

UPDATE

Fund Finance x Crypto: Luxembourg

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With the growth of fund finance, we have all observed cross-over between areas such as securitization, structured finance, and the insurance sector, blurring the lines between historically separate areas. The next frontier is rapidly coming into focus: crypto. Luxembourg is consistently at the forefront of financial innovation and has already adopted a strong legal framework on virtual assets, paving the way to fund tokenization in a fund finance context. While crypto presents some challenges to fund finance, it may also provide some novel solutions.

This is the third and final instalment in our Fund Finance x Crypto – the next frontier series. In [the first update](#), we discussed security over custodied digital assets from a Cayman Islands law perspective, with [the second instalment](#) looking at the advent of tokenized investment funds.

In this final update, we will give the Luxembourg perspective on the use of custodied virtual assets in NAV financing and the advent of tokenized funds units in the context of subscription lines.

1 Custodied virtual assets: a NAV finance approach

A progressive legal framework

Luxembourg has always been at the forefront of financial innovation and has taken the lead in Europe on the legal framework regarding virtual assets:

- As early as 2013, companies and funds were allowed to issue equity or debt instruments in an electronic form¹.
- Luxembourg was the first EU Member State to recognise blockchain transaction as equal to traditional transactions and to allow the use of distributed ledger technology (DLT)² for the registration and transfer of securities³.
- The framework was strengthened by allowing the issuance of securities on the blockchain by traditional credit institutions⁴.

¹ Law of 6 April 2013 on dematerialised securities.

² Distributed ledgers are defined by the Luxembourg regulator (the CSSF) as '*a technology allowing a network of independent and often geographically dispersed computers to update, share and keep a definitive record of data (e.g. information, transactions) in a common decentralised database in a peer-to-peer way, without the need for a central authority*' (CSSF White Paper 'Distributed Ledger Technologies & Blockchain : Technological Risks and Recommendations for the Financial sector', 21 January 2022).

³ Law of 1 March 2019 amending the law of 1 August 2001 on the circulation of securities.

⁴ Law of 22 January 2021 amending the law of 6 April 2013 on dematerialised securities and the law of 5 April 1993 on the financial sector.

- The 'DLT Pilot Regime'⁵, implemented into Luxembourg law, provides the legal framework for trading and settlements of transactions in crypto-assets that qualify as financial instruments under MiFID II⁶. It constitutes a derogatory regime for market providers using DLT which discharges them from certain regulatory obligations imposed by MiFID II.
- Finally, Luxembourg introduced the new concept of 'controlling agent', which would act as a delegate of a traditional depositary for the custody of dematerialised securities issued on DLT⁷.

The Luxembourg framework has since then been supplemented by the MICA Regulation⁸, which aims at establishing measures to protect consumers and improve trust and security in crypto-asset services.

As a result of this progressive and pragmatic legislative package, Luxembourg has positioned itself to provide the industry with legal certainty for the issuance of instruments directly on the blockchain. It is hoped that these legal innovations will help enhance liquidity and broaden the distribution of financial products.

Another effect might be that lenders will increasingly face Luxembourg funds holding virtual assets, notably in a NAV financing context. As such, it may be interesting to consider the question of whether and how these assets can be pledged.

Taking security over virtual assets in Luxembourg

The law of 5 August 2005 on financial collateral arrangements (the **2005 Law**) offers the most creditor friendly security interest regime in Europe. Amongst many other features, it most notably allows creditors to enforce their security in a very short timeframe (usually within a single day), notwithstanding any insolvency proceedings opened against the grantor, a principle which has been confirmed and strengthened numerous times by well-established case law.

Since March 2023⁹, this lender friendly regime now applies to security interests granted over dematerialised financial instruments or financial instruments transferable by book entry, including financial instruments which are deposited on securities accounts 'maintained within or through secured electronic registration mechanisms, including distributed ledgers or electronic databases'¹⁰. Creditors will therefore be able to benefit from the protective regime of the 2005 Law whenever they are taking security over virtual assets deposited on DLT, typically in the context of NAV financings where the borrowing fund holds virtual assets as part of its portfolio.

While the legal framework is in place, some remaining challenges are yet to be considered:

- The localisation of the virtual assets to be pledged, and therefore the determination of the law applicable to the security interest, remains uncertain. Traditionally, the 2005 Law refers to the PRIMA rule (i.e. the security interest should be governed by the law of the country where the relevant account is opened), but while this works well with traditional securities accounts, it may be more challenging to use when it comes to DLT. There is therefore a need for clarification to establish a single connecting factor, which could be (i) the law of the location of the service provider supporting the wallet, (ii) the law of the country where the issuer of the digital asset is incorporated, (iii) the law of the country where the operator or central administrator of the distributed ledger system is based or (iv) the law of the country where the last known controller of the relevant asset was located.
- The 2005 Law offers creditors a wide array of enforcement methods, amongst which the direct appropriation by the creditors (or third parties designated by them) of the pledged assets, which is the

⁵ 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 and amending Regulations (EU) No 600/2014 and (EU) No 909/2014 and Directive 2014/65/EU.

⁶ 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.

⁷ Law of 20 December 2024 amending the law of 6 April 2013 on dematerialised securities, the law of 5 April 1993 on the financial sector and the law of 23 December 1998 establishing a financial sector supervisory commission ('Commission de surveillance du secteur financier').

