019 on the growth and transformation of companies.

3) Regulation (EU) 2022/858 of the European Parliament and of the Council of 30 May 2022 on a pilot regime for market infrastructures based on distributed ledger technology.

4) Directive 98/26/EC of the European Parliament and of the Council of 19 May 1998 on settlement finality in payment and securities settlement systems.

5) Directive 2014/65/EU of the European Parliament and of the Council of 15 May 2014 on markets in financial instruments.

6) Regulation (EU) No 909/2014 of the European Parliament and of the Council of 23 July 2014 on improving securities settlement in the European Union and on central securities depositories.

7) Regulation (EU) 2023/1114 of the European Parliament and of the Council of 31 May 2023 on markets in crypto-assets.

This white paper sets out the opportunities created by the use of DLT for asset management companies, both for the management of fund liabilities, i.e. at the level of fund unitholders, and for asset management, i.e. investments made by asset management companies on behalf of unitholders. This guide is the result of recommendations made in the white paper on digital asset investment services and activities that asset management companies can offer their clients. This document therefore aims to provide a structured overview to support asset management companies and various players in their ecosystem in this phase of transformation.

The guide covers the regulatory and operational aspects of the various uses of DLT through the tokenisation of fund units, investments in digital assets and the tokenisation of financial instruments in fund assets. These three uses are not at the same level of maturity and do not entail the same obligations for players. The tokenisation of fund liabilities has been permitted since the 2017 reform instituting the DEEP.

In order to draw up this guide, the AFG brought together players in the asset management ecosystem, depositaries, auditors, lawyers, consultants, blockchain infrastructure players and, of course, asset management companies. This user guide is intended to be educational, simple yet precise.

We encourage you to use this guide as a starting point to deepen your understanding of the issues surrounding tokenisation, whether on the liabilities or assets side.

Beyond that, it shall be up to each asset management company to carry out the appropriate due diligence in line with their development or transformation objectives with the support of *ad hoc* experts (regulators, lawyers, consultants).

As European regulations on crypto-assets gradually come into force, it shall be updated regularly, thanks in particular to its digital format.

⍔ I. Liability management and distribution of fund units via blockchain

A. Introduction

In France, regulations do not require asset management companies to follow a single model for keeping their funds' issue accounts. In practice, since the digitisation of securities in the 1980s, this activity has essentially been delegated to the specialised departments of depositaries.

Under French law, securities may be held in one of three ways: in pure registered form; in administered registered form; or in bearer form. When the units or shares of an undertaking for collective investment (UCI) are held in pure registered form, the fund or its asset management company in charge of administrative management keeps the UCI's issue account. In the case of bearer shares, the asset management company has its fund admitted to Euroclear, and the depositary, acting on behalf of the asset management company, keeps the fund's issue account in Euroclear.

Type of UCI	Fund issue account keeping
Pure registered UCI	Asset management company
Administered registered UCI	Depositary acting on behalf of the asset management company
Bearer UCI	Depositary in Euroclear

The PACTE Act and the 2017 reform have changed the situation by allowing peer-to-peer transactions without intermediaries via automated protocols using distributed ledger technology.

In fact, the Blockchain Ordinance on the use of a DLT (DEEP) for the representation and transmission of financial securities (in particular UCI units/shares) offers asset management companies a technological solution to regain control of this issue account keeping activity by responding to several difficulties they face, such as:

- ▶ lack of information concerning the identity of the unitholder/shareholder due to the absence of information conveyed by traditional infrastructures;
- ▶ the multiplicity of data sources due to the number of technical intermediaries involved in managing the fund's liabilities (notably centralisers, in some cases also centralisers by country, paying agents, various purchase or execution platforms);
- ▶ the cost and operational risk associated with the manual management of pure registered units;
- ▶ the dissemination of information (in particular investor KYC and fund characteristics).

A DLT offers the operational security of a technology that provides resilience, an audit trail, inalterability of entries, confidentiality and identification of transaction participants.

In terms of liability management, a DLT can provide asset management companies with solutions to support activities as diverse as:

- ▶ direct distribution of funds;
- ▶ dissemination of information about the characteristics of fund units/shares.

With the DLT, we now refer to the tokenisation of a fund's units/shares, i.e. the digital representation of its units/shares in a DLT.

B. French legal framework applicable to the tokenisation of UCI units/shares

1. CONDITIONS FOR REGISTRATION OF UCI UNITS/SHARES IN A DLT (DEEP[8])

Financial securities issued on French territory and subject to French law may be registered in a DEEP in the cases provided for in Article L. 211-7 of the French Monetary and Financial Code (*Code monétaire et financier* – CMF). Financial securities may therefore be recorded in a DEEP in favour of the owner (Article R. 211-1 of the CMF).

Article R. 211-2 of the CMF stipulates that financial securities registered by the issuer in a DEEP are in pure registered form.

Registration in a DEEP produces the effects of book-entry registration, i.e. proof of ownership, and enables the securities to be transferred.

Article R. 211-9-7 of the CMF sets out the conditions under which financial securities may be registered in a DEEP, which offers guarantees, particularly in terms of authentication, that are at least equivalent to those offered by registration in a securities account:

- ▶ the DEEP is designed and implemented in such a way as to guarantee the recording and integrity of entries and to make it possible, whether directly or indirectly, to identify the owners of securities and the type and number of securities held;
- ▶ registrations made in this recording system are subject to an updated business continuity plan.

When securities are registered in this recording system, the owner of these securities may have access to their own transaction records.

2. ISSUE ACCOUNT KEEPING VIA A DLT (DEEP)

For UCITS and AIFs, the tasks involved in keeping an issue account are defined respectively in Articles 411-70 and 422-48 of the AMF General Regulation and consist of:

- ▶ creating units/shares following subscriptions and delisting units/shares following redemptions, on the basis of the net asset value transmitted by the asset management company;
- ▶ managing corporate actions (*opérations sur titres* – OST);
- ▶ organising the settlement/delivery of units/shares following the creation or delisting of units/shares;
- ▶ checking the number of units issued in pure registered form;
- ▶ keeping the register of pure registered unitholders;
- ▶ sending regulatory information to unitholders or their intermediaries via the central depositary or any other appropriate means.

Please note: the issue account keeping tasks as defined by the regulations are not affected by the use of a DEEP. However, the asset management company may only delegate the performance of issue account keeping tasks to an investment services provider (see Article 411-71 of the AMF General Regulation). Issue account keeping tasks may be delegated under the conditions set out in Article 411-70, which refers to Article 321-97 1) to 3° and 5° to 9° of the AMF General Regulation.

The issue of fund units in a DEEP may be carried out by:

- ▶ **the regulated entity operating the DEEP** under a delegation from the asset management company (managed-as-a-service);
- ▶ **the asset management company** itself.

Please note: the use of a DEEP is decided by the issuer and is published if the issuer uses an agent (see Article R. 211-3 of the CMF).

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8) Under French law, distributed ledger technology (DLT) is known as a *dispositif d'enregistrement électronique partagé* or DLT (DEEP)..

3. PARTIAL OR FULL TOKENISATION OF UCI UNITS/SHARES

The asset management company may use a DLT (DEEP) to issue some or all of the units/shares in its fund. If the asset management company uses a DLT (DEEP), the units/shares concerned are held in pure registered form and the investor's position is evidenced by an entry in their name (or in the name of their intermediary in accordance with the conditions provided for in the CMF) in the UCI's register.

In the case of a partial issue via a DLT (DEEP) (e.g. an existing fund whose issue account has been admitted to Euroclear) and in order to know the number of units in circulation (both bearer and registered; including in the case of multiple marketing channels), the asset management company may choose to:

▸ carry out the aggregation itself;

▸ appoint the long-standing centraliser for this purpose; in this case, it must be ensured that it can track the units issued via the DLT (DEEP).

Units/shares registered in a DLT (DEEP) may be reflected in one or more accounts opened in the depositary's books:

▸ either a global account for all funds with units issued in the DLT (DEEP);

▸ or one account for each asset management company;

▸ or one account for each client per fund.

Depending on the players, these accounts may be technical accounts (i.e. internal to the depositary and opened by it) or accounts opened by the asset management company with an account opening agreement. In any case, these accounts are used by the depositary to aggregate the number of units/shares and fundraising announcements, to update the number of units/shares in circulation (securities leg) and to manage subscription/redemption settlement flows between the fund and the DLT (DEEP) via the UCI depositary, as well as corporate actions (cash leg).

If a fund's liabilities are fully tokenised, the asset management company must supply the fund valuer and the depositary with the total number of units in circulation for net asset value calculations and depositary controls.

C. Delegation of issue account keeping to a third party

1. NO IMPACT ON THE ASSET MANAGEMENT COMPANY'S PROGRAMME OF ACTIVITY

Keeping an issue account in a DLT (DEEP) does not affect the asset management company's programme of activity. The identity of the issue account keeper for units/shares held in a DLT (DEEP) is mentioned in the prospectus.

2. DELEGATION AS PART OF AN OUTSOURCING OF ESSENTIAL SERVICES

When the asset management company delegates issue account keeping tasks to a regulated service provider operating a DLT (DEEP), it applies the regulations in force on the delegation of essential services.

3. REVERSIBILITY IN THE EVENT OF A CHANGE OF SERVICE PROVIDER OR DETOKENISATION OF THE UCI'S LIABILITIES

The use of a service provider operating a DLT (DEEP) requires an analysis of reversibility (recovery of data relating to transactions recorded in the DLT (DEEP)) in order to anticipate situations where the asset management company itself takes over the execution of tasks, entrusts them to another service provider or reverts to traditional bearer management.

The issue of reversibility must be considered by the asset management company when setting up the fund with the depositary. It may also be envisaged with the service provider when the relationship is set up under a tripartite Service Level Agreement (SLA) between the depositary, the asset management company and the service provider operating the DLT (DEEP).

D. Operating model

1. ESTABLISHMENT OF COMMUNICATION FLOWS WITH THE FUND VALUER AND DEPOSITARY

1.1 Order management and procedures for updating units/shares in circulation

a. Receipt of orders for units/shares to be registered or already registered in the DLT (DEEP)

To facilitate the integration of the DLT (DEEP) into the existing operational framework, the asset management company may ask the centraliser of non-tokenised units to include, in its role as aggregator, the funds raised via the DLT (DEEP) in the fundraising reports it sends to the asset management company.

Within this framework, a so-called "technical" account or "DLT (DEEP) account" is opened for each asset management company or for each fund in accordance with the terms and conditions agreed between the asset management company and the depositary.

For the cash leg: a collection account is opened with the depositary. This account (single or for each asset management company or for each fund) is dedicated to the DLT (DEEP) and enables the DLT (DEEP) operator to administer the fund (for example, in the event of redemptions or corporate actions) and to reconcile payments received from investors (subscriptions).

b. Updating the number of units/shares in circulation

To facilitate the integration of the DEEP into the existing operational framework, the asset management company may also ask the centraliser of non-tokenised units to include, in its role as aggregator, the updating of the number of units/shares in circulation.

As indicated in the previous paragraph, the entire portion issued, stored or redeemed in the DEEP can be reflected in an account (technical or in the name of the investor) with the depositary in order to be aggregated with the fundraising carried out elsewhere (bearer or administered/pure registered outside the DEEP). Thus, having access to the DEEP view coupled with the traditional bearer view makes it possible to update the number of units in circulation.

This operational framework varies from one depositary to another, with difficulties and unresolved issues:

► some prefer to set up a technical cash account for each fund, others for each asset management company. Similarly, to reflect the units registered in the DLT (DEEP), some depositaries prefer to set up a single DLT (DEEP) account, others a technical account for each asset management company and others for each fund;

► when choosing the type of account with the depositary, it is important to define the procedures for managing overdrafts, in particular to ensure that in the event of a payment default on a fund there is no impact on the operations of investors in other funds;

► it may be useful to set up a tripartite service level agreement (DLT (DEEP) operator, asset management company, fund depositary) to describe the roles and responsibilities of each party, particularly with regard to the management of flows and the procedures for reconciling flows and positions between the DLT (DEEP) operator and the depositary.

Depending on the option chosen, the asset management company may have to adapt the controls it carries out on the number of units in circulation.

In addition, some depositaries offer asset management companies the option of reflecting in their systems and in the reports transmitted, the fundraising carried out in the DLT (DEEP) detailed according to the usual marking practices.

1.2 CASH MANAGEMENT

The process for settling amounts owed by the investor in respect of subscriptions and those owed by the fund in respect of redemptions (or corporate actions, for example), when the transactions are recorded in a DLT (DEEP), is similar to the mode of operation in a conventional register, without delivery against payment. This requires the implementation of a specific operating model for managing transaction settlement flows, involving the DLT (DEEP) operator, the UCI depositary, the investor and/or the investor's cash account keeper. At present, in the absence of a digital currency, transactions are settled via the market's payment system.

The operating model varies according to the type of investor:

a. Institutional investors: contractual settlement

Institutional investors do not need to deposit cash in the collection account prior to the transaction; they are notified of the payment obligation by the DLT (DEEP) operator or the asset management company. If the cash is not in the account on the day of the trans-action, the order is centralised and the units are created. The DLT (DEEP) operator and the asset management company must arrange for reminders to be sent to the investor until payment is made. This requires smooth and rapid communication between the DLT (DEEP) operator and the asset management company, since in the event of a payment default, if the DLT (DEEP) operator's reminders to the investor and/or its account keeper have no effect, the asset management company must be alerted so that it can also contact the investor and, if necessary, decide to cancel the subscription order that has not been settled. Cancellation of a subscription order that has not been settled generates a capital gain or loss for the UCI concerned, which may then backfire on the investor.

b. Retail investors: pre-funding

For retail investors, the usual model is that of pre-funding: asset management companies require cash to be deposited in the account prior to the transaction.

2. CHANGE IN THE TYPE OF HOLDING AT THE REQUEST OF INVESTORS

Changes in the type of holding (from a custody account keeper – CAK to a DLT (DEEP) or from a DLT (DEEP) to a CAK) are likely to result in an update of the number of units in circulation in Euroclear, according to the system chosen by the issue account keeper at Euroclear.

Model 1
Transfer of French fund units/shares from Euroclear to the CAK's blockchain account

As part of this transfer, the fund units/shares are transferred from the instructing investor's account to the blockchain account of the CAK, the recipient of the units/shares. This transfer involves the destruction of the units/shares in Euroclear. It is carried out with free delivery with matching by:

▸ an instruction from the investor for a securities exit;

▸ an instruction from the blockchain to its CAK for a securities entry.

See figure on next page.

Figure 1 - Charter of good professional practice for centralising UCIs (France Post-Marché.fr) / General case model 1

Transfer of units from a CAK to a blockchain

CAPITAL MANAGEMENT ISSUE ACCOUNT

12 Registration of the units in the investor's register account

11 Creation of units in the register

10 Destruction of units in Euroclear

8 Registration of the units received in the blockchain account with the Custody Account Keeper

BLOCKCHAIN

9 Confirmation of receipt of units (credit advice)

BLOCKCHAIN FUND ACCOUNT KEEPER

4 Request for receipt of units in blockchain from the investor's CAK

1 Opening of blockchain registry account

2 Communication of blockchain securities account number or delivery of units

5 Free delivery of units to the blockchain CAK

6 Free receipt of units in the blockchain CAK account

3 Request to transfer units from its CAK account to its blockchain account

INVESTOR'S ACCOUNT KEEPER

7 Confirmation of free delivery of units to the blockchain fund's CAK (DLT account)

13 Optional: record-keeping of units held in blockchain

Model 2
Transfer of units/shares of French funds in Euroclear to a pure registered custodian (outside Euroclear)

As part of this transfer, the fund's units/shares are delivered from the instructing investor's account to be registered in the blockchain register to which the units are transferred. This transfer involves delisting the units/shares in Euroclear.

It is carried out with free delivery <u>without</u> matching by:

- ▶ an instruction from the investor to transfer the securities to the issuer of the units/ shares;
- ▶ receipt of the securities by the issuer of the units/shares for registration in pure registered form, and delisting of the units/ shares in Euroclear. In the specific case of Luxembourg funds, some depositaries operate by redeeming bearer units/shares and then subscribing for registered units/ shares in a DLT (DEEP).

