1 Philosophy of Money and Cryptocurrencies*

John Maynard Keynes wrote that the history of money begins with Solon, “… the first statesman whom history records as employing the force of law to fit a new standard coin to an existing money of account.”¹ The president of the European Central Bank (Christine Lagarde) reminds us that the defence of a currency is still an affair of state (or of the central bank of the latter),² and on 9 September 2019 highlighted that “Euro is a European public good.”³ Although, notably, …

² On this topic, see Benjamin Klein, “The Competitive Supply of Money,” (1974) 6 Journal of Money, Credit and Banking 423, who states that: “few areas of economic activity can claim as long and unanimous a record of agreement on the appropriateness of governmental intervention as the supply of money.”
³ See Annex N. 2 of the Report on the Council recommendation appointing the President of the European Central Bank (N9-023/2019 – C9-0048/2019 – 2019/0810(NLE)), available at: <https://www.europarl.europa.eu/doceo/document/A-9-2019-0008_IT.html> accessed 27 October 2022. On this point, see the Treaty on the Functioning of the European Union, [2012] OJ C326/1 (“TFEU”), Art. 282 “1. The European Central Bank, together with the national central banks, shall constitute the European System of Central Banks (ESCB). The European Central Bank, together with the national central banks of the Member States whose currency is the euro, which constitutes the Eurosystem, shall conduct the monetary policy of the Union. 2. The ESCB shall be governed by the decision-making bodies of the European Central Bank. The primary objective of the ESCB shall be to maintain price stability. Without prejudice to that objective, it shall support the general economic policies in the Union in order to contribute to the achievement of the latter’s objectives. 3. The European Central Bank shall have legal personality. It alone may authorise the issue of the euro. It shall be independent in the exercise of its powers and in the management of its finances. Union institutions, bodies, offices and agencies and the governments of the Member States shall respect that independence. 4. The European Central Bank shall adopt such measures as are necessary to carry out its tasks in accordance with Articles 127 to 133, with Article 138, and with the conditions laid down in the Statute of the ESCB and of the ECB. In accordance with these same Articles, those Member States whose currency is not the euro, and their central banks, shall retain their powers in monetary matters. 5. Within the areas falling within its responsibilities, the
pursuant to art. 282 TFEU, said Bank is certainly not subject to the powers of the Member States, because “Union institutions, bodies, offices and agencies and the governments of the Member States shall respect that independence.”

By contrast, virtual currencies have generated a real “private” and anarchic monetary system, in defiance of that state “patent”, idealised by Georg Simmel in his famous work (Philosophy of money), concerning the exclusive right to mint money.\(^4\) We note that this “patent” has been questioned several times in the course of history, with reference to the so-called alternative currencies.\(^5\)

Before delving into these new legal horizons, perhaps today this new virtual monetary system has (really) challenged the idea of a state “patent” as expressed by George Simmel, except that this epilogue (or this beginning, depending on one’s point of view) appears to be consistent with the idea of Simmel’s “patent” since, sooner or later, all patents – by nature – tend to capitulate in the face of the progress of a new technology. And therefore, perhaps, the issue that deserves more attention, from a scientific (juridical-economic) point of view, is not so much the overcoming of the state money minting exclusivity. Rather, the aspect that needs to be stressed is the development of a new currency (indeed virtual) unanchored to a specific causal need, a need that instead is typically the basis of all the non-virtual alternative currencies known to date. In addition, these virtual currencies are not defended by any “sword” or sovereign law, but are, instead, based on an anarchist system without any authoritative and/or legislative imposition.

Before even outlining the legal features of these new entities, it is necessary to analyse the current world economic development of this virtual monetary system (if it can be described as such), given that the most famous cases of alternative currencies (we are thinking of the Brixton pound), have often had a rather limited economic distribution, both in time and space, since alternative currencies stem from, and are linked to, a specific place and historical moment (characterised, for example, by a war, a famine or other reasons). In particular, it is possible to refer for example to the Depression Scrip, a subspecies of debt security that circulated in some areas of the United States (geographical limit) during the Great Depression (1930s, time limit) to cope with the drastic decrease of circulating liquid assets (causal connection limit).\(^6\)


\(^6\) Joel William Canaday Harper, *Scrip and Other Forms of Local Money* (University of Chicago 1948).
On the contrary, cryptocurrencies are a global phenomenon (there are no geographical limits) and do not even seem to be temporally limited, given that the first bitcoin exchanges date back to 2009; today they are regularly traded (along with thousands of other virtual currencies) 24 hours a day, 7 days a week, on hundreds and hundreds of exchanges (no time limit). In addition, it should be noted that cryptocurrencies do not exist/were not created to overcome a lack of money or liquid assets, nor to cope with extraordinary situations such as wars or famines; therefore, it would seem that a causal aspect or an intrinsic utility for the issuance of virtual currencies is completely lacking (no causal limit).

Indeed, among the various cryptocurrencies, bitcoin\(^7\) is, undoubtedly, the most widely known and used. This is not only for "historical" reasons, given that bitcoin has been circulating for 13 years,\(^8\) but also because of its economic relevance, as market capitalisation has now reached about € 625 billion (as of 7.5.2022).\(^9\) Furthermore, bitcoin prominence is also due to one of the (perhaps indirect) functions of bitcoin itself, namely being a digital asset with a high value (when these pages were written, a bitcoin traded at a price of approximately € 49,000.00). The fame of bitcoin is widely demonstrated by empirical market data, as the average trading volumes over 24 hours was approximately

\(^7\) The word 'Bitcoin' when capitalised refers to the Bitcoin network or protocol. On the other hand, the word 'bitcoin' beginning with a lower-case letter identifies the currency (also known as 'BTC' or 'XBT'). For more information, see bitcoin, "Some Bitcoin words you might hear" (bitcoin) (<https://bitcoin.org/en/vocabulary#bitcoin>) accessed 27 October 2022 and "Bitcoin" (Bitcoin Wiki) (<https://en.bitcoin.it/wiki/Bitcoin>) accessed 27 October 2022.


\(^9\) It should be noted that on 1.10.2018, the market capitalisation of bitcoin was $114 billion, approximately 17 million units of currency had been issued, and the average volume over a 24-hour period was $3,982,705,851, while the price had reached $6,598.49, whereas the market capitalisation of all digital assets totalled $222 billion, with an average 24-hour volume of $3,982,705,851. As of today (7.5.2022), the market capitalisation of bitcoin is € 625 billion, approximately 19 million units of currency have been issued, the average volume over 24 hours is € 31 billion, while the price has reached approximately € 34,000.00, as reported by CoinMarketCap (“Today’s Cryptocurrency Prices by Market Cap” (<https://www.coinmarketcap.com>) accessed 27 October 2022) and Blockchain (“The world’s most popular way to buy, sell, and trade crypto” (<https://www.blockchain.com>) accessed 27 October 2022). The market capitalisation of all virtual currencies (approximately 19332) is € 1,504,383,233,431, with a 24-hour average volume of € 93 billion, as reported in the same markets. For an economic analysis of bitcoin, see David Yermack, “Is Bitcoin a Real Currency? An economic appraisal” (<https://www.nber.org/papers/w19747>) accessed 27 October 2022; Giuliano Lemme and Sara Peluso, “Criptomoneta e distacco dalla moneta legale: il caso bitcoin,” (2016) 4 Rivista di Diritto Bancario 1, 1.
€ 47 billion. Moreover, there are some key exogenous and endogenous factors concerning bitcoin itself that have facilitated its distribution, and which can be summarised as follows:

a. The risk of devaluation of traditional currencies due to an expansive macroeconomic monetary policy, put into place by all the major central banks (US, European and Japanese) in recent years;

b. The risk of a sudden, explosive and unstoppable inflation due to the aforementioned monetary policy, given that this attitude of the central banks has in fact created the conditions for a market with negative interest rates. Therefore, the appetite shown by the market for assets such as bitcoin is not surprising, given bitcoin's deflationary nature. Indeed, bitcoin - unlike legal tender coins - can be “minted” in a limited way, since the total number of such cryptocurrency units will never exceed the limit of 21 million by coding of the Bitcoin protocol itself (and the same is true for several cryptocurrencies: ripple, litecoin, bitcoin cash, etc.).

c. The lower cost of managing, storing and exchanging bitcoin (transaction fees) compared to the more traditional storage of value goods (mainly gold, and other precious commodities);

d. The diversification of the investment portfolio. In this regard, cryptocurrencies in general (not just bitcoin) represent an alternative to traditional financial assets (bond market, stock market, commodities market, etc.), as well unregulated assets, and are therefore less subject to political risks or those related to international relations (wars, diplomatic crises, etc.).