⁸ Regulation (EU) 2023/1114 of the European Parliament and of the Council of 31 May 2023 on markets in crypto-assets, and amending Regulations (EU) No 1093/2010 and (EU) No 1095/2010 and Directives 2013/36/EU and (EU) 2019/1937 (the **MICA Regulation**).

⁹ Law of 15 March 2023 on the amending the amended law of 5 April 1993 on the financial sector, the amended law of 5 August 2005 on financial collateral arrangements, the amended law of 30 May 2018 on markets in financial instruments and on the implementation of Regulation (EU) 2022/858 of the European Parliament and of the Council of May 30, 2022 on a pilot scheme for market infrastructures based on distributed ledger technology amending Regulations (EU) No 600/2014, (EU) No 909/2014 and Directive 2014/65/EU.

¹⁰ Article 1 (8) of the 2005 Law.

most favoured enforcement method in practice. However, the appropriation of virtual assets could raise practical issues, notably as to how would the creditors appropriate virtual assets maintained on DLT. This will require security agreements to provide for precise and practical enforcement mechanisms to ensure that creditors can efficiently appropriate the assets when a default occurs.

The credit underwriting challenge

The obvious credit underwriting challenge stems from the inherent volatility of some virtual assets when compared to other types of investments. Traditional NAV testing, collateral valuation periods and margin mechanics may not be sophisticated enough to keep pace with swings in virtual asset prices. In other crypto lending contexts outside of fund finance, this is addressed mainly in two ways: through substantial over collateralisation and use of smart contracts. To protect against unacceptable loss given default, loans backed by virtual assets are often heavily over collateralised and margin call triggers are often set at very early stages when compared to more traditional investment securities. A smart contract meanwhile, is a digital contract embedded in the blockchain which contains an established set of rules governing 24/7 without reference to traditional market open and close timeframes. A smart contract can be set up to operate without the need for action by third parties such as broker dealers, administrators, banks or insolvency officials. This has obvious advantages in removing friction within the system, but from the borrower's perspective, the risk is that a smart contract built into a virtual asset-backed loan could trigger immediate liquidation into a falling market with almost no time for intervention or negotiation with the lender, creating a cascading effect and amplifying losses.

2 Tokenized fund units and subscription facilities

The MICA Regulation defines a crypto-asset as a digital representation of a value or of a right that is able to be transferred and stored electronically using DLT or similar technology¹¹.

A tokenized fund is a fund whose shares or units are represented by digital tokens. Those tokens serve as a digital representation of the rights associated with each share or unit. The MICA Regulation would not apply to a tokenized fund whose shares or units are issued as tokens qualifying as financial instruments within the meaning of MiFID II.

Taking security over commitments of a Luxembourg tokenized fund

A subscription lender performing its underwriting analysis on a borrower is focused on, more so than perhaps any other area of finance, the legal relationship between the fund and its investors. It is that bundle of contractual rights, rather than hard assets, tradable securities or cashflows generated by an operating business, which underwrites the credit risk. The area of focus is the right to call uncalled commitments from the investor if the fund defaults on the facility.

In a typical capital call security package involving a Luxembourg fund, the lender will have a pledge over the commitment claims the fund holds against the investors.

As a result, the nature of the interest in the fund (whether it is a traditional partnership interest or a token) would not in principle have an impact on the scope of the security the lender will take over the commitments of the investor. However, the lender will need to diligence exactly how a token-holder would, in practical terms, be obligated to fund capital calls and how remedies can be pursued against a defaulting token-holder via the distributed ledger.

As pointed out in our prior article covering the Cayman perspective, a potential solution would consist in using smart contracts. The smart contract concept is highly attractive in a subscription lending context for several reasons. First, it reduces the time taken to enforce, which should theoretically lead to a lower probability of loss given default. Secondly, it would theoretically lower the upfront cost and complexity of implementing a traditional security package. One example of this is that, similar to the Cayman law position, Luxembourg law governed pledge agreements over commitments require an investor notice to be delivered to investors in order to ensure the enforceability of the pledge against the investors in the jurisdiction where they are located. If an investor can simply be notified via smart contract on the blockchain, that would remove the requirement for an analogue form of investment notice delivered mechanically to investors. There is no prescribed form of notice required by Luxembourg law, so provided

¹¹ Article 3 of the MICA Regulation.

the fundamentals are covered in the smart contract, notification via blockchain is theoretically possible. Finally, there is arguably (although this can be debated) a greater degree of protection against fraudulent or wilful breach of a negative pledge provision. All transactions on the blockchain are verifiable and service providers with expertise in tracing blockchain transactions exist in the market.

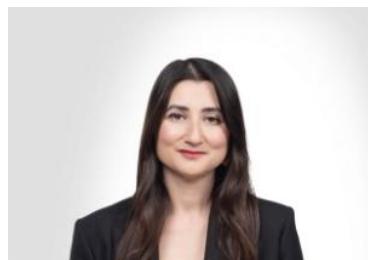
The above concept remains a distant way off for various reasons. However, the protection granted by the 2005 Law to lenders benefitting from Luxembourg law governed pledge agreements over commitments would apply regardless of whether the fund units are tokenized or not and the overall analysis would be largely the same as with any subscription credit facility executed in today's market.

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