Figure 2 - Charter of good professional practice for centralising UCIs (France Post-Marché.fr) / General case model 2

Transfer of units from a CAK to a blockchain
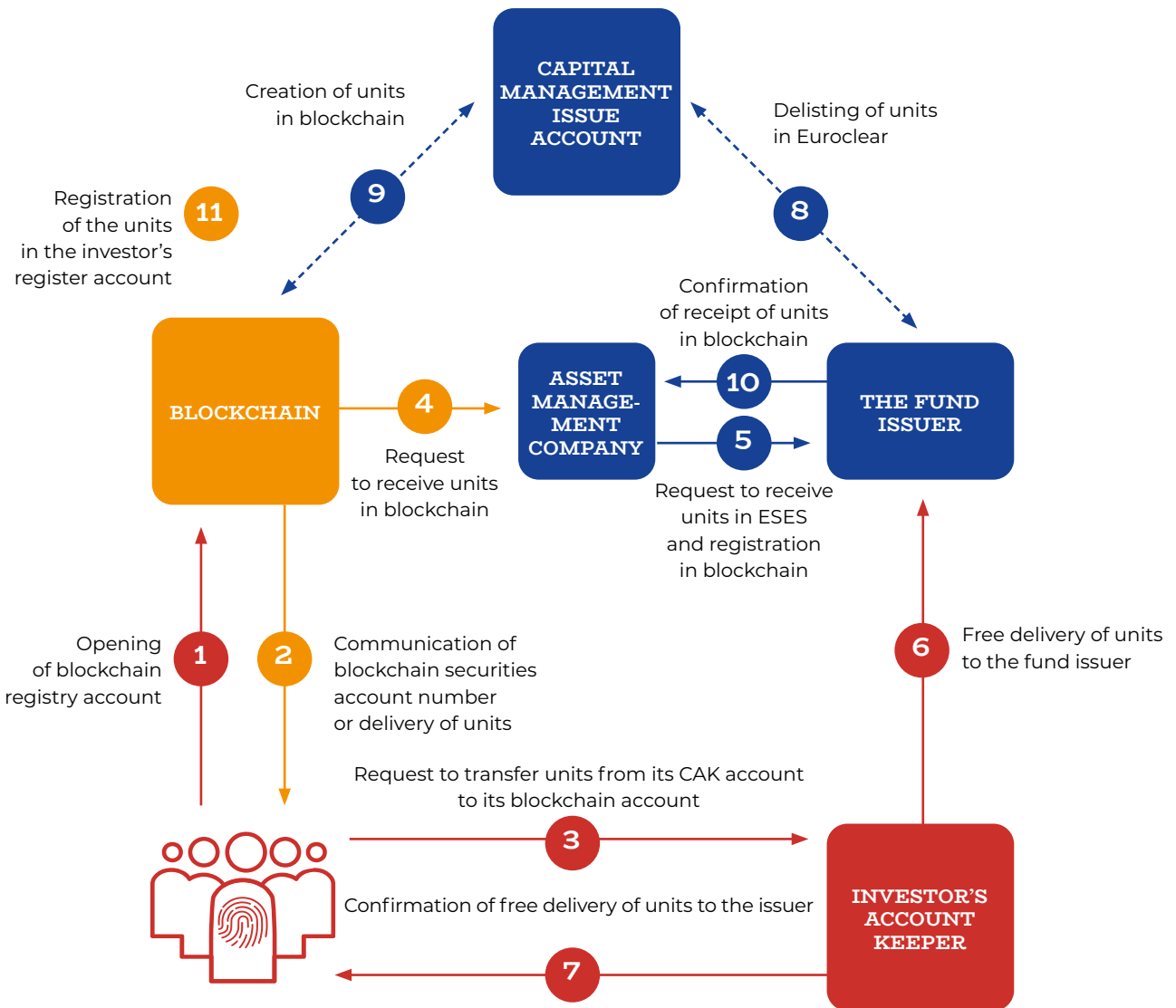
In the specific case of Luxembourg funds, some depositaries operate by redeeming bearer units/shares and then subscribing registered units/ shares in a DLT (DEEP).

E. Tax management: registered units and tax treatment of liabilities

Depending on whether the asset management company administers its fund's issue account itself or uses a DLT (DEEP) service provider, the responsibilities for tax reporting to the authorities and investors are as follows:

	IFU tax form	FATCA/CRS
Partial tokenisation	Coordination between the asset management company/service provider and the global paying agent for information due to the French Public Finances General Directorate (*Direction Générale des Finances Publiques* – DGFiP) and the investors' single tax form (*imprimé fiscal unique* – IFU).	Obligations of the asset management company: ▸ collect FATCA self-certifications from investors; ▸ make FATCA/CRS declarations for funds with registered share-holders.
Full tokenisation	Asset management company/service provider responsible for providing information for the DGFiP and the investors' IFU based on information provided by the valuer.	

F. Luxembourg funds

All UCIs governed by Luxembourg law must have a transfer agent (TA) responsible for keeping the fund register. The TA is appointed by the UCI to collect and process subscription/redemption orders and to manage payment instructions.

An asset management company may entrust a third party other than the TA (e.g. a fund distribution platform) to record positions taken by a unitholder. However, the fund's TA remains solely responsible for collecting and processing orders.

Therefore, any third party or platform receiving subscriptions/redemptions must forward them as nominee to the TA.

Settlement management is also the responsibility of the TA, which must contact the nominee, who will instruct the investor to settle the subscription or arrange for the fund to settle the cash in the event of redemption.

Given this context, the asset management company shall carry out additional analyses specific to the tokenisation of units/shares in funds governed by Luxembourg law.

G. Subscriptions/redemptions in view of DeFi and platform interoperability

Figure 3 - Distinguishing between TradFi, CeFi and DeFi

TradFi
So-called "traditional finance"
Traditional financial intermediaries and service providers (e.g. banks, asset managers, funds, brokerdealers, advisors, trading venues, clearing houses, CSDs, etc.).
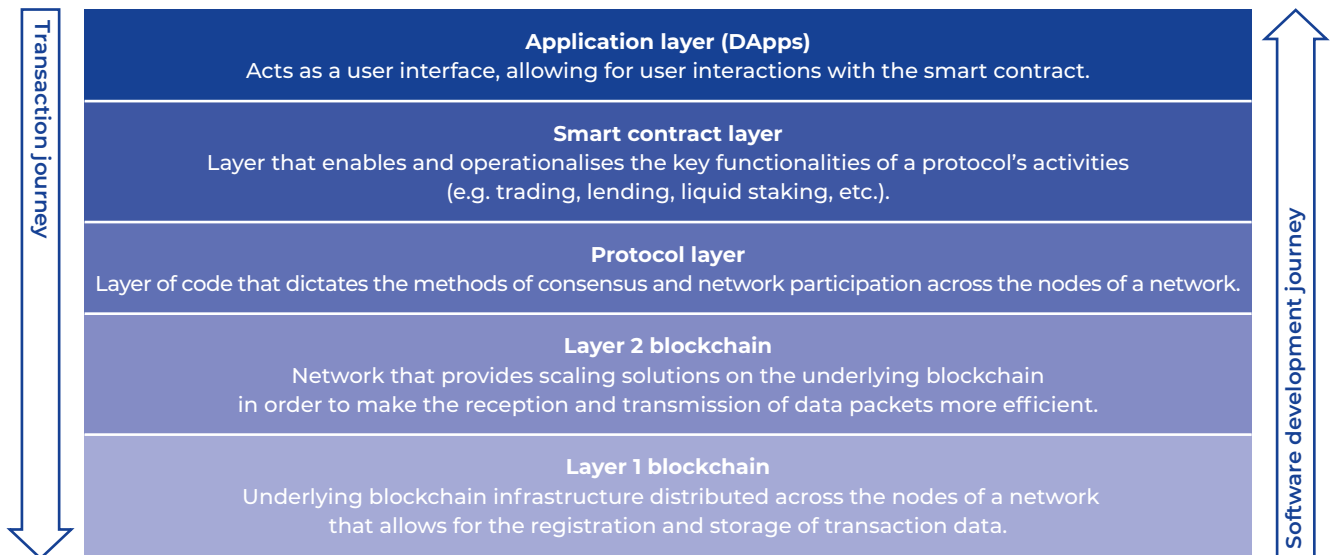
CeFi
Centralised finance
Includes TradFi, as well as nontraditional centralised players that operate activities "offchain", such as digital asset service providers.

DeFi
Decentralised finance
Financial activities occurring "on-chain", on automated, decentralised and disintermediated blockchain protocols.

"*DeFi is a recently emerged phenomenon, which purports to provide an alternative to traditional financial services (or "TradFi") by replicating certain activities such as borrowing, lending and investing. Having developed since the launch of the Ethereum blockchain, DeFi claims to provide such activities in a fully decentralised, automated and disintermediated manner, both without the need for human intervention, and solely relying on the use of decentralised blockchain protocols, thereby defining new models of activity and governance, in which stakeholders can actively participate "on-chain".*"[9]

Figure 4 - The DeFi "stack"[10]

Transaction journey

Application layer (DApps)
Acts as a user interface, allowing for user interactions with the smart contract.

Smart contract layer
Layer that enables and operationalises the key functionalities of a protocol's activities (e.g. trading, lending, liquid staking, etc.).

Protocol layer
Layer of code that dictates the methods of consensus and network participation across the nodes of a network.

Layer 2 blockchain
Network that provides scaling solutions on the underlying blockchain in order to make the reception and transmission of data packets more efficient.

Layer 1 blockchain
Underlying blockchain infrastructure distributed across the nodes of a network that allows for the registration and storage of transaction data.

Software development journey

Recent years have seen the emergence of decentralised finance (DeFi) platforms based mainly on the Ethereum blockchain or on so-called "level 2" solutions. These innovations are based on the use of smart contracts, which can automate several key stages in the third-party asset management process.

Adapted to investment management, a smart contract can automate all the stages in the lifecycle of an investment vehicle, from placing orders to calculating net asset value, managing subscriptions and redemptions, and keeping a register of the units/shares held by investors.

9) *AMF Discussion Paper – Decentralised Finance (DeFi), exchange protocols and governance: overview, observed trends and regulatory discussion points*

10) *Source: AMF.*

Figure 5 - Example of a collective management Smart Contract infrastructure
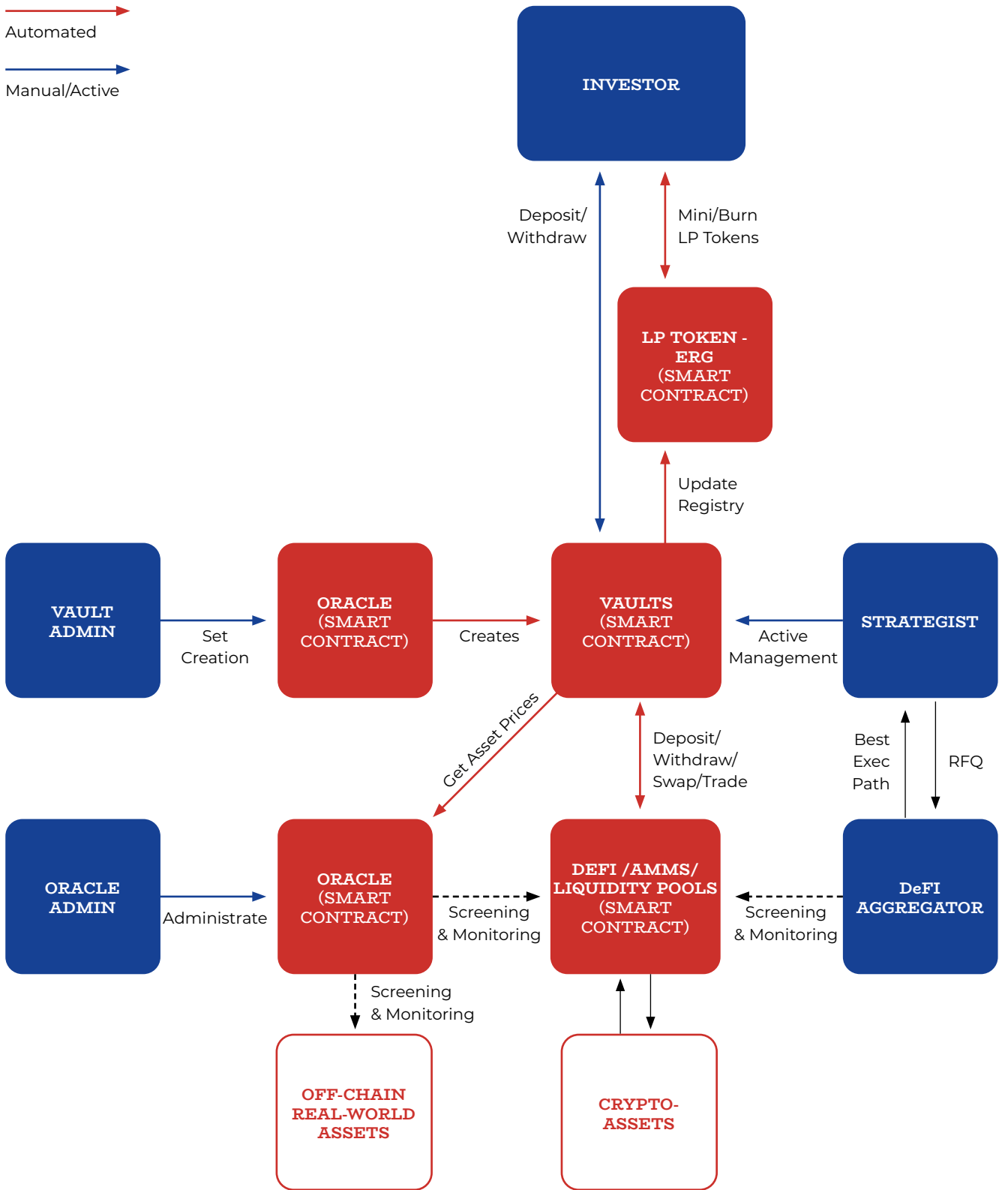
However, for a smart contract to work, the following prerequisites must be met:

1. Tokenisation of assets <u>and</u> liabilities: assets and liabilities must be converted into digital tokens so that they can be managed by the smart contract.

2. Need for oracles: an oracle is a system for connecting the smart contract with data external to the DLT (DEEP). Since the smart contract resides on a blockchain, it cannot directly access data or events that occur outside it. Oracles act as bridges by providing information external to the DLT (DEEP) that the smart contract may require to perform functions or validate conditions. For example, ChainLink[11] is the leading player in the oracle market.

The fundamental transformation brought about by the development of smart contracts raises operational and regulatory issues that are crucial for the industry:

1. New fund structures: is it possible for a UCI to take the form of a smart contract, thereby creating a new category of fund alongside FCPs and SICAVs?

2. Roles of traditional players: what will be the roles of traditional players such as the depositary, the delegated administrative and accounting entity, and the centraliser, in this new landscape?

Less complex to set up from a regulatory point of view and more mature in terms of experimentation, the tokenisation of fund units has become a reality and should continue to develop. New players could also emerge to offer services such as the consolidation of fund inflows from different DEEPs or systems connected to a DLT (DEEP). This will raise the issue of platform interoperability.

But the tokenisation of fund units is part of an evolving context marked by pioneering initiatives aimed at taking the current transformation a step further.

For example, the Franklin OnChain U.S. Government Money Fund (FOBXX)[12], a U.S. fund whose liabilities are available in token format and whose unit ownership is transparently registered on the Stellar blockchain using a proprietary system administered by Franklin, or Switzerland-based Backed Finance AG[13], which manages a tokenised feeder of the iShares Core S&P 500 UCITS ETF USD fund.

Similarly, UBS Asset Management recently launched the pilot of a tokenised variable capital company (VCC)[14] fund in collaboration with the Monetary Authority of Singapore, using the in-house tokenisation service, UBS Tokenize.

In this new era, we may ask ourselves whether the traditional players in asset management could gradually be replaced by smart contracts, which would profoundly revolutionise the industry and would certainly pave the way for many new opportunities and challenges.

In light of this chapter on how blockchain can be used to manage liabilities, it is undeniable that implementing this technology offers significant benefits in terms of transparency, process optimisation and regulatory compliance, despite some inherent challenges. Liability management therefore appears to be a prime entry point for integrating this technology into asset management companies. Numerous initiatives have proved that the model works, and the number of subscriptions/redemptions via blockchain continues to grow. Some institutional investors have made it their preferred investment channel, forcing asset management companies to register their funds on it, and vice versa. However, to seize the other opportunities offered by the technology, it is essential to explore the new products and seize the new investment opportunities resulting from the adoption of DLT, the objective of the following chapter, which will focus on the different types of instruments available and the regulatory framework that defines them.