However, this does not mean that they are free from some issues. On the contrary, there are many inherent risks of cryptocurrencies, such as

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10 For additional detail see (n 9).

12 Bitcoin limit of units will presumably be reached in 130 years, as the number of bitcoin mined by solving the calculations necessary for the creation of a block is halved every 4 years.

volatility (excluding stablecoins),\textsuperscript{14} theft, loss of physical support, market abuse due to the absence of regulation and insolvency of trading platforms.\textsuperscript{15} Thus, it is clear that cryptocurrencies (and in particular bitcoin) have benefited from an environment favourable to their proliferation, and that this “habitat” has guaranteed such digital assets a much wider distribution (in geographical and temporal terms) than any other currency or alternative currency. In addition, it should be remembered that the most remarkable dissimilarity between legal tender currencies and cryptocurrencies consists of the absence of central authority or an issuing institution. For example, the bitcoin creation system is based on a so-called “mining” procedure, in which the various members of the network, on the basis of a peer-to-peer consensus mechanism, provide their computational power to solve a certain number of calculations necessary before a new block for the blockchain can be propagated on the network.\textsuperscript{16}


It should be recalled that cryptocurrencies can also be purchased by exchanging legal tender currency or other cryptocurrencies on specific trading platforms and/or currencies exchange, or, again, obtaining them as payment for an operation for the sale of goods or services. On this specific point, it is important to point out that, to date, companies such as Paypal, General Motors (and many others, such as Tesla)\(^{17}\) have begun to accept payment in some cryptocurrencies (mainly bitcoin and ethereum), and other companies have started offering virtual currency-based services to their clients, such as the investment bank Goldman Sachs.

As far as the storage of cryptocurrencies is concerned, these can be stored both on one’s personal computer and/or smartphone (using specific software), or in so-called e-wallets (online wallets) that can also be managed by third parties (wallet service providers).

On the basis of these brief introductory notes, we can now deal with the subject of the legal qualification of virtual currencies which, indeed, has

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\(^{17}\) Tesla accepted bitcoin as payment until 13.5.2021, but recently Elon Musk has stated that Tesla is “most likely” to accept it again. See BBC, “Bitcoin climbs as Elon Musk says Tesla ‘likely’ to accept it again” (BBC, 22 July 2021) <https://www.bbc.com/news/business-5794354>.

Financial Supervisory Authority (BaFin), the US Commodity Futures Trading Commission (CFTC), the European Central Bank (ECB), the Bank of Italy,20 CONSOB21 and the Italian Revenue Agency.22

2 Legal Qualification of Cryptocurrencies in the EU Regulatory Framework

In this section, we will address the issue of the legal qualification of cryptocurrencies, within the limits of the European regulatory framework, with brief digressions concerning non-EU regulatory experiences.

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20 Comunicazione del 30 gennaio 2015 – Valute virtuali, in Bollettino di Vigilanza n. 1, gennaio 2015. In this Communication it is clarified that “the so-called virtual currencies are digital representations of value not issued by a central bank or public authority. They are not necessarily linked to a legal tender currency, but are used as a means of exchange or held for investment purposes and can be transferred, stored and traded electronically. Virtual currencies are not legal tender and must not be confused with electronic money. And, again, that in Italy ‘the purchase, use and acceptance of virtual currencies in payment must be considered legitimate activities by the State; the parties may choose to pay sums also not expressed in legal tender currencies.’” In the same document, it was also noted that “the attention to the fact that the activities of issuing virtual currency, converting legal money into virtual currencies and vice versa and managing the related operational schemes could instead imply, in the national law, the violation of provisions regulations, criminally sanctioned, which reserve the exercise of the related activity only to legitimate subjects (articles 130, 131 TUB for banking activities and savings collection activities; article 131-ter TUB for the provision of payment; art. 166 of the TUF, for the provision of investment services).”

21 Among the most recent analyses: Resolution no. 20944, Suspension, pursuant to Article 99, Paragraph 1, Subparagraph b), of the legislative decree n. 58/1998, of the offer to the public resident in Italy concerning “Liracoind” made by “Liracoind - DAMO,” 2019; Resolution no. 20814, Prohibition, pursuant to Article. 99, Paragraph 1, Subparagraph d), of Legislative Decree n. 58/1998, of the public offer for investments of a financial nature promoted by Cryptoforce Ltd.

22 Resolution of the Revenue Agency of 2 September 2016, no. 72/E, pursuant to which virtual currencies are assimilated to foreign currencies for the purpose of determining tax treatment.
Cryptocurrencies, being issued neither by a central bank nor by a centralised issuer cannot be considered legal tender pursuant to art. 128 TFEU. However, we can anticipate that the purchase, use and acceptance for payment of virtual currencies must, at present, be considered legitimate activities; but let us proceed in the proper order.

Even excluding the nature of legal tender, virtual currencies cannot be considered electronic currencies. In fact, in terms of regulatory framework, Article 1, Paragraph 3 Subparagraph b) of Directive no. 46/2000 EC, electronic money is defined in the following way:

- electronic money shall mean monetary value as represented by a claim on the issuer which is: (i) stored on an electronic device; (ii) issued on receipt of funds of an amount not less in value than the monetary value issued; (iii) accepted as a means of payment by undertakings other than the issuer.

This definition was then specified in Article 2 No. 2 Directive no. 110/2009 EC):

- ‘electronic money’ means electronically, including magnetically, stored monetary value as represented by a claim on the issuer which is issued on receipt of funds for the purpose of making payment transactions as defined in Point 5 of Article 4 of Directive 2007/64/EC, and which is accepted by a natural or legal person other than the electronic money issuer.

Having identified the relevant regulatory framework, the differences between virtual currency and electronic money emerge clearly (given that they have in common only the absence of a representative physical support):

- electronic money, pursuant to Article 2 No. 2 of the aforementioned Directive, are issued in exchange for funds of a corresponding value and expressed in legal tender currency (the euro). By contrast, virtual...
currencies are generated with the data mining procedure and/or other more specific procedures (with some exceptions such as Tether, which is generated and exchanged against payment of US dollars; b virtual currencies are not issued by a central bank or by a centralised issuer, as they are “minted” through a system that is not regulated, nor controlled or controllable by any entity/market operator, while electronic money can only be issued and recognised by duly authorized parties pursuant to Directive 110/2009/EC (title II, the so-called “electronic money institutions”). Nevertheless, this feature is not always present: a mechanism of control is sometimes provided, as in the case of tether, which in fact is issued by a company subject to the control of the competent US authorities, or as ripple, which was recently involved in an investigation by the SEC; c electronic money, pursuant to Article 11 of the above-cited Directive, is always redeemable in “real” legal tender currency at the request of the holder. In contrast, this mechanism does not operate for virtual currencies (and there are no exceptions), as they can be exchanged with fiat currency only through exchanges\(^\text{26}\) that are not obliged to accept such virtual currencies. Yet, this legal “certainty” regarding the exclusion of virtual currencies from the category of electronic money gave way to the new Proposal for a Regulation of the European Parliament and of the Council on the Markets for crypto-assets and amending Directive (EU) 2019/1937 (‘MiCA proposal’). In particular, this proposal introduced ex novo the regulation of “electronic money tokens” as “a type of crypto-asset the main purpose of which is to be used as a means of exchange and that purports to maintain a stable value by referring to the value of a fiat currency that is legal tender,” which are legally equivalent to electronic money, given that the issuer must be authorized as a credit institution or “institution of electronic money” pursuant to Art. 2, No. 1, of Directive 2009/110/EC, and must meet the requirements applicable to electronic money institutions referred to in Titles II and III of Directive 2009/110/EC.

Based on these considerations, it seems legitimate to ask whether virtual currencies can, at least in the abstract, fulfil the function of complementary currency not being legal tender. In order to answer this question, it is necessary to verify whether virtual currencies are able to perform the functions of

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\(^{26}\) Exchanges are platforms, operating according to decentralised or centralised models, and which are exchange and trading systems, but are not, pursuant to the MiFID discipline, authorised trading venues, *i.e.*, regulated markets (RM), multilateral systems trading facilities (MTF) or organised trading facilities (OTF).
money, namely, according to the functional theory, those of: a) unit of account; b) means of payment (or exchange); and c) store of value.