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11) *ChainLink Data Feeds.*

12) *Franklin OnChain U.S. Government Money Fund – FOBXX*

13) *Backed Finance AG.*

14) *UBS Asset Management – blockchain-native tokenized VCC fund pilot.*

🔏 II. Investment in digital assets in portfolios

A. Introduction

The emergence of bitcoin in February 2009 and the growth of multiple blockchain protocols over the last 15 years have seen the gradual emergence of a new form of fully digitised assets, all of which have the common feature of being issued, transferred and stored in blockchains. These digital assets can be divided into three categories:
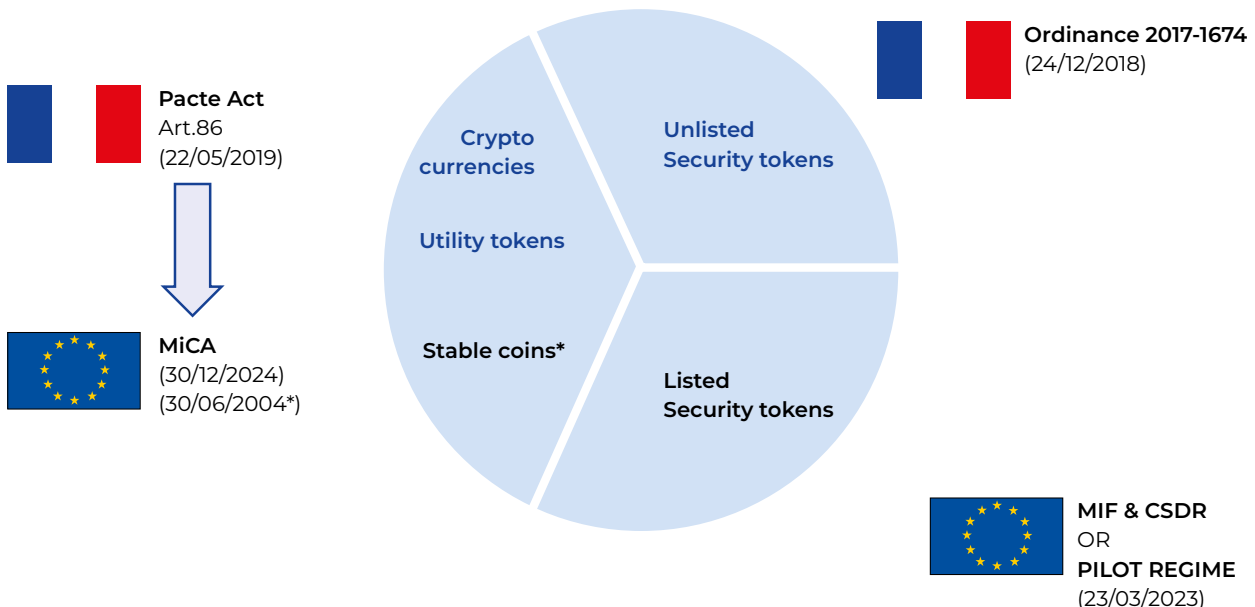
- ▶ tokenised financial instruments (security tokens) covered by Article 211-1 of the CMF, which may or may not be listed. The tokenisation of financial instruments may:
  - ▫ take place at the initiative of issuers or investors (as long as the issuer has provided for this in advance),
  - ▫ take place on both existing and new securities,
  - ▫ be reversible (detokenisation) in order to revert, if requested or if necessary, to the traditional version of these financial instruments.
- ▶ digital assets covered by Article 54-10-1 of the CMF and crypto-assets within the meaning of the European MiCA Regulation, which include:
  - ▫ stablecoins:
    - · e-money tokens or EMTs (e-money tokens that aim to maintain a stable value by referring to the value of an official currency)
    - · asset-referenced tokens or ARTs (tokens that aim to maintain a stable value by referring to one or more underlying assets)
  - ▫ utility tokens (in the context of MiCA, a type of crypto-asset intended to provide digital access to a good or service, available on a blockchain, and which is accepted only by its issuer)
  - ▫ native tokens (gas tokens/crypto-currency) which are the only digital assets that do not have an issuer in the proper sense, i.e. distinct from the blockchain on which they are registered; e.g. Bitcoin or Ether);
- ▶ non-fungible tokens (NFTs) which, unlike the previous two categories, are not regulated as NFTs but according to the nature of their underlying asset. As a result, the legal regime applicable to two NFTs may vary greatly depending on how they work and what they represent.

Depending on their category, these assets are subject to different regulations. In France and Europe, these include the Blockchain Ordinance and the PACTE Act on the one hand, and the MiCA and pilot regime regulations at European level on the other.

Figure 6 - Regulatory overview of asset tokens[15]

Pacte Act
Art.86
(22/05/2019)

MiCA
(30/12/2024)
(30/06/2004*)

Crypto currencies

Utility tokens

Stable coins*

Unlisted Security tokens

Listed Security tokens

Ordinance 2017-1674
(24/12/2018)

MIF & CSDR
OR
PILOT REGIME
(23/03/2023)

15) Source: France Post-Marché.

The first titles of the MiCA Regulation, dealing with stablecoins (Titles III and IV) shall come into force on 30 June 2024. *Further information on the regulatory timetable for DASPs and MiCA can be found in **Appendix 2** of this document.*

According to the MiCA Regulation, stablecoins correspond to two types of crypto-assets: asset-referenced tokens and e-money tokens.

French regulation on digital assets is set to be replaced by MiCA and the pilot regime, which is an optional regime with exemptions. It is possible to issue security tokens in compliance with the original regulatory framework (i.e. without exception to MiFID and CSDR).

The table below lists the different types of digital assets and specifies the regulations by which they are defined.

	Types	Nature	Blockchain Ordinance	PACTE Act	Pilot regime	MiCA
Tokenised Financial Instruments (FIs)	Unlisted	Negotiable debt securities	Yes	No	Yes	No
		Units or shares in collective investment funds	Yes	No	Yes	No
		Equity securities issued by joint stock companies	Yes	No	Yes	No
		Debt securities other than negotiable debt securities	Yes	No	Yes	No
	Listed	Registered securities registered in a DEEP	No	Yes	Yes	No
		Bearer securities registered in a DEEP	No	Yes	Yes	No
Digital assets/Crypto-assets as defined by MiCAR	Native tokens (gas tokens or crypto-currency)	Bitcoin and altcoins	No	No	No	Yes
	Utility tokens		No	No	No	Yes
	Asset refer-enced tokens	Stablecoins	No	No	No	Yes
	E-money tokens	Stablecoins	No	No	No	Yes

B. Tokenised unlisted securities: Blockchain ordinance

1. SCOPE OF APPLICATION

Amendment of the legislation applicable to financial securities and transferable securities so as to authorise the representation and transfer via DLT of financial securities that are not included in the operations of a central depositary or registered in a financial instruments settlement and delivery system.

The broadest possible scope in view of the authorisation given, i.e. all securities that are not admitted to the operations of a central securities depositary and, in practice, those that the issuer may decide to register in a DLT (DEEP):

- ▶ negotiable debt securities;
- ▶ units or shares in collective investment funds;
- ▶ equity securities issued by joint-stock companies and debt securities other than negotiable debt securities, provided that they are not traded on a trading platform, within the meaning of Article L. 420-1-i of the CMF, as amended with effect from 3 January 2018.

2. PLAYERS

Registration in a DLT (DEEP) requires a decision by the issuer.

3. PROTOCOLS

The term 'DEEP' is a designation that remains broad and neutral with regard to the various protocols so as not to exclude subsequent technological developments.

4. RESPONSIBILITIES

This new method of registering financial securities is an alternative to book-entry registration and produces the same effects. It does not introduce any new obligations, nor does it reduce the existing guarantees relating to the representation and transmission of the securities concerned.

The level of protection afforded by the regulations to owners of financial securities is preserved, and the issuer remains responsible for keeping the register even if an agent is appointed.

C. Tokenised listed securities: Pilot regime

1. SCOPE OF APPLICATION

Whereas MiCA and the French DASP regime concern assets that are not equivalent to financial instruments, the pilot regime focuses solely on assets that are equivalent to financial instruments admitted to a regulated trading platform (market infrastructure), which generally also implies admission to a regulated settlement/delivery platform (post-trade infrastructure). When they pass through DLT-based infrastructures, listed financial securities are referred to as security tokens. Unlisted security tokens are essentially governed by national law, i.e. in France by the Blockchain Ordinance.

The pilot regime explicitly provides for the following types of security: shares, bonds and other debt securities, as well as units in UCITS, although the European legislator has set limits on the issue volume of each of these in order to limit the risk associated with this experiment: A maximum of €500 million for each share issue and each issue of UCITS units, and a maximum of €1 billion for each bond issue. In addition, the total amount of all types of securities issued may not exceed €6 billion per DLT infrastructure. In the event that the total market value of these issues exceeds €9 billion, the legislator requires the activation of a plan to migrate all or part of the security tokens to traditional infrastructures in order to reduce the number of tokenised securities in circulation.

Securities originally issued on traditional infrastructures and which are subsequently partially listed on DLT infrastructures (in particular in the case of dual listing on traditional infrastructures and DLT infrastructures) must obviously be included in the monitoring of these various limits. With regard to UCITS with unit classes, at first sight it seems entirely possible to have both traditional and tokenised unit classes for the same UCITS.

On the other hand, DLT-based infrastructures that comply strictly with the current regulatory framework by not applying for any of the exemptions provided for in the pilot regime should not be subject to these various limits.

2. TERMS AND CONDITIONS FOR HOLDING LISTED SECURITY TOKENS

The methods defined by French regulations for the holding of securities by investors (registered securities versus bearer securities) are not, in principle, called into question by the pilot regime. Listed security tokens may therefore be held either in registered form (as is the case for unlisted security tokens, which are governed in France by the Blockchain Ordinance) or in bearer form, but it will still be possible to switch from one form to the other at the investor's request.

The French transposition of the pilot regime also retains the option for investors to leave the administration of their registered securities with the issuer (pure registered securities) or to entrust it to an external third party (administered registered securities).

3. ROLES AND RESPONSIBILITIES OF PLAYERS

Where the administration of tokenised registered securities is entrusted to an external third party, it is deemed to include, as for traditional securities, the management of the means of access to the DLT infrastructure's settlement/delivery system. If the investor decides to use bearer form for their security tokens, the external third party will be responsible not only for administration but also for custody.

The responsibility of issuers for tokenised registered securities and the responsibility of DLT infrastructures for tokenised bearer securities will therefore be deemed to be the same as for traditional securities, with one exception: the option for an issuer to delegate to a DLT infrastructure the responsibility for keeping the register of registered securities when that DLT infrastructure complies with the provisions of the pilot regime.

In particular, DLT Infrastructures and their participants must be able to guarantee a level of investor protection equal to that of traditional infrastructures. In particular, UCITS depositaries will be deemed to be responsible for the custody of all financial securities, whether or not they are tokenised. As with traditional financial securities, custody of assets will therefore involve holding positions for security tokens held in registered form by the fund and custody for security tokens held in bearer form by the fund.

D. Decoding and outlook: specific case of NFTs

1. TECHNOLOGICAL OVERVIEW OF NFTS

■ The concept of a non-fungible token

NFTs are digital tokens that differ from traditional digital assets, such as Bitcoin or Ether, in that they are non-fungible. They can be considered as commodities, securities, intellectual property or other categories.

Fungibility refers to the ability of an asset to be exchanged for another of the same value without any discernible difference. For example, one Bitcoin can be exchanged for another Bitcoin without any distinction between the two. However, NFTs are different because they are non-fungible. This means that each NFT is unique and represents a specific asset. There are a variety of underlying assets and they can be tangible or intangible.

■ The digital trace of the underlying asset

The creation of an NFT requires the development of a smart contract. As a reminder, a smart contract is a computer code that is executed automatically according to pre-defined parameters and conditions. To date, the vast majority of NFTs are exchanged mainly on the Ethereum blockchain, given the ease with which they can be created due to the characteristics of the programming language. The Ethereum Virtual Machine is compatible with other blockchains such as Avalanche, Polygon and Solana, so NFTs can also be easily created on these infrastructures.

Other recent initiatives include the arrival of ordinals on Bitcoin, which represent digital entries on the Bitcoin blockchain. Ordinals are therefore in some ways similar to the NFTs created on Ethereum, even though the technological mechanism is quite different.

From a technical point of view, it should be noted that on the Ethereum blockchain, different token standards are used for both fungible and non-fungible tokens. Of these, the formats most commonly used in the ecosystem, with examples of use cases, are:

- ERC-20: creation of fungible tokens for a dedicated application;
- ERC-721: creation of non-fungible tokens: a collection of 10,000 NFTs, each with different characteristics;
- ERC-1155: issue of an NFT in 10,000 copies; this is a combination of the two standards above, and provides greater agility.

*Details of the standards and associated use cases can be found in **Appendix 9** of this document.*

2. LEGAL DEFINITION OF NFTS

■ The definition of NFTs with regard to the PACTE Act

Article L. 54-10-1 of the CMF defines digital assets as *"§1. The tokens referred to in Article L. 552-2, excluding those that fulfil the characteristics of the financial instruments referred to in Article L. 211-1 and the short-term notes referred to in Article L. 223-1"*; or as *"§2. Any digital representation of a value that is not issued or guaranteed by a central bank or public authority, that is not necessarily attached to legal tender and that does not have the legal status of a currency, but that is accepted by natural persons or legal entities as a medium of exchange and that can be transferred, stored or exchanged electronically"*.

In its Q&A on the DASP[16] regime, the AMF confirmed that an NFT granting rights to goods or services can be classified as a digital asset and reiterated that fungibility is not a criterion for classification as a digital asset.

Classification as a digital asset within the meaning of the PACTE Act may therefore result in application of the DASP regime.

■ What about the MiCA Regulation? Is an NFT the same as a crypto-asset?

The MiCA Regulation defines crypto-assets (the term 'crypto-asset' replaces the term 'digital asset' which exists in French law) in a different way from the PACTE Act: *"A digital representation of a value or right that can be transferred and stored electronically, using distributed ledger technology or similar technology"*.

MiCA therefore excludes non-fungible crypto-assets from its scope. Under the recitals of the Regulation, only (large) collections or series of NFTs could therefore be considered fungible assets and fall within the scope of the definition of crypto-assets.

■ What about the classification of financial instruments?

A large proportion of financial securities are fungible assets. This is particularly the case for transferable securities that confer *"identical rights for each class"*, including shares, bonds, transferable securities giving access to capital, investment certificates and profit-sharing certificates.

While fungibility is a feature of most financial securities, it is not a criterion for classifying all financial securities. It is therefore possible to design financial securities that are non-fungible. The dividing line between NFTs and financial instruments therefore becomes more complex when NFTs are part of series or collections whose non-fungibility is questionable.

The classification of NFTs as financial instruments should therefore not be ruled out from the outset.

■ Is it possible to use the system of intermediation in miscellaneous assets?

According to the AMF's Q&A on the DASP regime, Article L. 551-1 of the CMF allows NFTs to be treated as miscellaneous assets, in the same way as digital assets.

16) AMF Position-Recommendation DOC-2020-07.

E. Impact of investment in tokenised assets on asset management operating models and relationships with custodians/depositaries

1. ADAPTATION OF OPERATING MODELS ACCORDING TO THE BUSINESS PROCESSES CONCERNED

The characteristics of issue, exchange and storage of digital assets in DLTs mean that companies wishing to invest in or expose their portfolios to these assets must adapt their operating models.

The table below sets out the various points of attention to be considered by an asset management company in this area, bearing in mind that while tokenised financial instruments are eligible for investment by UCITS, crypto-assets within the meaning of MiCA may only concern certain types of AIF.

#	Activity	Impact on the operating model	Point of attention
1	Data manage-ment	**Low** to **High**	▪ If the asset is similar to a financial instrument (i.e. with an ISIN code), there will be little impact. ▪ If it is a crypto-asset within the meaning of MiCA, the level of impact will be greater.
2	Trade booking	**Moderate** to **High**	The level of impact may vary depending on the type of asset. Consequently, a detailed analysis must be carried out on a case-by-case basis: ▪ If it is a tokenised listed security type instrument, the impact will be moderate: the process is similar to that of a traditional financial instrument. ▪ If it is a crypto-asset within the meaning of MiCA, the architecture will be different, resulting in a higher level of impact.
3	Trade execution	**Moderate** to **High**	The procedures for confirming and affirming the trade may change, which could require new processes to be put in place or even a return to manual processes, particularly in the absence of a central securities depositary.
4	Cash manage-ment	**High**	The settlement currency has no direct impact on the internal operations of the fund if all participants are aligned on its use. Cash management is not a subject that is dealt with by the asset management company, but by the depositary, which is responsible for receiving, holding and securing the fund's liquidity. However, there are a few points to bear in mind: ▪ **"Free of Payment"**: the cash is sent but the securities remain on the blockchain. Consequently, the depositary must be able to check that the securities are actually in the portfolio, or coordinate with the registrar. Simultaneous delivery of the security and settlement in commercial currency, or even in central bank money, is a desirable objective, but one that has not yet been fully developed. ▪ Linking ***off-chain*** and ***on-chain*** systems: the connection between the real world and systems on blockchain can be established via an oracle. The use of oracles as middleware will therefore have a significant impact on the entire cash management process within the asset management company.

#	Activity	Impact on the operating model	Point of attention
5	Corporate actions manage-ment	**Low** to **Moderate**	▪ Off-Chain **Corporate actions** management is based on standard processes. ▪ On-Chain **Corporate actions**: operational processes will need to be adapted.
6	Valuation	**High**	Mark-to-model preferred.
7	Risk man-agement	**Moderate**	No specifics when the instruments are modelled in tools, but include technological risk mentionned in the prospectus by differentiating the instrument and the principle of storage or custody: ▪ The management of keys for crypto-assets under MiCA is the responsibility of the asset management company and the investor; ▪ The management of keys for other assets on blockchain is the responsibility of the issuer (pure registered). DeFi protocols may be subject to specific risks associated with smart contracts, such as faulty design, incorrect programming and security vulnerabilities.
8	Compli-ance – Ratio control	**Low**	Potential impact if new regulatory ratios on new assets are created. Issue of liquidity ratio management if the fund holds stablecoins.
9	Reporting	**Low** to **Moderate**	Impact identified on daily reporting, especially if the company reports its transactions via an ARM.

The level of operational impact on middle office activities in particular varies considerably depending on the type of instrument considered. For all digital assets that are equivalent to financial instruments, the impacts are more moderate than for crypto-assets within the meaning of MiCA.

Cash management is the most complex factor for the various players in the chain to grasp. Expected regulatory changes, combined with the various experiments under way with stablecoins and digital currencies issued by central banks, should help to structure the approach of asset management companies in this area.

2. IMPACT ON RELATIONSHIPS WITH DEPOSITARIES CONCERNING CUSTODY OF ASSETS

The agreements entered into by the asset management company and the asset servicers for its UCIs must clearly set out the breakdown of services provided and the responsibilities of each party with regard to asset custody and administration.

■ The custody function of the UCI depositary

The UCI depositary provides custody of assets, which generally includes financial instruments but also all assets in which a UCI may invest, including tokenised financial instruments and crypto-assets within the meaning of the MiCA Regulation (e-money tokens, utility tokens, asset-referenced tokens), also known as digital assets under French law.

Custody of assets is broken down as follows:

- ► "custody of assets" when the assets of the UCI in the form of financial instruments may be registered or held in a securities account directly or indirectly in the name of the depositary. This is the case, for example, for so-called "bearer" financial securities, in which case the depositary has an obligation to return the securities held at the request of their owners or in the event of the loss of these securities for any reason whatsoever;

- ► "asset register keeping" means that the depositary must record assets in the UCI portfolio which the depositary is not responsible for keeping, and must ensure that the ownership of the UCI's assets is verified annually or half-yearly, in accordance with Article 90[17] of the European Alternative Investment Fund Manager Directive (AIFMD). This control by the depositary is based on an ongoing update of the UCI's inventory based on instructions and/or transaction notices sent by the UCI's asset management company.

When the ownership of assets is established using a system external to the depositary, its role is limited to reconciling the position held by the depositary with the information attesting to the ownership of the assets concerned. The depositary has no obligation to return any assets held in the register.

Assets are held on the basis of information transmitted by the asset management company.

Since digital assets are not financial instruments and tokenised financial securities are not registered or held in a securities account directly or indirectly in the name of the depositary, the custody by a UCI depositary of digital assets or tokenised financial securities is a matter of asset register keeping.

If the tokenised financial securities were to be registered or held directly or indirectly in the name of the depositary, then the custody arrangements would be determined on a case-by-case basis.

■ The custody function of the DASP

The UCI depositary regime is distinct from the DASP regime, which holds the digital assets and for which there is an obligation to return the means of access to the digital assets.

With MiCA due to come into force in late 2024/early 2025, the DASP regime is set to be replaced. The provider of crypto-asset custody and administration services within MiCA will in turn be subject to an obligation to return crypto-assets in the sense that it is liable for the loss of crypto-assets or the means of access to these assets for events for which it is responsible. The amount of liability of crypto-asset custody and administration service providers within the meaning of MiCA is limited to the market value of the lost crypto-assets.

Where the AIF depositary is not registered or DASP-authorized for the custody of digital assets/crypto-assets, it is the asset management company's responsibility to choose one depositary/custody in accordance with its Best Selection procedures. Indeed, this activity is not authorised for asset management companies in accordance with AMF DOC-2012-19 (no self custody). Once the service providers have been selected, the overall organisation will be presented to the Alternative Investment Fund (AIF) depositary, which will confirm whether it can carry out its duties within this specific framework.

Incidents for which the custodian of digital assets cannot be held liable include those that occur independently of the service provided or operations carried out by the custody service provider (for example, a problem with the DLT exchange platform).

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17) *Article 90 of the AIFM Directive.*
18) *AMF Position-Recommendation DOC-2012-19.*

III. Impact of the use of blockchain on the programme of activity of asset management companies

The use of blockchain has a different impact on asset management companies depending on whether it is applied to the assets or liabilities of managed portfolios.

Thus, keeping a fund's register via a DLT (DEEP) has no impact on the asset management company's programme of operations. However, the fund prospectus must mention the identity of the issue account holder for the units/shares registered in the DLT (DEEP). This may be the asset management company (provided it has sufficient and appropriate resources) or a regulated ISP (Investment Service Provider) carrying out DLT (DEEP)

register-keeping operations on behalf of the asset management company.

Conversely, any implementation of portfolio management that is partially or wholly invested in digital assets (and, to a lesser extent, in DLT financial instruments) will require submission of an authorization for the extension of the programme of activity Board in order to amend the AMF's authorisation grid.

We assess the impact of an application for extension as follows, depending on the activities concerned:

#	Name of section	Impact on the programme of activity	
		Digital assets	DLT financial instruments (security tokens)
2.A	Asset management company activities	**High**	**Moderate**
2.B	Ancillary activities	**Low** to **High**	**Low**
2.C	Technical resources, IT, Cyber	**High**	**Moderate**
2.D	Investment and divestment process	**High**	**Low**
2.E	Best execution/selection and order routing	**High**	**Moderate**
2.F	Control system	**Moderate** to **High**	**Moderate** to **High**
2.G	Valuation of instruments	**High**	**Low**
2.H	Outsourcing and delegation	**Moderate** to **High**	**Moderate** to **High**
2.I	Conflicts of interest[19]	**Low**	**Low**
2.J	AML/CFT	**High**	**Moderate**
2.K	Remuneration policy[20]	**Low**	**Low**
2.L	Marketing[21]	**Low**	**Low**
2.M	International positioning[22]	**Low**	**Low**
2.N	Capital requirement and other financial items	**High**	**Low**

19), 20), 21) and 22) See _Appendix 3._

A. Impact on the sections of the asset management company's programme of activity

Any application to extend authorisation to use digital assets must be submitted using the "Other" form in AMF Instruction

DOC-2008-03 – Annex IV – Forms for applications to extend authorisation.

1. ACTIVITIES, UNDERLYING ASSETS AND AUTHORISATION SCHEDULE

#	Name of section	Impact on the programme of activity	
		Digital assets	DLT financial instruments (security tokens)
2.A	Asset management company activities	**High**	**Moderate**

The main impact for this section concerns part *"2. Scope of intervention by asset class used"*, where the asset management company will have to:

▸ add a new line dedicated to digital assets and include line "9 – Other (please specify)" in the authorisation schedule.
In principle, the asset management company is required to provide an exhaustive list of its digital assets. However, it also has the option of establishing a capitalisation threshold below which it chooses not to report the selected digital assets. If the list changes, it can be easily updated by simply posting it on the ROSA portal;

▸ according to the interpretation of the participants in this guide, DLT financial instruments are not an *"other category"* of assets in the authorisation schedule of an asset management company. For example,

an investment in "tokenised" units or shares of a money market fund will still be identified in the authorisation schedule as a *"2 – European UCITS and AIF open to non-professional clients"*;

▸ specify in existing lines the tokenised nature of authorised assets (rights, uses or assets) and, where applicable, their trading venues by adding the new categories of DLT market infrastructures created by the European pilot regime.

It should also be noted that, in accordance with Annex II of Position – Recommendation DOC-2008-03, any financial contract involving digital assets should be considered as requiring *"9 - Complex financial contracts"* approval (whether they are "simple" financial contracts, such as futures and CME options, or more complex).

*Examples can be found in **Appendix 3** of this document.*

2. ANCILLARY ACTIVITIES

#	Name of section	Impact on the programme of activity	
		Digital assets	DLT financial instruments (security tokens)
2.B	Ancillary activities	**Low** to **High**	**Low**

In this section, the asset management company must mention any other ancillary activities that are not specifically covered in the previous section of the programme of operations. It is important to remember

that ancillary activities may be carried out if they are directly related to the management activity.

In accordance with Position – Recommendation DOC-2012-19[23], dated 21 July 2023,

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the AMF specifies that the "Other" box refers in particular to assets (physical gold, bottles of wine, land, etc.). For example, the cases in which an asset management company may buy, sell or exchange digital assets as part of its collective investment activity are set out in AMF Position – Recommendation DOC2012-19 *"Programme of operations guide for asset management companies and self-managed collective investments"*.

In addition, the recent amendment to AMF Position – Recommendation DOC-2020-07[24] states that, as an extension of its asset

management business, an asset management company may carry on an ancillary activity involving digital assets, within the limits of the services it is otherwise authorised to provide in connection with financial instruments. In other words, they may not offer the full range of services related to digital assets, such as custody or administration of assets, investment, etc.

*Details of the information required by the AMF concerning assets, strategies deployed, custody locations, counterparties and markets involved can be found in **Appendix 3** of this document.*

3. TECHNICAL RESOURCES, IT INFRASTRUCTURE AND CYBERSECURITY

#	Name of section	Impact on the programme of activity	
		Digital assets	DLT financial instruments (security tokens)
2.C	Technical resources, IT, Cyber	**High**	**Moderate**

AMF Instruction DOC-2019-24[25] – "Cybersecurity system of requirements" sets out the cybersecurity requirements with which digital asset service providers must comply in order to ensure the resilience and security of their information systems.

Any asset management company wishing to operate in the field of digital assets or DLT financial instruments (security tokens) should prepare its programme of operations, including this section 2.C, by referring to the relevant parts of this instruction. It should be noted that an asset management company must not be in a position to directly or indirectly control or hold custody of

the portfolios it manages or advises. It is specified that even if an asset management company outsources certain services related to digital asset services, it remains fully responsible for the cybersecurity of the digital asset service for which it is authorised, even when it subcontracts part of its system.

Relationships with subcontractors or service providers concerning the information system of an asset management company operating in the field of digital assets must be governed by a legal contract, the content of which should be based on what is specified in AMF Position DOC-2020-07 applicable to DASPs.

4. INVESTMENT AND DIVESTMENT PROCESS

#	Name of section	Impact on the programme of activity	
		Digital assets	DLT financial instruments (security tokens)
2.D	Investment and divestment process	**High**	**Low**

The impact of this section mainly concerns asset management companies wishing to operate in the field of digital assets, in which case they must provide accurate

and exhaustive lists concerning:
▶ eligible digital assets (exhaustively defined);
▶ authorised trading platforms/markets;
▶ eligibility criteria for digital assets, particularly in terms of liquidity.

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24) AMF Position – Recommendation – DOC-2020-07.
25) AMF Instruction – DOC-2019-24 – Cybersecurity system of requirements.

Asset management companies are expected to define exhaustively the digital assets authorised by the company's programme of operations, unlike in the case of 'traditional' financial instruments where the approach may be based on "asset classes". This means that the selection criteria and procedures must be established upstream.

5. BEST SELECTION/EXECUTION AND ORDER ROUTING

#	Name of section	Impact on the programme of activity	
		Digital assets	DLT financial instruments (security tokens)
2.E	Best execution/selection and order routing	**High**	**Moderate**

Digital assets have fostered the emergence of new categories of platforms, intermediaries and service providers specialising in these types of assets. As a result, operational processes and order and execution flows often differ significantly from traditional flows. Against this backdrop, asset management companies have a crucial role to play in ensuring that orders for digital assets or DLT financial instruments are placed efficiently and in line with best practice. They need to detail the operational order flow and analysis methods to ensure that orders are executed in the best interests of their clients and investors.

Each platform may have its own distinct protocols, interfaces and technical requirements, which may differ from traditional order flows. Consequently, it is necessary for the asset management company to adjust the operational processes to suit each of them, taking into account their respective specific features and technical constraints. The development of sophisticated analysis methods to accurately assess the quality of order execution on digital assets is therefore becoming a priority that needs to be addressed.

Because digital assets are more volatile than traditional markets, it is crucial to take into account factors such as liquidity, order book depth, price volatility and transaction costs. In the area of digital assets, the concept of "best execution" takes on a particularly crucial meaning.

In addition, the regulation on the pilot regime[26] allows investment service providers, i.e. credit institutions providing investment services, credit and investment institutions and investment firms, market undertakings and central securities depositories, to operate where appropriate a multilateral trading facility (DLT MTF), a settlement system (DLT SS) or a trading and settlement system (DLT TSS) whose operation is based on the DLT.

Article 7 of the DDADUE Act of 9 March 2023[27] made adjustments to the CMF to enable the pilot regime to be implemented.
It specifically defined the division of responsibilities between the national authorities (AMF, Banque de France and ACPR) and established the supervisory framework for the three distinct categories of players that could apply for the exemptions permitted by this pilot regime.

The pilot regime regulation creates three new categories of market infrastructure based on DLT, each subject to a specific authorisation procedure:

▸ **DLT multilateral trading facility (DLT MTF)**: a trading platform operated by an investment services provider or a market undertaking, in addition to any authorised natural persons and legal entities.

▸ **DLT settlement system (DLT SS)**: it enables transactions in DLT financial instruments to be settled against payment or delivery. This settlement system is operated by a central securities depositary (CSD) authorised in accordance with CSDR regulations.

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26) *Regulation (EU) 2022/858 of the European Parliament and of the Council of 30 May 2022 on a pilot regime for market infrastructures based on distributed ledger technology.*

27) *Act no. 2023-171 of 9 March 2023 containing various provisions for adapting to European Union law in the fields of the economy, health, labour, transport and agriculture.*

▶ **DLT trading and settlement system (DLT TSS):** a market infrastructure that offers both the services of the DLT MTF and DLT SS trading and settlement systems.

As these infrastructures are new and currently non-existent, this implies a major change to the order routing system, which it is up to the asset management company to draw up and explain to the AMF.

6. CONTROL SYSTEM

#	Name of section	Impact on the programme of activity	
		Digital assets	DLT financial instruments (security tokens)
2.F	Control system	**Moderate** to **High**	**Moderate** to **High**

Asset management companies operating in the field of digital assets must comply with the rules set out in AMF Position – Recommendation DOC-2014-06[28], entitled *"Guide to the organisation of risk management, compliance and control systems within portfolio asset management companies"*. As a reminder, the purpose of this guide is to define the requirements in terms of permanent and periodic controls, whether these controls are internal or outsourced, depending on the instruments and activities carried out by the asset management company, as well as their complexity. In addition, with regard to the human aspect, it is essential for those responsible for risk control and management to have proven experience in the area of digital assets.

In the specific context of digital asset management services, it is essential for asset management companies to carry out a thorough assessment of their compliance and internal control systems when submitting their application for initial authorisation or when applying to extend their activities. The purpose of this assessment is to ensure that the system in place adequately and sufficiently covers the specific risks associated with the use of digital assets.

As for the financial risk control system, in the context of a crypto-asset investment fund, it requires a tailored and specific approach to managing the financial risks associated with digital assets. Depending on the category of investors eligible for the company's products, the independence of the risk control function will be required.

Figure 7 - Independence of the risk management function
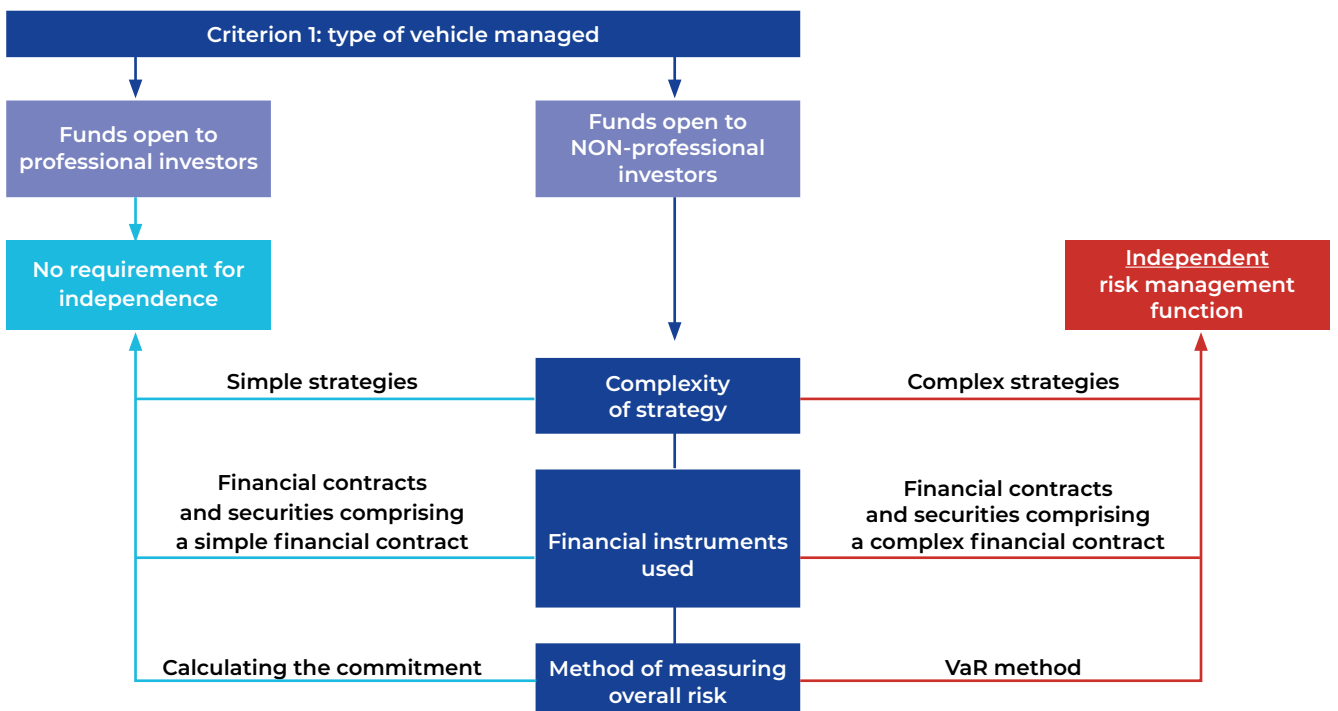
28) AMF Position – Recommendation – DOC-2014-06.