In this regard, in the opinion of the Authors (based on the existing legal framework), it does not appear possible to recognise the characteristics and functions of money in virtual currencies, as these are not able to fulfil all three aforementioned functions. Indeed, in Europe the unit of account, pursuant to Article 4 of Reg. No. 974/1998 EC, is exclusively the euro, and more precisely: ‘the euro shall be the unit of account of the European Central Bank (ECB) and of the central banks of the participating Member States’, even if this regulation establishes this principle limited to the aforementioned subjects (ECB and central banks of the participating Member States), and not to other private subjects, who would be free to also adopt different units of account.27 On this topic, we refer to a decision of the Italian Supreme Court (no. 25837/2011), which underlined the hierarchy of sources in monetary matters. In particular, the Italian Supreme Court stated that:

shall be qualified as currency only the means of payment, universally accepted, which is an expression of the public powers of issue and management of economic value, in accordance with the objectives established by national and supranational law.28

In this framework of uncertain boundaries, it would seem useful to make reference, again in relation to the issue we are analysing, to some considerations that have emerged within the Court of Justice of the European Union (CJEU). According to the decision of 22.10.2015, C. 264/14 of the CJEU, bitcoin has been equated to a “contractual means of payment.”29 In particular, the CJEU, which had been called upon to rule on whether or not the exchange transactions between Bitcoin and “traditional” currencies are subject to value added tax, in a nutshell, defined Bitcoin as a “contractual means of payment, or rather

27 This "lack" of virtual currencies has also been underlined by scholars. See De Stasio, "Verso un concetto europeo di moneta legale," (n 18), 756 et seq.; Krogh (n 15), 158, who states: “[e]xcluding, therefore, the possibility that virtual currencies can fall into the legal category of ‘legal currencies,’ all that remains is to include them in the more generic category of ‘goods,’ in the broad meaning of Article 810 of the Italian Civil Code [...]’

28 Accord: Italian Supreme Court, decision of 2.10.2011, no. 25837, with a case note of Luciano Ciafardini, “Offerta di prodotti finanziari mascherata da emissione di moneta: lo stop della Cassazione,” (2012) 1 Giustizia civile 29, 31, with regard to the case of the “currency of the Republic of the Earth” called “dhana” (which, however, was not a virtual currency).

29 Skatteverket (n 19).

30 For a more detailed analysis of this ruling, see Palumbo (n 13), 279; Piasente (n 19), 141.
a direct payment method between the operators who accept it,” and consequently, the provision of services which have as their object the exchange of the virtual currency against units of fiat money and vice versa, are considered exempt from VAT. Nonetheless, this qualification as a means of payment has been opposed, both by certain legal doctrine and by the ECB, as specified below.\textsuperscript{31}

From this point of view, virtual currencies can be considered a means of payment only among the operators who accept them. Therefore, the debtor will be able to fulfil his obligation by paying in cryptocurrencies rather than in currency having legal tender only if the creditor consents.\textsuperscript{32} Thus, there is still the possibility of refusing to accept virtual currencies in payment of a debt. The ruling in question, indeed, does not allow \textit{ipso jure} the equivalency of cryptocurrencies and currencies not having legal tender status. However, these guidelines are limited to the tax issues of the case, and therefore do not “generally attribute the monetary character to virtual currencies.”\textsuperscript{33} In other words, and recalling the typical functions of money, virtual currencies are not legally recognised as a unit of account (at least by the ECB and central banks of the participating Member States), as they would appear to be a means of payment, or, at most, a means of exchange.

In this regard, in fact, it is worth recalling the scope and content of the provisions of the ECB opinion of 12.10.2016 (signed by Mario Draghi).\textsuperscript{34} The ECB, referring to virtual currencies, stresses that “they are not legally established as money nor are they legal tender issued by central banks and other public authorities.” And again, in the same opinion, the ECB criticises the definition

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\item In this regard, however, it should be noted that scholars do not consider “applicable the rules on payment systems envisaged for example by Directive 64/2007/EC (the so-called PSD Directive) since electronic money is excluded from its scope, if he deduces by analogy, the \textit{a fortiori} inapplicability for virtual currencies (without those forms of issue surveillance to which the first is subjected),” as said in these terms by Noah Vardi (n 18), 446–447. See also Giorgio Gasparri (n 18), 31.
\item As argued in the legal doctrine by: Massimo Giuliano, \textit{L’adempimento delle obbligazioni pecuniarie nell’era digitale: dalla moneta legale alla moneta scritturale e digitale legalmente imposta}, (Torino: Giappichelli 2018), 134 et seq.; Giorgio Gasparri (n 18), 416 fn. 6.
\item In these terms De Stasio, “Verso un concetto europeo di moneta legale,” (n 18), 755. The author argues that the judgment of ECJ is limited only to the tax issues of the said case.
\end{enumerate}
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of virtual currencies as means of payment, since “virtual currencies cannot qualify as currencies” from the point of view of the Union and indeed, in the view of the Authors, Article 2, Paragraph a), of Directive 2014/62/EU of the European Parliament and of the Council of 15 May 2014 would not seem to include virtual currencies.\(^{35}\) Furthermore, the ECB clarifies that “In compliance with the Treaties and the provisions of Regulation (EC) no. 974/98 of the Council, the euro is the single currency of the economic and monetary union of the Union, that is of the member states that have adopted it as their currency.” So the European Banking Authority:

recommends defining virtual currencies more specifically, in order to explicitly clarify that virtual currencies do not constitute legally established currency or money “considering that” virtual currencies are not actually currencies, it would be more appropriate to consider them as a means of exchange rather than a means of payment.

This opinion of the ECB was not the first pronouncement of the Authority. In fact, there had already been a previous publication by that bank, titled the Virtual Currency Schemes (dating back to October 2012), where the virtual currency was defined as “a virtual currency [which] is a type of unregulated, digital money, which is issued and usually controlled by its developers, and used and accepted among the members of a specific virtual community.” The ECB added the clarification that “[t]his definition may need to be adapted in future if fundamental characteristics change.”\(^{36}\)

The same can be said of the Bank for International Settlements, which had already issued its own opinion (in 2015),\(^{37}\) through which it had tried to draw a line between e-money and digital currencies.

However, unlike traditional e-money, digital currencies are not a liability of an individual or an institution, nor are they backed by an authority. Furthermore, they have no intrinsic value and, as a result, they derive value only from the belief that they might be exchanged for other goods or services, or a certain amount of sovereign currency, at a later point. Accordingly, holders of digital

\(^{35}\) Whereby currency is meant: “banknotes and coins whose circulation is legally authorized, including banknotes and coins whose release into circulation is legally authorized pursuant to Regulation (EC) no. 974/98.”


currency may face substantially greater costs and losses associated with price and liquidity risk than holders of sovereign currency.

Some cryptocurrencies however do not “technically” have an intrinsic value equal to zero; for example, bitcoin or litecoin - from a purely accounting point of view - are worth at least the cost necessary for their production and exchange (very high in the case of the bitcoin mining), a value that increases due to the scarcity of these currencies (according to the general supply-demand mechanism) and their usefulness (for instance, the value of bitcoin appreciates every time a private entity, or an institution or a State recognises its legal validity). These considerations, reverting to the three functions of money, suggest that the requirement of the “store of value” is attributable at least to some cryptocurrencies.

In the wake of the aforementioned opinion of the ECB of 12.10.2016, the European regulatory framework has also recently been enriched by Directive no. 843/2018 EU. With this Directive (in the “recitals”, Paragraph n. 10), it was preliminarily clarified what virtual currencies are not:

Virtual currencies should not to be confused with electronic money as defined in point (2) of Article 2 of Directive 2009/110/EC of the European Parliament and of the Council, with the larger concept of “funds” as defined in point (25) of Article 4 of Directive (EU) 2015/2366 of the European Parliament and of the Council, nor with monetary value stored on instruments exempted as specified in points (k) and (l) of Article 3 of Directive (EU) 2015/2366, nor with in-games currencies, that can be used exclusively within a specific game environment. Although virtual currencies can frequently be used as a means of payment, they could also be used for other purposes and find broader applications, such as a means of exchange, investment, store-of-value products or for use in online casinos. The objective of this Directive is to “cover all the potential uses of virtual currencies.”

The following assumptions are then confirmed:

i. virtual currencies are not electronic money pursuant to Article 2, Point 2, of Directive 2009/110/EC;

ii. virtual currencies are not payment instruments pursuant to EU Directive 2015/2366 (so-called PSD 2, Payment Services Directive);

iii. virtual currencies, in addition to being used as a means of payment, can also be used as a means of exchange and investment or products of store of value.
After that, and again according to the Directive in question (which would seem to have adhered to the theses of the ECB), virtual currencies are defined as:

a representation of digital value that is not issued or guaranteed by a central bank or a public body, it is not necessarily linked to a legally established currency, it does not have the legal status of currency or money, but it is accepted by natural and legal persons as a medium of exchange and can be transferred, stored and exchanged electronically.\(^{38}\)

And at the same time, a definition was also given of the subjects who carry out the activities of digital wallet service providers, such as subjects who provide: “services for safeguarding private cryptographic keys on behalf of their customers, in order to hold, store and transfer virtual currencies.”