Digital assets have unique characteristics that introduce new types of risk, and are therefore considered to be complex instruments.

The new types of financial risk associated with digital assets include:

▶ **Extreme volatility risk:** digital assets are known for their high volatility, which can lead to significant and rapid changes in value. Fund managers need to take this increased volatility into account and develop appropriate risk management strategies to mitigate the effects of volatility on the fund's portfolio;

▶ **Counterparty risk:** although initiatives are currently being put in place to limit/mitigate counterparty risk, the digital assets ecosystem is still exposed to this risk;

▶ **Liquidity risk:** some digital assets may have limited or highly fragmented liquidity, which could have a major impact on the ability to deploy certain strategies.

Non-financial risks specific to DLT may also have a negative impact if they are not controlled by the asset management company:

▶ **Technological risks associated with blockchain:** loss or theft of public and private keys, vulnerability of the smart contract code, lack of interoperability between blockchain and existing systems, etc.;

▶ **"Traditional" IT risks:** phishing, external attack, data leakage.

▶ **Operational risks:** manual error, incorrect reconciliation, reporting errors, etc. These risks must be mapped and an associated control plan drawn up, as well as a business continuity plan;

▶ **Supplier risks:** key management, tokenisation projects and other services may be carried out by external service providers, so supplier risk needs to be assessed;

▶ **Reputational risks:** the materialisation of the risks listed here could have a reputational impact for the asset management company.

7. VALUATION OF INSTRUMENTS

#	Name of section	Impact on the programme of activity	
		Digital assets	DLT financial instruments (security tokens)
2.G	Valuation of instruments	**High**	**Low**

The use of digital assets or tokenised assets has a significant impact on the system for valuing the asset management company's instruments, requiring it to be updated accordingly. In this section, it is essential to provide details of the specific valuation arrangements for these assets:

▶ digital assets **traded on exchange platforms when they are highly liquid:** the market price should be taken into account (marked-to-market). This includes crypto-assets listed on several markets, whether centralised or decentralised;

▶ digital assets **traded on exchange platforms when they are illiquid:** it is essential to present the valuation model used (marked-to-model).

This model must take into account the particular characteristics of digital assets, as well as aspects relating to tokenomics, if applicable;

▶ digital assets **that are not traded on exchange platforms:** it is recommended to use a valuation model that reflects the specific nature of these assets, taking into account parameters such as recent transactions on similar markets, fundamental data and other relevant factors such as underlying characteristics, utility or intrinsic value, acquisition cost, etc.

▶ **DLT financial instruments:** the asset valuation system remains unchanged in principle compared with other traditional assets.

8. OUTSOURCING AND DELEGATION

| # | Name of section | Impact on the programme of activity | |
		Digital assets	DLT financial instruments (security tokens)
2.H	Outsourcing and delegation	**Moderate to High**	**Moderate to High**

The choice of service providers, in particular custodians with a direct legal relationship with the asset management company (the depositary not being the custodian), has an impact in this section.

The management of digital assets or DLT financial instruments may have a significant impact on the organisation of the asset management company, which may choose to outsource its tasks and functions.

Without this constituting a major change to section 2.H of the programme of operations, given that the rules on outsourcing and delegation for asset management companies are already sufficiently comprehensive and detailed, the company should carry out a review of its programme to ensure that it is up to date and that its control system for outsourced services is adequate.

9. FINANCIAL AND FISCAL INTEGRITY

| # | Name of section | Impact on the programme of activity | |
		Digital assets	DLT financial instruments (security tokens)
2.J	AML/CFT	**High**	**Moderate**

It should be remembered that, in accordance with Article L. 561-2 of the CMF, asset management companies are subject to the anti-money laundering and combating the financing of terrorism obligations set out

in Articles L. 561-4-1 et seq. of the CMF. Consequently, it is essential to anticipate additional vigilance measures due to the complexity and lack of transparency inherent in certain digital assets.

■ Asset risk

On 14 February 2023, the Advisory Board for Anti-Money Laundering and Combating the Financing of Terrorism [known in French as the *Conseil d'orientation de la lutte contre le blanchiment de capitaux et le financement du terrorisme* – COLB] published an updated version of its national risk analysis (NRA), which takes into account the recommendations of the Financial Action Task Force (FATF) and benefited from input from professionals

from all business sectors subject to anti-money laundering and combating the financing of terrorism (AML/CFT) risks. Asset management companies investing in digital assets are at the crossroads of several COLB risk analyses, between financial services and digital assets. It should first be demonstrated how, on the assets side, the asset management company identifies, measures and hedges AML/CFT risks.

Figure 8 - Measurement and coverage of asset-based AML/CFT risks
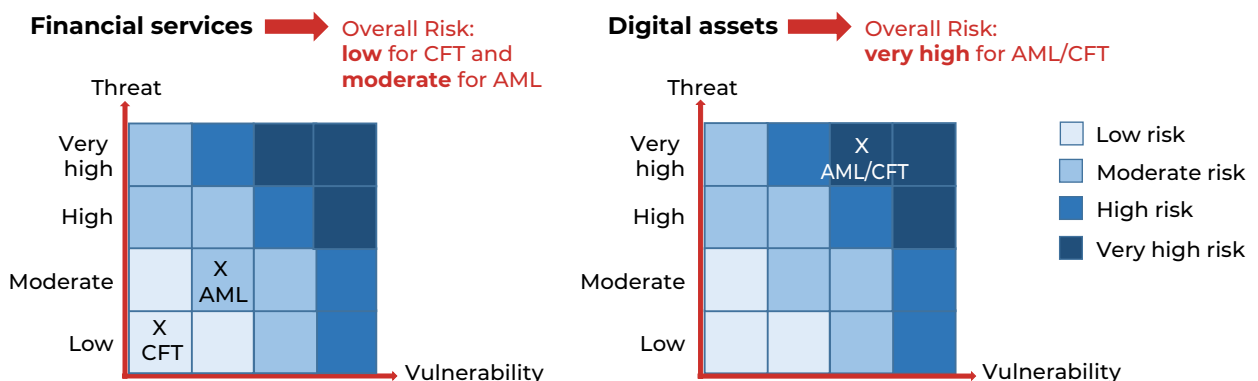
■ **Liability risks**

The management of the liabilities of a collective investment scheme (which will be referred to as a "DLT financial instrument") and its challenges are presented in the first part of this guide.

The various options, service providers and approaches observed require an accurate presentation to the AMF, describing how responsibilities are allocated between the asset management company, the registrar and any service providers involved in managing the DLT liabilities of a collective investment scheme.

10. OWN FUNDS AND OTHER FINANCIAL ITEMS

#	Name of section	Impact on the programme of activity	
		Digital assets	DLT financial instruments (security tokens)
2.N	Capital requirement and other financial items	**High**	**Low**

Pursuant to Articles 12 and 14 of Delegated Regulation (EU) No 231/2013[29], the asset management company will have to strengthen its analysis of the own funds requirements necessary to cover the operational risks arising from its activity,

which should lead it to retain a higher level of additional own funds than so-called "traditional" asset management companies. At present, it is still difficult to obtain an insurance policy that specifically covers digital assets.

B. Impact on the statuses

11. FRENCH REGIME PRIOR TO MICA

11.1 Provision of digital asset services by an asset management company

■ **Scope of services: analogy with ancillary investment services**

Pursuant to Article L. 532-9, §5 of the CMF[30], some asset management companies may apply, under certain conditions, for authorisation to provide the following ancillary investment services:

▶ investment advice;

▶ portfolio management on behalf of third parties;

▶ reception and transmission of orders on behalf of third parties.

By analogy with this provision and pursuant to Article 60 of the MiCA Regulation, which will allow asset management companies to provide crypto-assets services equivalent to the aforementioned ancillary services for which they are authorised, asset management companies should be able to provide crypto-assets services equivalent to the aforementioned investment services.

These crypto-asset services are listed in Article L. 54-10-2, §5 of the CMF[31] under the following headings:

▶ advice to subscribers of digital assets;

▶ portfolio management of digital assets on behalf of third parties;

▶ reception and transmission of digital asset orders on behalf of third parties.

Consequently, the following services are not authorised for asset management companies:

▶ custody of digital assets on behalf of a client;

▶ the purchase or sale of digital assets in legal tender;

▶ the service of exchanging digital assets for other digital assets;

▶ the underwriting of digital assets, i.e. the direct acquisition of digital assets from an issuer of digital assets, with a view to selling them;

29) *Articles 12 and 14* of Delegated Regulation (EU) No 231/2013.

30) *Article L.532-9, §5* of the CMF.

31) *Article L.54-10-2, §5* of the CMF.

▶ the guaranteed placement of digital assets, which consists of seeking buyers on behalf of an issuer of digital assets and guaranteeing the issuer a minimum amount of purchases by undertaking to acquire the digital assets not placed;

▶ the unsecured placement of digital assets, i.e. seeking buyers on behalf of an issuer of digital assets without guaranteeing it an acquisition amount;

▶ operating a digital asset trading platform. This involves the management of one or more digital asset trading platforms, where multiple buying and selling interests expressed by third parties for digital assets against other digital assets or in legal tender can interact in a way that results in the conclusion of contracts.

■ Combining asset management company status and DASP status

In its Position-Recommendation DOC-2020-07[32], the AMF takes the view that an investment services provider (ISP) can also be a DASP in accordance with the regulations applicable to ISPs.

However, an ISP applying for DASP authorisation must have own funds equivalent to the higher of the minimum required under Instruction DOC-2019-23[33] and the minimum required for the specific investment services covered by the authorisation.

Given that asset management companies have ISP status under Article L. 531-1 of the CMF[34], it follows that an asset management company should be able to qualify as a DASP in accordance with the regulations applicable to ISPs and therefore to asset management companies. The provision of digital asset services will therefore require a change in the asset management company's programme of operations, in consultation with the AMF.

■ Regulatory regime

At the date of publication of this guide, pursuant to Article L. 54-10-3 of the CMF, a service provider wishing to provide the services listed in §5 of Article L. 54-10-2 of the CMF is not subject to any registration and/or authorisation.

Accordingly, the provision by an asset management company of services comprising advice to subscribers of digital assets, portfolio management of digital assets on behalf of third parties and reception/transmission of digital assets orders on behalf of third parties is not subject to obtaining prior status as a registered and/or authorised DASP.

However, the provision of these crypto-assets services within the meaning of MiCA will necessarily entail a change in the asset management company's programme of activity. The provision of these services would then be considered as an "ancillary activity" within the meaning of section 2.B of the programme of operations.

As digital asset services are not listed in section 2.B of the AMF's programme of activity, the asset management company should contact its AMF contact to check that it can carry out the proposed activity.

32) AMF Position-Recommendation – DOC-2020-07.
33) AMF Position-Recommendation – DOC-2019-23.
34) Article L. 531-1 of the CMF.

11.2 MiCA

Article 59 of the MiCA[35] Regulation on the authorisation of crypto-asset service providers provides that a person may not provide crypto-asset services, within the European Union, unless that person is:

- ▶ a legal entity or other undertaking authorised as a crypto-asset service provider in accordance with Article 63; or
- ▶ a credit institution, central securities depositary, investment firm, market operator, e-money institution, UCITS management company or alternative investment fund manager authorised to provide crypto-asset services in accordance with Article 60.

Article 60 (5) of the MiCA Regulation[36] provides that from 30 December 2024, when MiCA[37], comes into force, asset management companies will be able to provide crypto-asset services equivalent to investment portfolio management. Provided that they are authorised to provide ancillary services within the meaning of Directives 2009/65/EC (UCITS) and 2011/61/EU (AIFM), they may provide crypto-asset services equivalent to these ancillary services. These services are listed in Article 60 (5) of the Regulation. These are:

- ▶ the reception and transmission of orders in crypto-assets on behalf of clients;
- ▶ the provision of advice on crypto-assets;
- ▶ the provision of crypto-asset portfolio management services (individual management).

In order to be able to provide such crypto-assets services, asset management companies will have to notify the regulator of the information referred to in Article 60 §7 of the Regulation and do so at least 40 working days before providing these services for the first time.

12. IMPACT ON ENVIRONMENTAL RISK ASSESSMENT SYSTEMS

According to Chapter 2, Article 66 §5 and §6 of the MiCA[38] Regulation, crypto-asset service providers must disclose in a transparent manner the major environmental impacts, including those related to climate, as well as other adverse consequences for the ecosystem, resulting from the consensus process employed for the creation of each crypto-asset covered by their services.

In collaboration with the EBA, ESMA is working to create regulatory guidelines in the form of technical standards to define the methodology and presentation of sustainability indicators. This approach takes into account the diversity of consensus mechanisms used to verify digital assets transactions, as well as the associated incentive structures, their energy footprint, their use of renewable energy and natural resources, their waste production and their greenhouse gas emissions. Standards that are regularly adapted to technological developments.

Clients' sustainability preferences will have to be taken into account for digital assets treated as financial instruments under MiFID. For other digital assets and at the date of publication of this guide, there is no obligation to take account of clients' sustainability preferences.

> *DLT offers new sources of portfolio diversification via new asset classes. However, investments in digital assets will require existing processes to evolve.*

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35) *Regulation (EU) 2023/1114 of the European Parliament and of the Council of 31 May 2023 on markets in crypto-assets.*
36) *Article 66 §5 and §6 of the MiCA Regulation.*
37) *With the exception of Titles III (asset-referenced tokens) and IV (e-money tokens) which will come into force on 30 June 2024.*
38) *Article 66 §5 and §6 of the MiCA Regulation.*

⬚ IV. Conclusion

The arrival of blockchain in the world of finance has very quickly captured the media spotlight, arousing suspicion, fears and also hopes on the part of all players (regulators, intermediaries, issuers, new entrants and, ultimately, consumers and savers).

In doing so, it has triggered an unprecedented wave of innovation, potentially shifting the lines between traditional financial intermediaries and new entrants (relying on their agility to offer products and services using DLT), asset management companies and centralisers/transfer agents (for issue account keeping), investor clients and account keepers (for securities account keeping).
It has also led the authorities to rethink some of the regulations to keep pace with these developments, while continuing to protect investors and preserve market integrity.

However, while the field of possibilities is now wide open and partly defined, the fact remains that DLT has not yet been adopted *en masse* by financial market players, undermining the efforts of DLT initiative promoters and the long-term viability of the ecosystem that has begun to emerge.

So the challenge now is to make the transition from the experimental stage to the industrialisation stage, towards full adoption of DLT, particularly by participants at both ends of the chain: issuers and investors.

From this point of view, the supply of digital assets representing financial instruments is still too marginal for asset management companies to consider deploying management invested in security tokens. The implementation of the pilot regime should enable more tokenised financial instruments to be issued and some of the securities already issued to be converted into tokens, but for this to happen:

- ▶ operators of market infrastructures (regulated markets, multilateral trading facilities) and post-trade infrastructures (central securities depositories, clearing houses and settlement and delivery systems) must quickly provide all participants with visibility on the terms and conditions under which tokenised financial instruments can be traded and settled/delivered in their infrastructures, in particular for the possible adaptation of their tools and interfaces;

- ▶ The Paris financial marketplace is working to highlight the advantages of this form of security for raising capital for issuers (registered records to facilitate identification of their shareholders and creditors; automatic execution of corporate actions via smart contracts; the option for investors to retrieve directly and free of charge via smart contracts all the characteristics of the securities purchased, in particular ESG characteristics);

- ▶ transactions in tokenised financial instruments can benefit from simultaneous settlement versus delivery mechanisms similar to those existing in traditional post-trade systems, to take full advantage of the instantaneous nature of ownership transfers via the blockchain without any operational risk. In this respect, it is very important that the work being carried out by central banks to define the terms and conditions for making digital settlement assets available in central bank money or commercial currency, or in a basket of digital assets, can be brought to a swift conclusion.

Beyond the tokenisation of listed financial instruments, the development of the use of tokenisation mechanisms for real assets will also be decisive in facilitating their financing and increasing their liquidity.

Finally, in addition to this expected expansion of the range of digital assets on offer, several other developments will be key for asset management companies themselves:

► firstly, on the assets side, the UCITS regulations to:
  ◻ confirm the eligibility of tokenised financial instruments (with no cap in relation to net assets);
  ◻ authorise the direct or indirect exposure of UCITS to all or some of the crypto-assets regulated by the MiCA Regulation.