2.1 The EU Proposed “Regulation on Markets in Crypto Assets”: New (Un)certainties

The regulatory framework described thus far was shaken by the Proposal for a Regulation of the European Parliament and of the Council on the “Markets for crypto-assets and amending Directive (EU) 2019/1937.”\(^{39}\) This proposal radically changes the legal landscape discussed up to this point; it also seems to include one of the most problematic aspects (in terms of regulation and legal qualification) of cryptocurrencies,\(^{40}\) namely that of stablecoins, abandoning the “certainty” that “virtual currencies should not be confused with electronic money as defined in Point 2 of Article 2 of Directive 2009/110/EC.”\(^{41}\)

More specifically, it should be noted that among the objectives set by the European legislator (legal certainty, support of technological innovation, consumer protection) we find that of financial stability,\(^{42}\) and, in particular, it is

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\(^{41}\) Directive (EU) 2018/843 (n 38), Recital 10.

\(^{42}\) The introductory report of the MiCA Proposal (n 39) states: “The first objective is one of legal certainty. For crypto-asset markets to develop within the EU, there is a need for
said that “the proposal includes safeguard measures to address the potential risks to financial stability and orderly monetary policy that could arise from stablecoins.”

In any case, this regulation clarifies, in Article 2 (2), that it is not intended to apply to crypto assets that qualify as: (a) financial instruments as defined in Article 4(1), point (15), of Directive 2014/65/EU; (b) electronic money as defined in Article 2, Point (2), of Directive 2009/110/EC, except where they qualify as electronic money tokens under this Regulation; (c) deposits as defined in Article 2(1), Point (3), of Directive 2014/49/EU of the European Parliament and of the Council; (d) structured deposits as defined in Article 4(1), point (43), of Directive 2014/65/EU; or (e) securitization as defined in Article 2, Point (1), of Regulation (EU) 2017/2402 of the European Parliament and of the Council.

The MiCA proposal (Article 3 Paragraph 2) has not only an objective exclusion, but also a subjective one, given that it cannot be applied to: (a) the European Central Bank, national central banks of the Member States when acting in their capacity as monetary authority or other public authorities; (b) insurance undertakings or undertakings carrying out the reinsurance and retrocession activities as defined in Directive 2009/138/EC of the European Parliament and of the Council when carrying out the activities referred to in that Directive; (c) a liquidator or an administrator acting in the course of an insolvency procedure, except for the purpose of Article 42; (d) persons who provide crypto asset services exclusively for their parent companies, for their subsidiaries or for other subsidiaries of their parent companies; (e) the European investment
bank; (f) the European Financial Stability Facility and the European Stability Mechanism; or (g) public international organisations.

The MiCA proposal also includes several definitions. Specifically, it defines as “crypto-asset”: “a digital representation of value or rights which may be transferred and stored electronically, using distributed ledger technology or similar technology”; as an “asset-linked token”: “a type of crypto asset that purports to maintain a stable value by referring to the value of several fiat currencies that are legal tender, one or several commodities or one or several crypto assets, or a combination of such assets”; as “electronic money token”: “a type of crypto asset the main purpose of which is to be used as a means of exchange and that purports to maintain a stable value by referring to the value of a fiat currency that is legal tender”; as a “utility token”: “a type of crypto-asset which is intended to provide digital access to a good or service, available on DLT, and [which] is only accepted by the issuer of that token.” The proposal also outlines, in a specific and articulated way, a list of possible services that can be provided by crypto asset service providers; nevertheless, it should be noted that such a topic is beyond the scope of this paper.45

It is also important to stress that the MiCA proposal provides a distinction among different types of crypto assets: utility tokens (also providing a legal framework on offering and regulation), stablecoins (electronic money tokens and tokens linked to assets) and investment tokens, which are characterised as financial instruments (thus subject to the discipline referred to in Article 4, Paragraph 1, Point No 15, of Directive 2014/65/ EU). Going into more depth, each of these tokens has its own discipline; on this point, it is interesting to note that the regulatory aspects of this proposal would not seem to apply to cryptocurrencies (strictly speaking, such as bitcoin, litecoin, etc.), since the latter do not have an issuer that legally offers them on a platform. Such a conclusion tallies with Article 4 (2) Subparagraph b) of the proposal for a Regulation, which expressly provides for the exemption from the publication of the white paper (and other duties) for crypto assets where “the crypto-assets are

45 “[C]rypto-asset service” means any of the services and activities listed below relating to any crypto-asset: (a) the custody and administration of crypto-assets on behalf of third parties; (b) the operation of a trading platform for crypto-assets; (c) the exchange of crypto-assets for fiat currency that is legal tender; (d) the exchange of crypto-assets for other crypto-assets; (e) the execution of orders for crypto-assets on behalf of third parties; (f) the placing of crypto-assets; (g) the reception and transmission of orders for crypto-assets on behalf of third parties; (h) providing advice on crypto-assets.
automatically created through mining as a reward for the maintenance of the DLT or the validation of transactions.\textsuperscript{46}

This circumstance confirms what has been anticipated, namely that the MiCA proposal mainly deals with the regulation of stablecoins. On this point, this regulatory initiative – in terms of the qualification of cryptocurrencies – offers an important legal innovation, given that it provides that electronic money tokens and actual electronic money may be subject to/governed by the same regulation. Therefore, stablecoins such as tether, USDC coin, paxos standard and many others (which replicate the official prices of the US dollar) would, in fact, be subject to the same regulation of electronic money.

In this new \textit{de iure condendo} framework, what is clear is the genus-to-species relationship (between crypto assets and single types of tokens) that the proposed regulation would seem to have definitively established. On the one hand, there is the “genus” represented by “Crypto assets” (\textit{i.e.}, the digital representation of value or rights that can be transferred and stored electronically, using distributed ledger technology or a similar technology). On the other hand, it is possible to single out individual species of tokens:

a \textbf{Utility tokens}, namely the crypto assets (accepted only by the issuer) aimed at providing digital access to a good or service. Tokens that would seem to be included among the broad category of legitimation securities, given that these tokens do not even potentially have the function of money (as the specification of being accepted only by the issuer demonstrates), nor do they appear to have a financial nature since these tokens would seem to be supported – from a causal point of view – by a consumer intent as shown by Article 12 of the proposed regulation in question, when it recognises the right of withdrawal of consumers who have purchased these tokens;

b \textbf{Investment tokens}, \textit{i.e.}, crypto assets not governed by the EU’s recent MiCA proposal, but which should fall within the category of financial instruments referred to in Article 4 (1), Point No. 15, of Directive 2014/65/EU. In other words, this kind of crypto asset does not escape regulation, but the European legislator simply includes it in a previous legal text

\textsuperscript{46} The other exemptions apply when: (a) the crypto assets are offered for free; (c) the crypto assets are unique and not fungible with respect to other crypto assets; (d) the crypto assets are offered to fewer than 150 natural or legal persons per Member State where such persons are acting on their own account; (e) over a period of 12 months, the total consideration of an offer to the public of crypto assets in the Union does not exceed €1,000,000, or the equivalent amount in another currency or in crypto assets; or (f) the offer to the public of the crypto assets is solely addressed to qualified investors and the crypto assets can only be held by such qualified investors.
(namely in that on financial instruments, the so-called MiFID II and MiFIR regime), which, moreover, is already intended to be updated in this regard. Indeed, one of the most important “pieces” that make up the so-called white paper, regulated under Article 5, Point No. 7, of the MiCa Proposal, is precisely the one dedicated to illustrating the reasons why the crypto assets offered should not be considered financial instruments; Asset-referenced tokens, i.e., a type of crypto asset that purports to maintain a stable value by referring to the value of several fiat currencies that are legal tender, one or several commodities (as set forth Article 2(6) of Commission Delegated Regulation (EU) 2017/565), or one or several crypto assets, or a combination of such assets. Such reserves of assets represent the underlying value of these tokens (as regulated by Articles 32 et seq. of the MiCA proposal), where the token buyer may not even be the holder of direct credit or reimbursement rights (see Article 25 of the MiCa Proposal on the obligation of transparency and disclosure of this condition). In such a case these tokens may be deemed financial derivative contracts (for example forwards or futures) referred to in Article 4 (1), No. 15 MiFID II, given that the speculative element would seem to prevail over the consumption element. The absence of a claim right and/or the reimbursement on reserve of activities (Article 25 MiCA Proposal), and of a right of withdrawal as well (Article 12 MiCA Proposal), are features and effects that make the token we are speaking of similar to derivative contracts of Article 4(1), No. 15 MiFID II. That is because the speculative element seems to prevail over the consumeristic one. Nonetheless, it should be noted that this article prohibits issuers from providing to the token holder interests or other benefits linked to the duration of the holding period of these tokens.