► the AIFM Regulation, to extend to AIFs not reserved for professionals the option to gain direct exposure to crypto-assets regulated by the MiCA Regulation;

► secondly, on the liabilities side, the real revolution would be the option to capitalise on the advantages of DLT to supplement the UCI market (which currently operates exclusively on the primary market) with a secondary market in UCI units, which would improve the liquidity conditions of the products, which would no longer depend solely on the manager's ability to sell assets on the market to pay back investors:
  ◻ for UCIs invested in assets that can usually be traded easily, this option would reduce the pressure on the prices of assets to be disposed of in the event of a serious market crisis, and reduce the need to use other liquidity management mechanisms such as gates, for example;
  ◻ for UCIs invested in assets for which transactions are generally long and complex (real estate, private equity, certain loans or debts), this option would allow investors to benefit from more advantageous liquidity solutions than redemptions accompanied by the application of very high exit fees.

► lastly, with regard to the distribution of fund units, the emergence of a preference on the part of investors and their advisers for subscribing to tokenised fund units which are accessible through one or more multi-brand marketplaces in addition to traditional distribution channels could result in a growing number of asset management companies listing some or all of their products on these marketplaces.

The history of blockchain in financial services (capital markets, asset management and distribution) will therefore continue to be written. For all these reasons, it is already foreseen that this guide will be updated at a later date, in line with expected regulatory developments and changes in market practices.

⍍ V. Appendices

Appendix 1 – Glossary

The purpose of this Glossary is to provide indicative definitions to make it easier to understand the key concepts related to digital assets. It is important to note that the definitions presented here are those adopted by the Committee responsible for drafting the Guide. However, there are a multitude of varied and nuanced definitions of digital assets, stemming from local regulations, different legal opinions and calls for consultation from regulators, as well as the experience of players in the sector.

It should also be noted that the MiCAR *(Markets in Crypto-Assets Regulation)* which came into force on 29 June 2023, and the DLT Pilot Regime, which came into force on 9 March 2023, are intended to rationalise and harmonise these definitions at European level. The definitions presented in this Glossary are therefore mainly based on current guidelines, but are likely to change as these new regulations take effect.

Readers are therefore encouraged to consult the relevant regulatory texts and to keep abreast of future developments in the field of digital assets, as these definitions are subject to potential change to reflect ongoing developments.

- **EBA**
  European Banking Authority.

- **DIGITAL ASSET**
  According to Article L. 54-10-1 of the French monetary and financial code (*Code Monétaire et Financier* – CMF), digital assets include:
  1. The tokens referred to in Article L. 552-2, excluding those that fulfil the characteristics of the financial instruments referred to in Article L. 211-1 and the short-term notes referred to in Article L. 223-1;
  2. Any digital representation of a value which is not issued or guaranteed by a central bank or public authority, which is not necessarily attached to legal tender and which does not have the legal status of a currency, but which is accepted by natural persons or legal entities as a means of exchange and which can be transferred, stored or exchanged electronically.

- **CRYPTO-ASSET**
  Crypto-assets are one of the main applications of distributed ledger technology.
  MiCA defines "crypto-assets" as digital representations of securities or rights that can provide significant benefits to market participants, including retail holders of crypto-assets.
  Certain crypto-assets, in particular those qualifying as financial instruments as defined in Directive 2014/65/EU of the European Parliament and of the Council[39], fall within the scope of existing EU financial services legislation.
  As a result, a comprehensive set of EU rules already applies to issuers of these crypto-assets and to undertakings engaged in activities related to these crypto-assets.

  It is important to note that there is a difference in scope between the concept of digital asset in French law and crypto-assets in European law. For example, non-fungible tokens (NFTs) are expressly excluded from the scope of the MiCA Regulation. These differences between the two concepts are currently being reviewed as part of the work of the French High Legal Committee for the Paris Finance Marketplace (*Haut Comité Juridique de la Place financière de Paris* – HCJP).

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

- **ALTCOINS**
  Gas coin/native token alternatives to bitcoin, such as Litecoin and Ether.

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39) *Directive 2014/65/EU of the European Parliament and of the Council of 15 May 2014 on markets in financial instruments and amending Directive 2002/92/EC and Directive 2011/61/EU (Official Journal L 173 of 12.6.2014, p. 349)..*

■ **AMF**

French financial markets authority (*Autorité des Marchés Financiers* – AMF)

■ **ARM** *(Approved Reporting Mechanism)*

Specific platform that has been authorised and certified by the AMF to receive, process and transmit reports and information relating to financial activities and transactions on financial markets.

■ **BITCOIN (BTC)**

Native token that secures the Bitcoin blockchain network. First e-currency created in 2009 by Satoshi Nakamoto.

■ **BLOCKCHAIN** or *Distributed Ledger Technology* **(DLT)**

Distributed Ledger Technology (*Dispositif d'enregistrement électronique partagé* – DEEP) as defined by the pilot regime.
This is a digital register that stores transaction data and is shared and synchronised between a set of user network nodes, operating through a consensus mechanism.

The conditions of access to the network and use of the register determine whether this blockchain is public, i.e. open to all, or private, i.e. reserved for certain users.

- **Consensus mechanism:** set of rules and procedures by which an agreement is reached between the nodes of the blockchain network to validate a transaction.
- **Network node:** machine forming part of a peer-to-peer network (refer to the corresponding Glossary entry), which contains a full or partial copy of the records for all transactions carried out on a distributed ledger.
- **Block validation protocols:** the validation of new blocks is based on a consensus algorithm (refer to the Glossary entry above). The historical method for achieving this type of consensus is the "proof of work". This method uses a mathematical problem, the solution to which verifies that the "miner" has performed a task. As more and more miners join the network, the difficulty of the cryptographic puzzles they have to solve to earn new crypto-assets increases. This is an intentional design feature to ensure that the average time taken to add a new block remains constant. Over time, as the puzzles become increasingly difficult, miners need more powerful hardware to solve them in a reasonable time: solving the proof requires a substantial amount of computing power, which in turn requires sophisticated (and energy-intensive) hardware.

One solution to this problem was to switch to a new validation protocol:
proof of stake, which requires the user to prove possession of a certain quantity of digital assets in order to validate additional blocks. One of the major drawbacks of proof of stake is that a player can end up owning the majority of the tokens on a blockchain, thus becoming capable of acting in bad faith with the power to modify or validate blocks that do not represent real transactions.

To eliminate these risks, a third validation protocol has been developed: proof of authority. This is now the protocol of choice for centrally regulated blockchains, or private blockchains and blockchains that are used in finance and other sectors as ledgers without the concept of e-currency in circulation.
In this consensus mechanism users gain the right to become validators, which encourages them to maintain the position they have acquired. By associating a reputation with the identity, validators are encouraged to respect the transaction process. In a proof of authority system, validators are generally known and trusted entities, often subject to real identity verification. This allows for a more controlled environment, which may be preferable for certain use cases, such as business consortia where the participants are known entities such as companies or government agencies.

■ **CENTRALISED EXCHANGE (CEX)**

A platform for the exchange of e-currency and digital assets where transactions and custody take place centrally, such as Binance, Coinbase, Kraken and others.

- **CMF**

  French monetary and financial code (*Code Monétaire et Financier* – CMF).

- **COIN**

  Native digital unit of a crypto-economic system (e.g. Bitcoin)[40].

- **CUSTODY**

  Traditional custody of assets (based on the custodian's mastery of the technical custody system, which justifies the obligation to return the assets).

- **FINANCIAL CONTRACT**

  Legal agreement that covers various types of transactions, including option contracts, futures, swaps, forward rate agreements and other contracts related to financial instruments, currencies, interest rates, commodities, financial indices, financial measures, climatic variables, freight rates, inflation rates, and other official economic statistics.

- **CSDR**

  Central Securities Depositary Regulation.

- **DECENTRALISED AUTONOMOUS ORGANISATION (DAO)**

  Usual (but not systematic) component of DeFi protocols, aimed at organising their governance. It is usually defined by the community of governance token holders, the smart contracts that govern its operating rules and the assets it controls (protocol treasury).

- **DECENTRALISED EXCHANGE (DEX)**

  A DEX, or Decentralised Exchange, is an e-currency exchange platform that operates without a trusted intermediary. Unlike centralised exchange platforms, which are controlled by an authority, DEXs are built on decentralised protocols that allow users to trade directly with each other without the need for a trusted third party.

  DEXs operate using smart contracts. These are lines of code stored on the blockchain that execute automatically and autonomously. Smart contracts make it possible to create pre-defined exchange conditions between the various parties and guarantee that these conditions are met automatically and transparently.

- **DECENTRALISED FINANCE (DEFI)**

  Decentralised Finance (DeFi) is a competitive financial environment that is open, scalable and free of control mechanisms, built on technology that operates without the need for a central entity and without a safety net. It is based on financial protocols that take the form of "smart contracts" and operate on a computer network to automatically manage financial transactions.

- **DEFI AGGREGATOR**

  A DeFi aggregator is a platform that collects information from different DeFi protocols and integrates it into a single interface, allowing users to perform otherwise complex tasks by connecting to multiple protocols simultaneously.

- *DISPOSITIF D'ENREGISTREMENT ÉLECTRONIQUE PARTAGÉ* **(DEEP)**

  French name for decentralised distributed ledger technology (or DLT for Distributed Ledger Technology).

- **DLT CSD (CENTRAL SECURITIES DEPOSITORY)**

  Central securities depositary operating a DLT settlement system.

- **DLT MTF *(Multilateral Trading Facility)***

  Multilateral trading facility for the exchange of security tokens.

- **DLT SS *(Settlement System)***

  Settlement system based on DLT.

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40) *AFG – White Paper "Technological innovations: strategies for asset management companies".*

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■ **ETHEREUM**

Decentralised, public and open-source exchange protocol.

Ethereum is a protocol that enables the automatic execution of transactions (via smart contracts and the deployment of decentralised applications (dApps) using Ether (ETH).

■ **ETHEREUM REQUEST FOR COMMENT (ERC)**

Ethereum Request for Comment (ERC) standards are technical standards used to develop new tokens based on Ethereum and any blockchain running on EVM.

Ethereum Requests for Comment (ERCs) are similar to Bitcoin Improvement Proposals (BIPs), in that they are used to propose new protocol changes or new network standards. ERCs are discussed within the Ethereum community on Github, and then implemented and published if accepted by the main Ethereum developers and the wider community.

■ **FATF**

Financial Action Task Force.

■ **DLT** or ***Security Token financial instrument***

Financial instruments as defined in Article L211-1 of the CMF, with the difference being that they are recorded on a blockchain/distributed ledger technology.

■ **NATIVE TOKEN**

A token is said to be native when it is executed directly on the blockchain that issues it and on which it can be exchanged. It is essential to the operation of this blockchain, and derives its value from its usefulness (payment of transaction fees, remuneration of miners for recording transactions in the blockchain - for example, Bitcoin is a native token of the Bitcoin blockchain).

Apart from the native tokens, the other tokens are derived from the execution of smart contracts and are units of value representing existing assets in digital form outside the blockchains on which they are traded without duplication.

■ **AML/CFT**

Anti-money laundering and combating the financing of terrorism.

■ **MICA**

Markets in Crypto Assets.

■ **MIFID**

Markets in Financial Instruments Directive.

■ **NON-FUNGIBLE TOKEN (NFT)**

Unique and non-interchangeable cryptographic token.

■ **NON-NATIVE TOKEN**

Unlike native tokens, which are intrinsically associated with the blockchain on which they operate (such as Ether on Ethereum), non-native tokens are created and operate on top of another existing blockchain using protocols such as ERC-20, ERC-721, or other smart contract standards.

■ **OFF-CHAIN**

Activities or data stored outside the blockchain, but which can still be referenced from it.

■ **ON-CHAIN**

Activities or data stored and referenced on the blockchain.

■ **ORACLE**

Entity transporting information from the physical world to smart contracts. It provides the link between the physical world and a blockchain, and enables smart contracts to not be limited to information internal to the blockchain.

■ **DIGITAL ASSET SERVICE PROVIDER (DASP)**

A DASP provides various services related to investment in crypto-assets. In order to provide certain services (custody, purchase/sale of crypto-assets for legal tender, exchange of crypto-assets for other crypto-assets, trading platform), a DASP is required to obtain registration with the AMF, after receiving the ACPR's approval.
A DASP may also apply to the AMF for an optional authorisation, which is more stringent and protects investors, allowing it to canvass for clients.

■ **CRYPTO ASSET SERVICE PROVIDER (CASP)**

The MiCA Regulation provides for mandatory authorisation for crypto-asset service providers (CASP), the requirements of which are close to the optional authorisation under the French regime. Service providers authorised under the MiCA Regulation will be able to benefit from the European passport and provide their services in all EU countries.

■ **AMF GENERAL REGULATION**

General Regulation of the AMF.

■ **SMART CONTRACT**

Computer protocol that facilitates, verifies and executes transactions. These computer programs are not "intelligent" in the sense that they do not change their behaviour over time, but instead simply execute code when pre-defined conditions are met. Smart contracts are also not necessarily contracts in the legal sense.

■ **STABLECOIN**

Crypto-assets whose purpose is to maintain a stable value by reference to an official currency (or a basket of such currencies), other real-world rights or assets, or by reference to other crypto-assets. Stablecoins can be issued and managed by centralised entities – the most significant of them are currently managed by such entities. They can also be issued by DeFi applications, in which case the rules for their issuance are written into smart contracts and managed by these smart contracts. There are two models for decentralised stablecoins: collateralised stablecoins, which are issued in exchange for deposits (as with centralised stable-coins); and "algorithmic" stablecoins, which are based on the dynamic adaptation of the supply of tokens.

■ **CAK**

Custody Account Keeper.

■ **IAK**

Issue Account Keeper.

■ **TOKEN**

Non-native digital unit of value symbolising an asset, a right or a utility. It is issued in connection with an application that usually uses DLT-type technology and can take various forms.

■ **TOKENISATION**

Process of attaching the rights of a financial security to a digital token stored on a DEEP.

■ **WEB3**

Web3 refers to the use of DLT to decentralise and improve the current internet infrastructure. It envisages a more open and secure internet that allows users to control their own data and eliminates the need for a central authority.

The idea was first introduced by Tim Berners-Lee, the inventor of the World Wide Web. He referred to the concept of the "Semantic Web", which should be able to process and analyse all the data available on the Web, including content, links and exchanges of information between people and their computers.

Appendix 2 - Applicable regulatory framework and expected developments

The Act of 22 May 2019 on business growth and transformation, known as the "PACTE" (action plan for business growth and transformation) Act introduced the status of digital asset service provider ("DASP") in France. It defines digital assets, distinguishes them from "digital tokens" and devotes a large section to fundraising via Initial Coin Offerings (ICOs).

The MiCA Regulation establishes a European regulatory framework for crypto-asset markets. The adoption of the MiCA Regulation is in line with Europe's desire to provide legal certainty and establish clear rules for the use of crypto-assets[41]. One of the main areas covered by the Regulation is the framework for the provision of crypto-asset services by service providers.

In order to ensure this high degree of harmonisation, the Regulation defines "crypto-assets"[42] as "a digital representation of a value that is not issued or guaranteed by a central bank, that is not necessarily attached to legal tender and that does not have the legal status of a currency, but that is accepted by natural persons or legal entities as a medium of exchange and that can be transferred, stored or traded electronically".

In order to prepare for the arrival of the MiCA Regulation, the DDADUE Act of 9 March 2023 provides for changes to the rules applicable to players wishing to operate as DASPs. The Act amends three key points: the move from mandatory simple registration to mandatory enhanced registration (Articles 8 and 9), a strengthening of the powers of the ACPR and the AMF, and the AMF's power to supervise "enhanced registered" DASPs for the obligations set out in §5 and §6 of the same Article L. 54-10-4 of the CMF.

The new requirements will apply to service providers whose applications have not been deemed complete by the AMF by 30 June 2023. The transition for the regimes applicable to DASPs will be as follows:

▸ **30 June 2023**: final date for simple registrations with complete applications

▸ **1 January 2024**: enhanced registrations come into force. This regime will apply to all players who have submitted an application after 30 June 2023 or whose application has not been considered complete by 30 June 2023.

A transitional period of 18 months after the date of implementation is provided for by the Regulation[41] to allow DASPs (future CASPs under MiCA) providing their services in accordance with the applicable national law[43] to comply with the new requirements and obtain authorisation in accordance with Article 55 of the MiCA Regulation.

For DASPs that are already registered, the AMF has announced that it is working with other industry players to develop a possible modular fast-track authorisation between DASP status and CASP status under MiCA[45], in accordance with the provisions of Article 143 (3) of the Regulation.

See timeline on the following pages.

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41) Preamble to the MiCA Regulation.

42) The closest concept under French law is that of digital asset, which is narrower than that used in the Regulation, being considered as "any instrument containing in digital form non-monetary units of value that can be held or transferred for the purpose of acquiring a good or service, but which does not represent a claim on the issuer".

43) Article 123 of the MiCA Regulation.