Electronic money tokens, i.e., crypto assets used mainly as a medium of exchange, the value of which is linked to the value of a legal tender fiduciary currency. Of all the token subspecies, this is undoubtedly the least problematic - from a qualification point of view - as it is clear that this token is in fact an electronic money, given that the issuer must be authorised as a credit institution or “institution of electronic money” pursuant to Article 2, point 1, of Directive 2009/110/EC, and must meet

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47 As stated at 2 of the MiCA Proposal (n 39): “the Commission is also proposing a clarification that the existing definition of ‘financial instruments’ - which defines the scope of the Markets in the Financial Instruments Directive (MiFID II) - includes financial instruments based on DLT, as well as a pilot regime on DLT market infrastructures for these instruments.”
the requirements applicable to electronic money institutions referred to in titles II and III of Directive 2009/110/EC. These tokens (better known as stablecoins), have revolutionised the legal landscape of cryptocurrencies, as in their case, the position for which virtual currencies are never comparable to electronic money has been definitively abandoned, so much so that stablecoins are always redeemable by the issuer (see art. 44 of the MiCA proposal). Moreover, the issuer of these tokens is forbidden from providing remuneration to the holders in the form of interest or other benefits (art. 45), and it is evident that, given the prevalence of the exchange function for these tokens, any equality with financial instruments is excluded.\footnote{Moreover, the exclusion of the investment function is further demonstrated by the obligation of the issuer (pursuant to Article 49 of the MiCA Proposal (n 39)) to invest the funds received from the issuers of electronic money tokens in secure and low-risk assets, in accordance with of Directive 2009/110/EC of the European Parliament and of the Council of 16 September 2009 on the taking up, pursuit and prudential supervision of the business of electronic money institutions amending Directives 2005/60/EC and 2006/48/EC and repealing Directive 2000/46/EC [2009] OJ L267/7, Article 7(2).}

In this regulatory framework, however, cryptocurrencies such as bitcoin or litecoin, are produced through data mining, but are not linked to the enjoyment of a good or service (no utility tokens), nor to the value of a currency having legal tender (no electronic money tokens or stablecoins), commodity or other, nor do they have a financial nature. It is therefore not clear under which “kind” of crypto asset these virtual currencies can be categorised.

More specifically, this type of virtual currency does not match any of the “species” as defined by the proposed regulation. Perhaps this is due to the fact that these cryptocurrencies could be considered property. In more precise terms, we have already mentioned the difficulty in categorising this cryptocurrency as money (including electronic money) and as a payment instrument (despite an initial case law approach to that effect).\footnote{See Skatteverket (n 19).} Nonetheless, this difficulty helps in the attempt to find the correct qualification. In fact, it is undeniable that these virtual currencies represent a value, and as such can be considered property, given that they can be freely disposed of (spent, transferred, destroyed, etc.) by means of the private key. In essence, therefore, if, on the one hand, it is true that MiCA does not regulate cryptocurrencies, on the other hand, it implies - by reasoning \textit{a contrario} - that cryptocurrencies cannot be included in any of the legal categories regulated by the MiCA proposal (“species”). Thus, their exclusion from these definitions allows us to corroborate the thesis that bitcoin is property, an orientation in line with...
the non-regulation of MiCA, which in fact, provides a broad definition of the “genus” represented by “Crypto-assets” (i.e., the digital representation of value or rights that can be transferred and stored electronically, using distributed ledger technology or a similar technology), would seem to somehow lead to this conclusion.

In this regard, we recall some cases. In the Koinz Trading B.V. case, the District Court of Amsterdam opined that:

Bitcoin exists, according to the court, in the form of a unique, digitally encrypted series of numbers and letters stored on the hard drive of the right-holder’s computer. Bitcoin is “delivered” by sending bitcoins from one wallet to another wallet. Bitcoins are standalone value files, which are delivered directly to the payee by the payer in the event of a payment. It follows that a bitcoin represents a value and is transferable. In the court’s view, it thus shows characteristics of a property right. A claim for payment in bitcoin is therefore to be regarded as a claim that qualifies for verification.

We can also refer to the USA Bankruptcy Court of the Northern District of California holding in a case on the bankruptcy of the Bitcoin mining firm HashFast’s trustee (HashFast Technologies LLC and HashFast LLC v. Marc A. Lowe, Case No. 14-30725DM), where it was declared that bitcoins are not US dollars and should be considered as intangible property or commodities in bankruptcy procedures. In other words: “Bitcoin is property, not currency.”

These decisions, which are far from isolated, lead the interpreter to consider the idea of qualifying bitcoin (along with all the other virtual currencies not comparable to the legal categories ruled in the MiCA proposal), under the

category of “non-physical property rights” as increasingly well-founded and compelling.\(^{54}\) This conclusion is substantially supported by several arguments.

1. As mentioned, bitcoin would not seem to be compatible with the other qualifications applicable to other types of crypto assets (utility tokens, investment tokens, asset-referenced tokens and electronic money tokens).

2. Bitcoin can be held both directly (with a physical wallet, such as a hardware wallet, named “cold wallet”) and indirectly (through an e-wallet managed by specific exchange platforms, a so-called “hot wallet”). It can be kept indefinitely, and the risks of deterioration or loss are irrelevant, given that even traditional properties can be subject to this risk.

3. Bitcoin can circulate, and, in particular, it can be transferred and spent using the users’ private key, and it can even be destroyed.

3. Consequences of Legal Qualification of Digital Assets in Insolvency Proceedings

After focusing on the analysis of the legal nature of crypto assets, especially cryptocurrencies, and having described the regulatory framework in the Member States of the European Union, the second part of this work will focus on the issue relating to the relationship between bankruptcy and digital assets. In particular, it is now necessary to analyse the consequences of the qualification of digital assets on insolvency proceedings and of the relationship between exchanges and clients, also in light of the MiCA proposal.

3.1 Insolvency Estate and Property Claim in Case of Insolvency

The first issue to tackle when analysing the application of bankruptcy law with regard to crypto assets is establishing whether the said assets can be regarded as “assets” under insolvency law, and thus be included within the insolvency estate in the event of the insolvency of a cryptocurrencies investor. In the event that the answer to this question is negative, crypto assets would not be treated as part of the insolvency estate, thereby decreasing the amount creditors may possibly recover. By contrast, if the crypto assets are deemed to be part of the

\(^{54}\) The same conclusion was also reached in the UK, as “cryptoassets have all the legal indicia of property and are, as a matter of English legal principle to be treated as property”; see Geoffrey Vos, “The Launch of the Legal Statement on the Status of Cryptoassets and Smart Contracts” (Judiciary, 18 November 2019), para. 12 <https://www.judiciary.uk/wp-content/uploads/2019/11/LegalStatementLaunch.GV_.2.pdf>.
debtor’s estate, such assets would be recoverable under bankruptcy law, and
the insolvency trustees should act in such a manner as to gain control over
those assets in order to increase the value of the insolvency estate.

With respect to the insolvency of an individual, it is important to mention
Tsarkov, a recent Russian case. Prior to Tsarkov, it was unclear whether, under
Russian law, crypto assets should be included in the bankruptcy estate, since
their status was indeterminate. The insolvency trustee claimed that the crypto-
currencies held in a digital wallet should be deemed to be part of the debtor’s
assets, and therefore should be included in the insolvency estate. The court
of first instance dismissed the claim. By contrast, the appellate court rec-
ognised the insolvency trustee’s claim, on the grounds that cryptocurrencies
should be regarded as pecuniary assets, which can be freely disposed of, used
and possessed by the debtor. Therefore, in the view of the Court, the debtor’s
status with respect to these assets should be considered similar to ownership.
The Court also stressed that, cryptocurrencies having an undeniably
relevant economic value, their exclusion from the insolvency estate would
impede creditors from receiving full satisfaction of their claims, therefore
they should be deemed part of the debtor’s assets. In this case, then, the Court
ordered Mr. Tsarkov to give the insolvency estate administrator access to his
e-wallet, so that it was possible to include cryptocurrencies among the recov-
erable assets for the benefit of the creditors.

The qualification of crypto assets also has serious consequences for the
claims made by crypto-investors against the bankruptcy estate. Indeed, in the
event of a qualification of digital assets as property, the crypto-investors would
have a proprietary claim against the bankrupt, and thus would be able to claim
the restitution of the digital asset having a right in rem. In such a case, credi-
tors might lodge a restitution claim, thus requesting the return of the digital
assets they own. Thus, the crypto assets would not be considered part of the
insolvency estate, as crypto-investors have an exclusive right in rem.

55 Moscow Arbitrazh Court, Case No. A40-124668/17-71-160 (5 March 2018).
56 Decision of the 9th Appellate Court of Moscow, Tsarkov, Case No. A40-124668/2017 (15
May 2018).
57 For an in-depth analysis of the Tsarkov case decisions, see Gregory Azeff, Stephanie De
Caria and Matthew McGuire, “Governing the Ungovernable: Cryptocurrencies in Insol-
www.acfi.ca/2019/02/27/governing-the-ungovernable-cryptocurrencies-in-insolvency-
proceedings/>. See also INSO International, “Cryptocurrency and its Impact on Insol-
D8499AF6A596E78DFF94B8D87FAB4C85A35> accessed 27 October 2022.
On the contrary, not qualifying crypto assets as property leads to the conclusion that such assets, not being subject to a right in rem, would be included in the insolvency estate. As a consequence, crypto-investors’ claims would be equated to the actions of the other creditors of the bankruptcy estate, and would therefore be subject to the bankruptcy reduction, obtaining only partial satisfaction of their claims. Indeed, creditors having a right to claim will need to compete with other personal rights creditors with respect to the sum that the insolvency trustee manages to realise, pursuant to the payment priorities provided by the law applicable to the proceedings.

Proprietary issues (as opposed to contractual issues) are extremely relevant in cases where a crypto asset service provider goes bankrupt. From a contractual standpoint, if ownership over the digital assets cannot be established, users would be regarded as regular creditors and their claims on the assets would have no more priority that those of other creditors in the insolvency proceedings; and consequently would not be fully satisfied. By contrast, if users are able to prove their ownership over crypto assets, they would be entitled to the restitution of all of those assets,\(^\text{58}\) and therefore be able to recover the same amount of cryptocurrencies as they owned.\(^\text{59}\)

With respect to the insolvency of crypto assets exchanges, there are few cases that have recognised the proprietary qualification for cryptocurrencies. In 2018, the Supreme Court of (South) Korea\(^\text{60}\) and the Shenzhen Court of International Arbitration\(^\text{61}\) both found that Bitcoin was a form of property. In 2019, the Singapore International Commercial Court, in \(B_2C_2\) Ltd v Quoine Pte Ltd,\(^\text{62}\) also stated that Bitcoin constitutes a form of property. The High Court

\(^{58}\) The value of such assets, during the time necessary for the conclusion of the insolvency proceedings, will likely increase or decrease, as crypto-asset markets are highly volatile.


\(^{62}\) Singapore Court of Appeal, \(B_2C_2\) Ltd v Quoine Pte Ltd [2019] SGHC(1) 03.
of Justice of England and Wales, in \textit{AA v Persons Unknown, Re Bitcoin},\footnote{AA (n 53).} agreed, relying for its conclusion on the Singapore case.\footnote{More recently, the High Court of New Zealand, in \textit{Ruscoe and Moore} (n 53), held the same view. For a detailed comment on this decision, see Paul Babie et al., “Cryptocurrencies as Property: Ruscoe v Cryptopia Ltd (in liq) [2020] NZHC 728” (2020) 28 Australian Property Law Journal 106.}

By contrast, there is also case law concluding that restitution actions with regard to cryptocurrencies must be excluded. In 2013, MtGox Co. Ltd. (MtGox) was the biggest cryptocurrencies exchange, responsible for nearly 70\% of bitcoin trades. After a hack resulting in the loss of approximately 850,000 bitcoin, MtGox filed for insolvency protection pursuant to Japanese law. In 2018, the unfinished insolvency liquidation proceeding was stayed, and a civil rehabilitation proceeding was initiated. With regard to the claim lodged by a customer asking for the return of cryptocurrencies (restitution), the District Court of Tokyo expressly concluded that Bitcoin could not be the object of ownership under Japanese law,\footnote{Tokyo District Court, Judgement of Civil Division 28 of 5 August 2015, Reference number 25541521, available at <https://www.law.ox.ac.uk/sites/files/oxlaw/mtgox_judgment_final.pdf> .} as it lacked some features necessary to be considered property.\footnote{See Matthias Haentjens, Tycho de Graaf and Ilya Kokorin, “The Failed Hopes of Disintermediation: Crypto-Custodian Insolvency, Legal Risks and How to Avoid Them,” (2020) 2020 Singapore Journal of Legal Studies 526.} However, it must be noted that, since that decision, Japan has amended its Payment Services Act, which now explicitly recognises a property right in cryptocurrencies.\footnote{See Mai Ishikawa, “Designing Virtual Currency Regulation in Japan: Lessons from the Mt Gox Case,” (2017) 3 Journal of Financial Regulation 125, 126; Gregory Azeff, De Caria and McGuire (n 57).}

3.2 \textit{Proprietary Issues and the Contractual Relationship between Exchanges and Users}

The legal nature of crypto assets is not the only relevant element to assess the nature of creditors’ claims in case of insolvency of exchanges. It is also important to examine the contractual relationship between exchanges and users, as it may affect the treatment of creditors’ claims.

In the \textit{Bitgrail} case,\footnote{Tribunale di Firenze – sez. Fallimentare, decision N. 18/2019, published on 21.1.2019.} the court of first instance of Florence excluded the restitution action brought by the claimant, but on grounds other than those evoked in the aforementioned \textit{MtGox} case. Indeed, the \textit{Bitgrail} court held that the relationship between the users and the cryptocurrencies exchange, in the
case at hand, was to be qualified as an “irregular deposit” pursuant to Article 1782 of the Italian Civil Code. It was not possible to ascertain whether there was a property right over the cryptocurrencies, as, after users made deposits, the Bitgrail exchange conveyed such funds to the exchange’s wallet (omnibus address). Therefore, the exchange acquired the property right over the cryptocurrencies deposited by users in the digital wallets, maintaining the private keys and keeping the funds together at an omnibus address. Thus, since it was not possible to identify a property right in cryptocurrencies, Bitgrail’s clients were deemed creditors of the exchange and could only issue a personal right to claim against the exchange, competing with other creditors for the satisfaction of their rights on the basis of payment priorities.

Regarding claims against a bankrupt exchange, the Bitgrail case demonstrates the importance of the contractual relationship between the exchange and the users. Indeed, in this case, the claim for restitution was excluded on the basis of the terms and conditions accepted by the users, as the rules (and system) provided by the exchange impeded the ability to ascribe whether Bitgrail’s clients had a proprietary interest in these cryptocurrencies.

The contractual relationship between exchanges and users is therefore important to identify what kind of interest such users have in the event of insolvency of an exchange. Before delving into this matter, however, it is important to recall how the blockchain works, and, in particular, how cryptography is employed to safeguard the transactions within a given blockchain, enabling the exchange of crypto assets. Essentially, blockchains employ a system of two different types of cryptography (asymmetric-key algorithms and hash functions). The asymmetric-key algorithms consist of two mathematically-related keys, assuring a public-key encryption. Crypto assets are kept at what are called “addresses” (a line of code), identified in a blockchain. Crypto assets are moved by the sender, using its private key, sending this transaction via the network participating in the blockchain (for example the Bitcoin network). The public key, related and connected to the private key of the sender, is the key that allows crypto assets to be received by a certain address (receiver). The network, made of nodes, validates every transaction which occurs in the given blockchain, matching the private key with the public key (linked to the private

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69 Nodes are made of any kind of device with computational power (essentially computers or servers), each connected to other nodes; they constantly exchange the latest blockchain data. Basically, nodes store, spread and preserve the blockchain data, every node containing a full copy of the transaction history of the blockchain, which constitutes the infrastructure of a blockchain.
The private key is kept secret, enabling the user to spend the crypto assets at a certain address. Put more simply, perhaps, the private key functions as a password, employed by the user to access its crypto assets. The public key, on the other hand, allows the nodes (being a peer-to-peer decentralised network) that verify the transaction to move the crypto assets from the sender address (authorised by the user employing its private key) to the receiver address.

Users are also provided with wallets; these are a technical solution that allow users to manage together the crypto assets pertaining to different addresses. There are different types of wallets that may be provided to users. Essentially, these include i) online wallets, accessible online by users; ii) desktop wallets, which require the installation of software on a computer; iii) hardware wallets, consisting of two different types: paper wallets, which require the printing of the address and private key on a piece of paper, and wallets that require a computing device to work, since the crypto assets are kept inside the device.

What is relevant for our purposes is the distinction between i) wallet service providers offering a custodian wallet service, and ii) wallet service providers that offer a non-custodial wallet. The fundamental difference lies in the fact that the former takes custody and control over the private keys of the user, while the latter does not. Among providers offering custodian wallet services, it is then possible to make a further distinction between a ‘proper custodian’ and a ‘full custodian’. In the former, the wallet provider operates merely a custody service, only performing the orders made/given by users. In the latter, the wallet provider also gains access to the cryptocurrencies of users, administering such digital assets in the interest of the users.