44) In the case of France, these would be DASPs already registered with the AMF.

45) Perrine CATHALO, "MiCA" Regulation: the AMF supports the transition from the French to the European framework, Lexbase Affaires No 755 of 27 April 2023: Financial law.

Figure 9 - National and European regulatory timetable for digital assets

9 MARCH
Promulgation
of the DDADUE Act

Amendment to adapt
French law to the future
"MiCA" Regulation on
crypto-assets

MARCH 2023

30 JUNE
DASP

Final date for filing
a "simple" registration
application with the AMF

JUNE 2023

9 JUNE
MiCA Regulation

Publication in the OJEU
(Official Journal of
the European Union)

1 JULY
DASP

Compliance of applica-
tions filed with so-called
"enhanced" registration
provisions

JULY 2023

JULY
MiCA

Consultation no. 1:
• Art. 60 (13): on the content
of the notification of
selected entities to NCAs
• Art. 60 (14): on the forms
and models for notifying
entities to NCAs
• Art. 62 (5): on the content
of the application for
authorisation for CASPs
• Art. 62 (6): on the forms
and models for CASP
authorisation
applications
• Art. 71 (5) on the
complaints procedure
• Art. 72 (5): on the
management, prevention
and disclosure of conflicts
of interest
• Art. 84 (4): on information
requirements on planned
acquisitions

OCTOBER 2023

OCTOBER
MiCA

Consultation no. 2:
• Sustainability indicators
• Business continuity
requirements
• Trade transparency data
and order book custody
• Record-keeping require-
ments for CASPs
• Classification, models
and format of crypto-
asset white papers
• Public disclosure of
inside information

**PACTE Act and DASP status
AMF Regulation**

1 JANUARY
DASP

Enhanced requirements:

· Have an adequate
  security and internal
  control system

· Have a system for
  managing conflicts of
  interest

· Have a resilient
  and secure IT system

30 JUNE
MiCA

Implementation:

· Title IlI: regulations
  applicable to "Asset-
  referenced tokens"

· Title IV: regulations
  applicable to "e-money
  tokens"

Q1 2024

JANUARY 2024

DECEMBER 2024

JUNE 2024

Q1
MiCA

Consultation no. 3:

· Qualification of cryp-
  to-assets as financial
  instruments

· Surveillance, detection
  and notification
  of market abuse

· Investor protection

· System resilience and
  security access protocols

30 DECEMBER
MiCA

Implementation:

· Title 1: on "Subject matter,
  scope and definitions"

· Title II: Regulation
  applicable to "Crypto-
  assets other than
  asset-referenced tokens
  or e-money tokens"

· Title V: Regulation appli-
  cable to "Authorisation
  and operating conditions
  for crypto-asset service
  providers"

· Title VI: Regulations
  applicable to "Prevention
  and prohibition of market
  abuse involving crypto-
  assets"

· Title VII: Regulation
  applicable to "Competent
  authorities, EBA and
  ESMA"

**Application of the MiCA
Regulation EU regulations**

Appendix 3 – Impact on the asset management company's programme of activity: drafting examples

Method:
This impact assessment is indicative and is based on an internal assessment carried out by the members of the working group that drafted this guide. This analysis is the result of their respective experiences and analyses. It is important to stress that this impact assessment is based on the information available at the time it was carried out. The results presented are not absolute predictions, but rather estimates based on the knowledge and skills of our committee.
As a result, this indicative impact assessment may vary according to the individual perspectives of our members and may naturally be adapted to each member's organisation. We would like to stress that this assessment in no way replaces a full and detailed study carried out by professionals specialising in the field. Its purpose is simply to provide an initial educational analysis of the subject.
We encourage you to use these results as a starting point to deepen your understanding of the issue and to consult other relevant sources of information. The indicative impact assessment should not be regarded as an absolute truth, but rather as one of several tools to help you make the right decisions.

1. ACTIVITIES, UNDERLYING ASSETS AND AUTHORISATION GRID

#	Name of section	Impact on the programme of activity	
		Digital assets	DLT financial instruments (security tokens)
2.A	Asset management company activities	**High**	**Moderate**

Example of Digital Assets

SCOPE		
Type of instruments used and markets served	**Strategy followed**	**Target client base and type of vehicles used**
Other	*(Specify)*	*(Specify)*
Type of instruments used: · Digital assets within the meaning of Article L. 54-10-1 of the French Monetary and Financial Code (CMF): o *(The list may be more or less accurate, limiting authorisation to certain digital assets or certain categories of digital assets)* *Markets served:* · Digital asset trading platforms (specify geographical areas, licences and authorisations, and other relevant information). · Over-the-counter		

Example of DLT Financial Instruments

SCOPE		
Type of instruments used and markets served	**Strategy followed**	**Target client base and type of vehicles used**
Some of the "*B – Authorised instruments***"** *Type of instruments used:* · To be defined *Markets served:* · DLT Multilateral Trading Facility: (specify) · DLT trading and settlement system: (specify) · Over-the-counter* · Other: (specify)	*(Specify)*	*(Specify)*

2. ANCILLARY ACTIVITIES

#	Name of section	Impact on the programme of activity	
		Digital assets	DLT financial instruments (security tokens)
2.B	Ancillary activities	**Low** to **High**	**Low**

The AMF requires accurate information about the assets, the strategies deployed, the places of custody, the counterparties involved and the markets involved. This information is of the utmost importance and constitutes a crucial formal step to be completed.
It is essential for this detailed data to be collected in full before the application is submitted to the AMF.

Of the ancillary services mentioned in Section 2.B, the following services may be offered by the asset management company:

▶ Management of civil mandates – this service encompasses:
  ▫ **discretionary and personalised management of portfolios comprising:**
    · one or more digital assets, as part of a mandate given by a client.
    · tokenised real assets that do not meet the definition of a security token (for example, in real estate or debt selection), while the management of tokenised financial instrument portfolios is dealt with in the MiFID "Financial instrument portfolio management" service (section 2.a).
▶ Other:
  ▫ **Advice to subscribers of digital assets**: providing personalised recommendations to a third party, whether at the third party's request or at the adviser's initiative, concerning one or more digital assets;
  ▫ **Receiving and transmitting orders for digital assets** (for asset management companies fully subject to AIFM): receiving and transmitting orders to buy or sell digital assets on behalf of a client.

Depending on the ancillary services offered by the asset management company, the impact on the programme of operations will vary.

The entry into force of MiCA may change the position of services in sections 2A and 2B.

3. CONFLICTS OF INTEREST

#	Name of section	Impact on the programme of activity	
		Digital assets	DLT financial instruments (security tokens)
2.I	Conflicts of interest	Low	Low

The system for preventing, detecting, managing and classifying conflicts of interest (potential or actual) does not, in principle, depend on the type of assets being managed. Consequently, the impact on this section of the programme of operations is low.

4. REMUNERATION POLICY

#	Name of section	Impact on the programme of activity	
		Digital assets	DLT financial instruments (security tokens)
2.K	Remuneration policy	Low	Low

No impact identified.

5. MARKETING

#	Name of section	Impact on the programme of activity	
		Digital assets	DLT financial instruments (security tokens)
2.L	Marketing	Low	Low

No impact identified.

6. INTERNATIONAL POSITIONING

#	Name of section	Impact on the programme of activity	
		Digital assets	DLT financial instruments (security tokens)
2.M	International positioning	Low	Low

No impact identified.

Appendix 4 – Regulatory framework applicable to UCI service providers

	DIGITAL ASSETS	DLT FINANCIAL INSTRUMENTS
LEGAL OPINION	Custody of digital assets is regulated by the French financial markets authority (AMF), with operators having the status of digital asset service providers (DASPs). Optionally, the AMF issues DASPs with an authorisation for their services, based on sound management criteria. ANC Regulation 2020-05 sets out four of these management criteria (Article 629-1): • effective segregation of digital assets held on behalf of third parties; • non-use of digital assets without the express consent of clients; • a client's transactions are the result of multi-validation; • commitment to the means necessary to restore access to stored digital assets. The digital assets or access to digital assets, where applicable in the form of private cryptographic keys, referred to in Article L. 54-10-2-1° of the French Monetary and Financial Code (CMF) and stored by the service provider are not therefore recorded as assets on its balance sheet. In the event of non-compliance with one of the criteria, the digital assets stored are recognised as assets on the balance sheet, against a restitution debt.	In its report of 27 November 2020, the HCJP[46] stated that: • as digital financial instruments cannot be classified as bearer securities, they cannot be registered in an account held by a custody account keeper. As the law currently stands, there is therefore no obligation to return digital securities on the part of an intermediary to whom an owner delegates the management of its digital financial securities; • the absence of an obligation to return digital financial securities is all the more logical when the digital financial securities are registered in a public blockchain, i.e. a computer system with which the intermediary can interact but which it cannot control; • registered financial securities are excluded from the custody obligation of a fund depositary, unless the securities are registered in the name of the depositary on behalf of the UCI in the books of a registrar (which is not currently the practice on the French market, unlike the Luxembourg market, for example).

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46) *Report on digital financial securities* ("security tokens") by the *Haut Comité Juridique de la Place Financière de Paris, 27 November 2020.*

Appendix 5 – Regulatory framework of the PACTE Act: DASP regime

1. PLAYERS: PRIOR AUTHORISATION?

A player may be considered to be a DASP if it provides at least one of the digital asset services referred to in Article L. 54-10-2 of the CMF. Depending on the services provided, a player may either:

- ▶ be a registered DASP: registration procedure supervised by the AMF;
- ▶ be authorised as a DASP: optional authorisation procedure supervised by the AMF.

These procedures may be combined. In France, at the end of August 2023, 87 DASPs were registered with the AMF, but only one DASP had been authorised.

Type of service	AMF procedure
Custody of digital assets on behalf of a client	DASP status with mandatory AMF registration
Buying or selling digital assets in legal tender	DASP status with mandatory AMF registration
Exchanging digital assets for other digital assets	DASP status with mandatory AMF registration
Operating a digital asset trading platform	DASP status with mandatory AMF registration
Receiving and transmitting orders for digital assets, i.e. receiving and transmitting buy or sell orders for digital assets on behalf of a client	DASP status with non-mandatory AMF registration
Portfolio management of digital assets, i.e. the discretionary and individualised management of portfolios including one or more digital assets under a mandate given by a client	DASP status with non-mandatory AMF registration
Advising subscribers of digital assets	DASP status with non-mandatory AMF registration
Underwriting digital assets, i.e. the direct acquisition of digital assets from an issuer of digital assets, with a view to selling them	DASP status with non-mandatory AMF registration
The guaranteed placement of digital assets, which consists of seeking buyers on behalf of an issuer of digital assets and guaranteeing the issuer a minimum amount of purchases by undertaking to acquire the digital assets not placed	DASP status with non-mandatory AMF registration
The unsecured placement of digital assets, i.e. seeking buyers on behalf of an issuer of digital assets without guaranteeing it an acquisition amount	DASP status with non-mandatory AMF registration

■ Registration: a prerequisite for all DASPs

The registration of DASPs is mainly conditional on compliance with requirements relating to the competence and good repute of their shareholders and directors, and with obligations relating to anti-money laundering and combating the financing of terrorism.

To prepare its application for registration with the AMF, the following information must be sent to the AMF:

- ▶ the identity of the persons in charge of the effective management and of the natural persons either holding more than 25% of the capital or voting rights of the service provider or exercising control over this service provider;

- ▶ a statement by the aforementioned persons declaring that they have not been subject to any of the prohibitions referred to in Article L. 500-1 of the CMF;
- ▶ a statement by the aforementioned persons that they have sufficient knowledge and skills to carry out their duties;
- ▶ and other additional information specific to certain services.

As part of the registration procedure, the AMF must obtain the assent of the ACPR, which has three months to respond. Finally, within six months of receiving the application, the AMF must notify the applicant of its decision.

■ Authorisation: a procedure with enhanced requirements

If the DASP does not provide any of the four services subject to registration, it is still possible to obtain optional authorisation from the AMF. In accordance with Article L. 54-10-5 of the CMF[47], a DASP may obtain authorisation if it provides one or more digital assets services, provided that the company is established in France.

However, from 1 January 2024, pursuant to the DDADUE Act, DASPs will now be required to have adequate security and internal control arrangements, a system for managing conflicts of interest, and a resilient and secure IT system. Those providing custody services for digital assets on behalf of third parties will have to establish a custody policy and segregate holdings on behalf of their clients from their own holdings.

2. OPTIONAL AUTHORISATION PROCEDURES

The terms of registration for optional authorisation still require certain obligations in terms of organisation, conduct of business and financial resources to be met. Among other things, the DASP must:

- ▶ have professional indemnity insurance or a minimum amount of own funds
- ▶ have at least one effective director;
- ▶ have sufficient human and technical resources;
- ▶ have an internal control system;
- ▶ have a procedure for handling complaints;
- ▶ have anti-money laundering and combating the financing of terrorism procedures;
- ▶ provide clear information to clients;
- ▶ sign an agreement with the client;
- ▶ comply with requirements specific to the services provided.

The application required to obtain DASP authorisation must contain the following information:

- ▶ general information (in particular, the company's name, corporate form, address of establishment, list of assets services for which authorisation is being sought, a copy of the company's incorporation documents, etc.);
- ▶ the identity of direct and indirect shareholders, whether natural persons or legal entities, holding at least 10% of the capital or voting rights (or any other significant influence on the management of the company);
- ▶ certain financial information:
    - ▫ an insurance certificate and the professional indemnity insurance policy;
    - ▫ other information specific to certain services.

Once the AMF has received the application for authorisation, it will review it and seek the opinion of the French National Agency for the Security of Information Systems (*Agence nationale de la sécurité des systèmes d'information* - ANSSI) which must issue its decision within two months. The AMF must notify the applicant of its decision within six months.

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45) Article L. 54-10-5 of the CMF.

Appendix 6 – Terms of application of the MiCA Regulation

For the purposes of MiCA, a crypto-asset may qualify as a financial instrument if it has the characteristics and substance of transferable securities (including financial securities) as defined by Section C of Annex 1 to MiFID2 and Article 2(a) of Regulation EU/2017/1129, the so-called Prospectus 2 Regulation. In this respect, the work of ESMA, which is responsible for proposing to the Commission the second-level measures (known as RTS) specifying in which cases a crypto-asset will qualify as a financial instrument, will be decisive.

Indeed, utility tokens issued as part of ICOs to raise capital may incorporate rights that are similar or even identical to those of a financial security (right to dividends, right to capital, right to governance of the legal vehicle issuing the token).

1. PLAYERS: PRIOR AUTHORISATION? TRANSITION CLAUSE?

For CASP (or DASP) authorisation to offer asset-referenced tokens to the public and the application for their admission to trading on a crypto-asset trading platform, the Regulation imposes a three-month deadline for national regulators, from the date of receipt of a complete application, to assess whether the prospective issuer meets the requirements[48].
During this period, the competent authority may ask the prospective issuer for any information on the application, including the white paper.

At the end of this three-month period, the competent authority shall send its draft decision and the application file to the EBA, ESMA and the ECB. The latter three and, where applicable, a central bank shall then have a period of two months in which to deliver a non-binding opinion to the competent authority, which shall then make a decision within one month granting or refusing authorisation[49].

2. BLACKLIST DRAWN UP BY ESMA

Article 112 of the Regulation allows the EBA to issue warnings that an issuer is in breach of its obligations when a significant issuer of e-money tokens has committed one of the offences set out in Annex VI of the Regulation. This information is published on the EBA website within 10 days of notification to the issuer.

As a result, the European Securities and Markets Authority is now authorised to draw up a blacklist that resembles a "name and shame" approach.

3. EUROPEAN PASSPORT FOR CASPS

The ultimate aim is to create a favourable environment for authorised service providers to offer their services throughout the European Union by creating a European passport, thereby avoiding the need to submit individual applications in each EU country.
Articles 92 et seq. of the MiCA Regulation stipulate that the European Securities and Markets Authority will be responsible for supervising CASPs. ESMA will also be responsible for keeping a register listing all authorised professionals.

4. EUROPEAN AUTHORISATION VERY SIMILAR TO FRENCH AUTHORISATION

The authorisation provided for by MiCA comes as no surprise to France.
The conditions for authorisation set out in the Regulation are very similar to the requirements for obtaining the optional authorisation provided for in the PACTE Act.

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48) _Article 18_ of the MiCA Regulation.
49) Under the conditions set out in _Article 18 §3 of the MiCA Regulation_.