Therefore, exchanges that offer custodian wallets may directly dispose of the users’ cryptocurrencies.

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71 Such a public-key encryption model, along with the use of the timestamp and the sequence of blocks, solves the issue of double-spending, removing the necessity of having an intermediary guarantee the transaction. See Nikolei Kaplanov, “Nerdy Money: Bitcoin, the Private Digital Currency, and the Case Against Its Regulation,” (2012) 25 Loyola Consumer Law Review 111, 117–119. For a detailed and practical example of how a bitcoin transaction works, see Matthias Haentjens, de Graaf and Kokorin (n 66), 526–563.

72 We are talking about cryptocurrencies kept in ‘cold’ wallets, such as the Ledger wallet. Sometimes crypto assets are also subjected to exceptional security measures, and kept in a bunker; see Joon Ian Wong, “Switzerland’s bitcoin bunker” (*Quartz*, 29 November 2017) <https://qz.com/email/quartz-obsession/1130471/>.

73 For a fully detailed description of different types of wallets and how they work, see Stefano Capaccioli, “Riflessioni sulla tassazione delle criptovalute: wallet quale deposito?,” (2020) 6 L’Accertamento 62.
In the case of cryptocurrency custodian service providers, it is important to establish how to demonstrate ownership of the digital assets, as was done in the Bitgrail case. This is especially true when the exchange deposits the digital assets coming from users at addresses that commingle such assets (omnibus or pooled addresses), rather than keeping them stored at individual addresses for every user (segregated addresses). In the former hypothesis, probably easier from a technical and administrative point of view, disputes concerning ownership of a certain user over certain crypto assets may arise. That is because it is the crypto assets provider that maintains control over the private keys of these addresses, which makes it difficult to identify the property of a specific user.\footnote{On this issue, for an in-depth analysis of the contractual relationship between users and exchanges, with the analysis of Gemini and Coinbase terms and conditions, see Matthias Haentjens, de Graaf and Kokorin (n 66).}

Such an issue could be resolved if custodian service providers were prevented from keeping users’ funds together at an omnibus address. Indeed, if such digital assets were stored at segregated addresses, it would be possible to assert property rights over the digital assets deposited at such individual addresses. In addition, with the segregation model, the utilization of users’ cryptocurrencies by the service provider is also prevented, both preserving client’s funds in the event of insolvency and limiting the risk of losing cryptocurrencies in case of cyber-attacks (which happen regularly).\footnote{In 2019, alone, 12 cryptocurrency exchanges have been hacked, resulting in losses of nearly $300M. For statistics and analysis of the individual cyber-attacks, see Selfkey, “A Comprehensive List of Cryptocurrency Exchange Hacks” (Selfkey, 13 February 2020) <https://selfkey.org/list-of-cryptocurrency-exchange-hacks/>.}

This solution was recently suggested in the MiCA Proposal,\footnote{MiCA Proposal (n 39), which we have analysed in Section 2.1 of this paper.} where the EU legislator provides, at Title V, a regulatory framework for crypto assets service providers. Starting from the definitions, the crypto assets services provided include “the custody and administration of crypto-assets on behalf of third parties,”\footnote{MiCA Proposal (n 39), Article 3, para. 9, subpara. a).} where “the custody and administration of crypto-assets on behalf of third parties means safekeeping or controlling, on behalf of third parties, crypto-assets or the means of access to such crypto-assets, where applicable in the form of private cryptographic keys.”\footnote{Id. at Article 3, para. 10.}

Article 63.1 of the MiCA Proposal states that:

crypto-asset service providers that hold crypto-assets belonging to clients or the means of access to such crypto-assets shall make adequate
arrangements to safeguard the ownership rights of clients, especially in the event of the crypto-asset service provider’s insolvency, and to prevent the [provider’s] use of a client’s crypto-assets on [its] own account except with the client’s express consent.

It is indeed the express intention of the EU legislator to regulate the phenomenon we are dealing with, in order to preserve the property rights of clients over crypto assets in the event of insolvency. The definition contained in the regulation as “ownership rights” is a further indicator of the fact that digital assets should be treated as property.

With the aim of assuring the necessary separation of users’ digital assets from those of the service providers, it is established that:

crypto-asset service providers that are authorised for the custody and administration of crypto-assets on behalf of third parties shall segregate holdings on behalf of their clients from their own holdings. They shall ensure that, on the DLT, their clients’ crypto-assets are held on separate addresses from those on which their own crypto-assets are held.79

The segregation of clients’ crypto assets should, on the one hand, prevent the service provider from using such funds, thereby impeding the conclusion the court arrived at in the Bitgrail case. The Bitgrail court, indeed, rejected the restitution claim due to the fact that property over client’s assets was acquired by the exchange as a consequence of the commingling of funds. On the other hand, keeping crypto assets at separate addresses should assure the preserving of property rights of users, since the link between clients and their crypto assets would always be traceable (and the transactions registered in the blockchain are public).

In addition to the issue of segregated addresses, it is also important to establish who maintains control over the private keys of the clients, in order to have the ability to dispose of such assets. In the event that the contractual relationship between parties establishes that private keys are to be kept and administered by the crypto assets service provider only, clients should demand the segregation of such assets, in order to avoid the digital assets falling within the insolvency estate, since the custodian has the power of direct disposal of the assets.

79 Id. at Article 67, para. 7.
Where, instead, the private keys are held jointly by the crypto assets custodian and the clients (but the custodian may not act without the user’s consent), or by the clients only, there is no need to request segregation, since users will have the power to directly dispose of their digital assets, and so there would be no risk of commingling (if the said digital assets are kept at segregated, and not omnibus, addresses).

The MiCA Proposal does not seem to include a provision regarding the issue of segregation claims at the current stage. This scenario is, instead, regulated by the Debt Enforcement and Bankruptcy Act of the Swiss federal government. Article 242a provides that, where the crypto assets service providers have the keys to access clients’ assets directly and the exclusive power to dispose of such assets, the clients have the right to ask for the segregation of their assets. Otherwise, in the absence of such power, the crypto assets would flow into the insolvency estate.

As a consequence of the segregation of crypto assets, and the property rights over them, their owners could lodge a restitution claim in case of bankruptcy of the digital assets service provider and therefore ask for the return of the assets deposited. In such a hypothesis, investors would be able to get their digital assets back, if they prove ownership over them. Or at least this is what would happen in an ideal scenario, as in practice i) the investor must demonstrate ownership rights over specific digital assets; and ii) the insolvency trustee must recover such crypto assets from the bankrupt exchange, and give them back to the proprietor.

Otherwise, in the event their claims are deemed to be of a contractual/personal nature, the digital assets would be part of the insolvency estate, with the consequence of a pari-passu treatment of crypto-investors with other creditors in the proceedings. In this scenario, all the digital assets would be part of the insolvency estate, and clients would concur together, subject to payment.

80 The MiCA Proposal only contains provisions directed at safekeeping digital assets and private keys, as laid down by Article 67, para. 3 of id.: “Crypto-asset service providers that are authorised for the custody and administration of crypto-assets on behalf of third parties shall establish a custody policy with internal rules and procedures to ensure the safekeeping or the control of such crypto-assets, or the means of access to the crypto-assets, such as cryptographic keys.”


priorities, with all other creditors of the bankrupted exchange (even those who have not invested in crypto assets), resulting in drastic reduction of the value of their claim.

4 Jurisdiction and Applicable Law in Insolvency Proceedings Regarding Cryptocurrencies: Private International Law Issues with Regard to Digital Assets

Crypto assets are built on the protocol that constitutes a blockchain. The blockchain is by definition decentralised, allowing parties to enter into a relationship without the intervention of an intermediary,83 as it relies on a shared public ledger and a peer-to-peer technology. This centralisation poses some serious Private International Law (PIL) issues of jurisdiction and of applicable law. Indeed, this new disruptive technology is not easy to handle “through regulatory instruments designed for physical world objects, (state) territories and jurisdictions.”84

That said, it is essential to establish which court is competent to open an insolvency proceeding, and which law is applicable to such proceeding; this will have important consequences for the treatment of the creditors and their claims against the bankrupt.

Crypto assets are not linked to any particular territory, which means that there is no obvious connection between a blockchain and any specific legal system. The traditional approaches to such PIL issues concerning insolvency (namely the universality and territoriality principles) do not work well when applied to crypto assets. For example, the (modified) universalist method85 with the principle of COMI (“centre of main interest”),86 adopted both by the European Insolvency Regulation87 and the UNCITRAL Model Law,88 does not

85 Providing that the insolvency proceeding will be opened in the state where the debtor has its domicile, and such law should govern all the assets pertaining to such debtor irrespective of where the relevant assets are located.
86 See in-depth discussion in the next paragraph.
fit crypto assets. Indeed, such an approach focuses on the place which is the centre of the debtor’s interests, a criterion which cannot be directly applied to blockchain, as the latter is decentralised by definition. Therefore, there is no ‘centre of interest’; the transactions happening on a given blockchain are spread all around the nodes participating on the network, making it unviable to identify a physical place.