Appendix 7 – Comparison of DASP vs CASP statuses

The table below sets out the main obligations of DASPs/CASPs:

	DASP/PACTE ACT	CASP/MiCA Regulation
AML/CFT	1. A priori control of certain elements of the AML/CTF system 2. Need to identify and assess the money laundering and terrorist financing risks to which DASPs are exposed via: ▶ the establishment of a risk classification according to the type of services and products offered, transaction conditions and distribution channels, as well as the country of origin or destination of the funds; ▶ a KYC system, with particular emphasis on the anonymity afforded by blockchain transactions; ▶ a transaction monitoring system comprising scenarios and alert thresholds to identify transactions that should be monitored or even reported to TRACFIN. 3. Obligation to apply freezing measures and bans on making assets available without delay and to inform the Minister for the Economy immediately.	Because the near-anonymity of blockchain makes it difficult to trace user identities, some crypto-assets run the risk of becoming commonplace for money laundering. MiCA grants the competent authority the option to assess whether there are reasonable grounds to suspect that a money laundering or terrorist financing transaction or attempt within the meaning of Article 1 of Directive (EU) 2015/849 is being or has been carried out in connection with the proposed acquisition, or whether the proposed acquisition could increase the risk thereof. ▶ transparency of transfers of crypto-assets between DASPs; ▶ simultaneous or advance transmission in relation to the transfer of cryptos, information included or not included in the transfer; ▶ transfers of crypto-assets from/to a self-hosted address.
Dissemination of non-misleading information	Option to communicate on the status (registration and/or an authorisation), ensuring that the information is clear and not misleading. Any confusion between the two statuses is prohibited. In fact, registration does not imply that client protection rules have been put in place or that rules of good conduct have been followed, unlike for authorised DASPs. Obligation to follow rules of good conduct, in particular by drawing up agreements on a durable medium setting out a description of the service provider's essential rights and obligations, the nature of the services provided and the confidentiality obligations incumbent on the service provider.	"No person other than a crypto-asset service provider shall use a name or company name, produce a commercial communication or use any other process which suggests that it is authorised as a crypto-asset service provider, or which is likely to create confusion in this respect". Promotional communication is accurate and fair and does not constitute a misleading commercial practice. Obligation to warn clients of the risks associated with crypto-assets and remain responsible for their promotional communication when they use third parties for the purposes of such communication.
Preventing conflicts of interest		The system for managing conflicts of interest must enable conflicts of interest to be identified, prevented and resolved. DASPs are obliged to keep a register and to ensure that clients are properly informed on this subject. They must have governance systems containing effective procedures for dealing with such conflicts of interest.

	DASP/PACTE ACT	CASP/MiCA Regulation
Preventing conflicts of interest		The system for managing conflicts of interest must enable conflicts of interest to be identified, prevented and resolved. DASPs are obliged to keep a register and to ensure that clients are properly informed on this subject. They must have governance systems containing effective procedures for dealing with such conflicts of interest.
Good repute requirements	Examination of good repute by providing a programme of operations that is sufficiently accurate to verify that the registration applied for is consistent with the activities carried out and the consistency of the legal qualification of the services offered. Demonstration of the good repute of its directors by providing documents such as: ▶ their identities, ▶ an extract from the criminal record of the Chairman, the Chief Executive Officer, the Deputy Chief Executive Officers or the Managers, and of any other person exercising equivalent functions; and, where applicable, ▶ any complaints lodged and proceedings initiated that may have an impact on its good repute of which it may be aware and which could be passed on without infringing any applicable law or regulation, ▶ decisions to impose administrative, civil or criminal sanctions on this person, ▶ the licence required to carry on commercial or professional activities, as well as any withdrawal, revocation or termination of registration, authorisation, affiliation or licence, or any delisting by a public authority within or outside the financial sector, or by a professional association, whether French or from a third country (including the identity of such authority or association, the date of the assessment and proof of the result of such assessment), ▶ a statement by the director(s) declaring that they have not been subject to any prohibitions provided for in Article L. 500-1 of the CMF, ▶ a statement from the director(s) declaring that they are not registered in any of the files of the Banque de France or its foreign equivalents, ▶ information on the minimum time that will be devoted to the performance of their duties by these persons, ▶ information about the knowledge and skills of the director(s).	Obligation to provide guarantees relating to the good repute of their directors: "The members of the management body of a crypto-asset service provider must be of sufficiently good repute and possess the necessary skills, in terms of qualifications, experience and ability, to perform their duties. They shall demonstrate that they are able to devote sufficient time to the effective performance of their duties. Natural persons who hold, whether directly or indirectly, more than 20% of the share capital or voting rights of the crypto-asset service provider, or who exercise, by any other means, a power of control over this service provider, shall provide proof that they are of good repute and have the necessary skills."

	DASP/PACTE ACT	CASP/MiCA Regulation
Prudential requirements	Obligation to have a professional indemnity insurance policy with sufficient guarantees and which is adapted to the digital assets services for which the service provider is authorised. Proof of the existence of own funds, the components of which will be share capital, reserves, retained earnings and net profit for the year. The DASP will also have to demonstrate that its own funds have been invested in liquid financial assets or assets that are easily convertible into liquidity in the short term and that do not have a speculative dimension. Amounts of own funds will be assessed using three calculation methods: ▸ own funds based on one quarter of overheads; ▸ own funds based on the minimum capital determined according to the activity carried out; ▸ own funds based on the level of activity determined according to the activity carried out.	▸ Own funds requirements. ▸ An insurance policy covering the EU territories in which crypto-assets services are actively provided or a comparable guarantee.
Other obligations		MiCA adds additional obligations that all DASPs will have to comply with, namely: ▸ with regard to governance and operational processes, suitability and competence of directors, custody of funds, segregation of client assets; ▸ incorporate mechanisms for handling complaints; ▸ outsourcing of services; ▸ publication of the environmental impact of products.
Cybersecurity	Obligation to have a resilient and secure information system in the face of threats to the ecosystem, such as: ▸ compromise of portfolios holding digital assets; ▸ leakage of personal data; ▸ denial of service attacks; ▸ identity theft; ▸ inability to investigate incidents or fraudulent activity. Obligation to trace and keep records of all activity generated by the digital assets service offered, for a period of five years, using a system that ensures availability, confidentiality, integrity and non-repudiation. Access to this system and the associated records must also meet this same requirement. The traceability and storage of this information is also necessary for the provision of authorised services.	

	DASP/PACTE ACT	CASP/MiCA Regulation
Cybersecurity	General requirements applicable to all services except the advisory service for subscribers to digital assets: define, formalise, implement and monitor an ongoing cybersecurity programme aimed at controlling the level of security of the information systems involved in the provision of the digital assets service(s). Almost all digital assets services are offered via a Website or a mobile app: the DASP must ensure a minimum level of security by implementing operational measures such as component security, app development security, authentication and encryption of communications and data. Specific requirements applicable to digital assets custody services on behalf of third parties: the DASP can move digital assets in two ways: ▶ by operating an e-wallet dedicated to the client or an e-wallet containing the client's digital assets among other digital assets; ▶ by holding a client's private cryptographic keys, i.e. the client's e-wallet. Requirements applicable to applicants for authorisation for the services of buying or selling digital assets in legal tender, exchanging digital assets for other digital assets, operating a digital assets trading platform and receiving and transmitting digital assets orders on behalf of third parties: the DASP must not hold digital assets or means of access to digital assets belonging to the client: ▶ only the client's public key may be stored on the platform offering the service ▶ the client must have their own e-wallet solution enabling the digital assets purchased or sold to be sent or received Specific requirements applicable to the digital assets portfolio management service on behalf of third parties: the DASP must create, for each client of its service (referred to below as the "principal"), an e-portfolio dedicated to the management of the client's digital assets: ▶ the private key of which is generated by the agent and is not transmitted to or known by the principal; ▶ operated by the agent with an e-portfolio solution;	

	DASP/PACTE ACT	CASP/MiCA Regulation
Cybersecurity	When the management contract is terminated, the agent must not communicate to the principal the private key of the e-wallet used during the contract, but must return the assets to the principal via an appropriate transfer service.	
Internal control system	Obligation to implement internal control measures, including a staff recruitment policy that includes the potential risks posed by individuals with regard to anti-money laundering and combating the financing of terrorism. The DASP's internal control system shall include at least: ▶ procedures defining the internal control activities that the DASP carries out to ensure compliance with their AML/CFT obligations; ▶ a permanent internal control performed, in accordance with internal procedures, by persons carrying out operational activities (first-level permanent control) and, where appropriate, depending on their size, complexity and level of activities, by persons dedicated solely to the function of controlling operations (second-level permanent control); ▶ a periodic internal control carried out by dedicated individuals, independently of the individuals, entities and departments they control, where this is appropriate given the size and nature of the activities. Given the level of risk associated with activities relating to digital assets, DASPs shall put in place a second-level permanent control system and a periodic control system adapted, in particular, to their size.	
	A different organisation may be envisaged if justified to the ACPR. For example, DASPs that do not have enough employees to carry out a permanent second-level control may only put in place a periodic control. This control will be carried out at least annually, except in situations duly justified to the ACPR. Incidents or shortcomings identified by the internal control system are communicated to the person responsible for the AML/CFT/asset-freezing system: ▶ when they concern the AML/CFT system, they are the subject of corrective measures within a reasonable timeframe, taking into account the AML/CFT risks;	

	DASP/PACTE ACT	CASP/MiCA Regulation
Internal control system	▶ when they concern the freezing of assets, these incidents or shortcomings are remedied immediately. The DASPs have procedures in place to ensure that corrective measures are implemented and monitored within the required time-frame.	
White paper		Obligation for the issuer of e-money tokens to publish on its website a white paper on these crypto-assets that contains: ▶ a description of the issuer of e-money tokens; ▶ a detailed description of the issuer's project and a presentation of the main participants in the design and development of the project; ▶ a statement indicating whether the white paper concerns a public offering of the e-money tokens and/or the admission of such e-money tokens to trading on a crypto-assets trading platform; ▶ a detailed description of the rights and obligations attached to the e-money tokens, including the right under Article 44 to redeem them at par value, and the procedures and conditions for exercising these rights; ▶ information on the underlying technology and the standards applied by the issuer of e-money tokens for the holding, storage and transfer of such e-money tokens; ▶ the risks associated with the e-money issuer, the e-money tokens and the implementation of the project, including in terms of the technology used; ▶ the information set out in Appendix 3 ▶ the information must be fair, clear and not misleading.

Appendix 8 – Comparison of the Luxembourg and French regulatory frameworks

Aspect	France	Luxembourg
National regulations	**PACTE Act** of 2019 introducing the status of digital asset service provider ("DASP").	**Blockchain I Act** of 1 March 2019 on the tokenisation of financial securities and the use of DLTs. **Blockchain II Act** of 25 February 2021 on covered support services and DLT service providers. More recently, adoption of **Bill 8055** which explicitly makes possible financial guarantee agreements on DLT financial instruments in accordance with the 2005 Act on guarantees.
Licences and authorisations	Issuers deemed to be DASPs must be registered with the AMF in order to offer digital assets services. DASP authorisation is currently considered optional.	Luxembourg offers several types of licences, including a licence for crypto-custody service providers and a licence for crypto-assets issuers.
Competent authority	The AMF is responsible for supervising activities related to digital assets and may impose restrictions or sanctions in the event of non-compliance.	The CSSF is responsible for supervising activities related to crypto-assets and may impose restrictions or sanctions in the event of non-compliance.
Towards an EU regime (MiCA)	The AMF is amending the provisions of its General Regulation and its legal opinion on the DASP regime to take account of the "enhanced" registration introduced by the DDADUE Act. These changes, which will apply from 1 January 2024, are also intended to anticipate the transition to the MiCA Regulation by adjusting the provisions relating to authorised DASPs (update: 10/08/23)[50].	The CSSF draws issuers' attention to the preparation by the EBA of a regulation in the form of technical standards and guidelines as well as related public consultations, and more particularly to the publication on 12 July 2023 of consultation documents, to prepare for the transition to the MiCA Regulation (update: 07/08/23)[51].
Specific case for ARTs and EMTs	The definition of digital assets in the PACTE Act and that of crypto-assets in the MiCA Regulation differ, particularly with regard to categories of crypto-assets such as EMTs and ARTs. Measures to adapt the provisions of the CMF will therefore have to be taken before 8 March 2024.	The CSSF reminds investors that until 30 June 2024 (date of application of the MiCA Regulation), ARTs and EMTs are not considered regulated products in Luxembourg. However, it encourages issuers considering issuing EMTs or ARTs before 30 June 2024 to familiarise themselves with the authorisation and supervision provisions of the MiCA Regulation.

50) AMF - *Enhanced registration and MiCA Regulation.*

51) CSSF - *Markets in Crypto-Assets (MiCA/MiCAR).*

Appendix 9 – Specific case of NFTs

1. ISSUE OF CERTIFICATE OF OWNERSHIP/AUTHENTICITY

▪ In that it is non-fungible and unique, it guarantees authenticity

One of the major advantages of NFTs lies in their ability to guarantee the authenticity of the assets they represent, whether such assets are tangible or intangible. Because of their unique, non-fungible nature, NFTs can serve as certificates of ownership and authenticity for digital artworks, virtual collectibles and other assets. This feature of NFTs opens up new possibilities for artists, content creators and collectors, allowing them to prove the legitimate ownership of, and benefits associated with, their digital assets.

▪ In that it is inseparable from the underlying asset

Another important aspect of NFTs is that they are inseparable from the underlying asset with which they are associated. This means that the NFT and the underlying asset are linked, which prevents forgery or counterfeiting of the assets. When an NFT is created, it is registered on the blockchain with metadata that uniquely identifies the asset to which it refers. Thus, throughout the life cycle of the NFT, its ownership and authenticity can be transparently verified by consulting the blockchain at any time.

▪ An accessory to the underlying asset in the contractual relationship

As well as acting as a certificate of ownership and authenticity, NFTs can also contain contractual information that specifies the rights, conditions of use and obligations associated with the asset. In this way, NFTs make it possible to establish clear and unbreakable contractual relationships between issuers and asset owners, reinforcing trust and transparency in transactions.

2. LEGAL DEFINITION OF NFTS

▪ Introduction: what is the legal status of NFTs?

There are no specific regulations governing NFTs. No jurisdiction has adopted explicit regulations concerning them.

The French Superior Council of Artistic and Literary Property (*Conseil Supérieur de la Propriété Littéraire et Artistique* - CSPLA) gives a definition: *"a flexible legal qualification of the NFT as a title to rights over a token but also over a file, the subject, nature and scope of which vary according to the will of its issuer expressed by the technical and potentially legal choices associated with the smart contract."*

It is difficult to be precise, particularly given the multitude of different types of underlying assets (physical or virtual works of art, brands, etc.).

Under French law, NFTs can be defined as non-fungible intangible movable property registered on a DEEP which, in certain cases, confers rights on their holders.

NFTs may nevertheless be governed by a specific legal framework such as that for digital assets or financial instruments.

3. TECHNICAL DEFINITION OF NFTS AND USE CASES

- ERC-721: this is the most widely adopted NFT format.
  This format enables the creation and management of a unique NFT, which guarantees the traceability and authenticity of the digital asset with which it is associated.

  Associated use cases: digital art market NFTs, in particular those based on the ERC-721 format, are used to represent unique digital works of art. Artists can create and sell their works as NFTs, offering certificates of ownership and authenticity for these unique digital assets. It is particularly through this use case and "collectibles" that NFTs have seen significant visibility in 2021.

- ERC-1155: this format is also based on Ethereum and allows the creation of various types of tokens (fungible and non-fungible) within the same contract and therefore a reduction in creation costs. The ERC-1155 format is often seen as a hybrid between the ERC-20 and ERC-721 formats, offering a versatile solution that combines the features of both formats.

  Associated use cases: this format can be adapted for gaming. Gamers can own, trade and sell NFTs representing rare virtual collectibles, such as weapons, skins or unique characters.

- Soul Bound Token (SBT): the SBT format is a special type of NFT designed to represent non-transferable digital assets. SBTs guarantee a binding and inseparable relationship between the digital asset and its owner. In other words, once issued, the NFT is indissociable from the address that owns it, which means that the link between the original owner and the asset is maintained permanently. This feature ensures data security and integrity, preventing forgery or fraud in transactions.

  Associated use cases: SBTs can be used to digitally represent a document that cannot be uniquely associated with an individual or a company, such as a diploma, training course or identity document.

There are other formats and other use cases, and this list is not exhaustive.

4. RECOGNITION OF A RIGHT IN THE UNDERLYING ASSET

- ***Same as above***

  As mentioned above, NFTs can theoretically enable the recognition of a right over the underlying asset with which they are associated. This recognition takes place through the blockchain, which provides an immutable record of transactions and transfers of ownership of NFTs. Therefore, when an individual buys an NFT, they can also view the rights associated with the underlying digital asset. These may include intellectual property rights, rights of use, resale rights or other specific rights defined in the contract associated with the NFT. However, under French law, NFTs do not currently legally represent a certificate of digital ownership of an underlying asset. It should also be noted that NFTs are not covered by the PACTE Act or the MiCA Regulation.

- **Dissociation between ownership of the underlying asset and the NFT, but maintenance of the mandatory link**

  An interesting feature of NFTs is the dissociation between ownership of the underlying asset and the NFT itself. Although the NFT represents the digital asset, it is important to note that possession of an NFT does not automatically confer ownership of the asset itself. The transfer of the NFT theoretically has direct implications for the rights and ownership of the associated digital asset, depending on the regulations. Thus, NFTs can facilitate secure transactions and exchanges of digital assets while maintaining a clear and transparent relationship between the two.

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