Such a statement is corroborated when dealing with decentralised autonomous organizations (DAOs), which are organizations run on the designed protocol, transparent, controlled by the members of the organizations and not influenced by a central authority, with the program rules and transactions/information registered on the blockchain. Thus, there is no central governance, no persons running the entity, and no physical properties. DAOs are essentially based on smart-contracts, which allow any participant from anywhere in the world to have an interaction with the organization like the one a person could have with an entity. The COMI principle is therefore inapplicable to DAOs, as it is not possible to establish a main interest over an organization that is completely decentralised.

DAOs demonstrate how traditional PIL methods cannot be directly applied to blockchain, as the absence of any link with a state, any physical property or identifiable stakeholder, hamper the opening of an insolvency proceeding.

The application of the lex rei sitae to Distributed Ledger Technology (DLT) also does not work well. This conflict-of-law rule establishes that rights on individual assets should be governed by the law of the place where such assets are located. Applying this criterion would lead to a substantially circular argument, since blockchain works on a distributed technology that has no link with any particular location. It could be argued that the location of crypto assets is that of the wallets; however, wallets are mere tools that enable users to access crypto assets, which are “located” on the distributed ledger. In addition, users could have multiple copies of a single wallet, making it impossible to determine which copy is relevant with regard to jurisdiction and applicable law. Crypto assets are built on a distributed ledger technology, meaning that they

89 For additional information on how DAOs work, see Primavera De Filippi and Aaron Wright, Blockchain and the Law: The Rule of Code (Harvard University Press 2018), 146–155.
Blockchain therefore requires either an adaptation of the existing PIL connecting factors, or the creation of new ones, identifying new models that would work better with blockchain and its decentralisation. To this end, the Hague Conference on Private International Law (HCCH) is tackling the issues arising from emerging technologies regarding jurisdiction and applicable law.92

Specifically, HCCH acknowledges that the traditional geographical locations related to PIL connecting factors is not relevant when speaking of DLT. It is thus necessary to develop different connecting factors, which may fit better with blockchain.93 HCCH is considering the possibility of adopting criteria that do not take into account the place where the asset is located or the place where the transaction was made, but rather the place where the participant, or the relevant authority, is located.

What is more, new connecting factors have been envisaged by HCCH in order to better encompass digital assets, involving the application of IT criteria. For example, HCCH makes reference to the ‘lex codicis’ or ‘lex digitalis’, which considers the governing law to be that of the code that was used to create the relevant IT program.94 Lex digitalis would imply that the applicable law be linked to the governing law of the code used to write the original distributed ledger program, choosing different factors, such as the place of the residence of the coder. That solution is not completely convincing, for multiple reasons, for example: i) the coder could be anonymous, or use a pseudonym, therefore making that criterion uncertain; and ii) blockchain is decentralised, so there is no central administrator, and the coder could, as was the case with Satoshi Nakamoto regarding Bitcoin, disappear, and not participate in the further development of the network. Thus, linking the applicable law to the mere creator of the code does not appear to be an appropriate solution.

91 See INSOL International (n 57), 34–36, where the authors discuss the difficulties in finding an appropriate solution to the application of lex rei sitae criterion to digital assets.


93 Id. at para. 16–18. HCCH pointed out that a significant difference may be drawn between “permissioned” and “permissionless” blockchains. In the former, participants in the network must be admitted, thereby becoming identifiable. In the latter, on the contrary, users may participate without any authorisation.

94 For a full list of new connecting factors based on modern technologies, see id. at Annex 1.
Given the difficulties of finding a feasible solution to the jurisdiction and applicable law issues, the *lex digitalis* was also advocated as a modern approach of the theory known as "contractualism." In particular, the *lex digitalis* would be useful in the case of DAOs organization, giving a practical approach to solve the issues posed by the cross-border environments in which these organizations operate. Indeed, the choice of jurisdiction and governing law in the form of the code would provide some legal certainty and predictability to the investors, otherwise being subject to less predictability when trying to ascertain the applicable law and jurisdiction.

5 Competent Court and Applicable Law in Case of Insolvency of Crypto-Assets Service Providers

In contrast to the case of crypto asset owners, the universality approach and *COMI* continue to be valid when speaking of the insolvency of crypto asset service providers (exchange and third-party wallet providers), since they are entities registered in a specific State.

The main benefit of the *COMI* principle is that of legal certainty, since insolvency proceedings are treated in a predictable and efficient way. In addition, *COMI* prevents the opening of parallel insolvency proceedings, merging the creditors’ claims into only one procedure, to the benefit of the creditors as a reduction of transaction costs, and also of the debtor’s estate, avoiding a piece-meal sale of such assets.

We have already mentioned that the principle of modified universalism is applied in the EU regulatory framework. Transnational insolvency between Member States (with the exclusion of Denmark) is indeed regulated by the Regulation (EU) 2015/848 of the European Parliament and of the Council of 20 May 2015 on insolvency proceedings (also known as *EIR* Recast).

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95 According to Robert K. Rasmussen, “A New Approach to Transnational Insolvencies,” (1997) 19 Michigan Journal of International Law 1, companies should have in their corporate charters the election for the jurisdiction applicable in case of insolvency.

96 See Kokorin (n 90).

97 *Id.*

98 Insurance undertakings, credit institutions, investment firms and other firms, institutions or undertakings covered by Directive 2001/24/EC of the European Parliament and of the Council of 4 April 2001 on the reorganisation and winding up of credit institutions, [2001] OJ L125/5 and collective investment undertakings are excluded from the application of *EIR* recast (n 87), as laid down under Recital no. 19.
internal market [which] requires that cross-border insolvency proceedings should operate efficiently and effectively.”\(^{99}\) To that end, it is provided that the EIR Recast aims to “avoid incentives for parties to transfer assets or judicial proceedings from one Member State to another, seeking to obtain a more favourable legal position to the detriment of the general body of creditors (forum shopping).”\(^{100}\)

According to the EIR Recast: i) the courts of the Member State within the territory of which is situated the centre of the debtor’s main interests (COMI) shall have jurisdiction to open insolvency proceedings; ii) courts of such Member State are competent to seize all of the debtor’s assets, regardless of their location;\(^{101}\) iii) when an insolvency proceeding is opened in a Member State, the courts of another Member State shall have jurisdiction to open a secondary insolvency proceedings against that debtor only if the debtor possesses an establishment within the territory of that other Member State, which will be limited to the assets localised in that State.\(^{102}\)

The main bankruptcy proceeding is thus opened in the Member State where the debtor has his/her COMI. The regulation specifies that “the centre of main interests shall be the place where the debtor conducts the administration of its interests on a regular basis and which is ascertainable by third parties.”\(^{103}\) The same article then imposes a series of presumptions concerning the place of COMI for legal persons, individuals exercising a professional activity and other individuals. For the purposes of this paper and regarding the insolvency of crypto asset service providers, the place of the registered office shall be presumed to be the centre of its main interests in the absence of proof to the contrary.\(^{104}\)

In addition to the regulation of jurisdiction, the principle of COMI also governs the law applicable to the bankruptcy proceedings, since Article 7 of EIR Recast establishes that the law applicable to insolvency proceedings and their effects shall be that of the Member State within the territory of which such proceedings are opened, with the exceptions laid down in that regulation.

The COMI principle laid down by EIR Recast is deemed to be a proper criterion to establish jurisdiction and applicable law, since it enables the Member State that has been affected the most by the bankruptcy to open and govern

\(^{99}\) EIR Recast (n 87), Recital no. 3.
\(^{100}\) Id. at Recital no. 5.
\(^{101}\) Id. at Recital no. 23.
\(^{102}\) Id. at Recital no 23 and Article no. 3.
\(^{103}\) Id.
\(^{104}\) Id.
the insolvency proceeding. The certainty and predictability of the COMI is extremely relevant to bankruptcy proceedings, as, by being able to predetermine the competent court and the applicable law, it makes possible an a priori assessment of the outcomes of the insolvency proceedings.

With regard to the insolvency of crypto asset service providers, it is at this point necessary to combine the regulatory framework laid down in the EIR Recast with that contained in the recent MiCA Proposal. Article 53(1) of the latter provides that crypto assets services shall only be provided by legal persons that have a registered office in a Member State of the European Union and that have been authorised as crypto asset service providers. The application for such authorisation is made to the competent authority of the Member State where the crypto asset service provider has its registered office (article 54(1). Based on those rules, insolvency proceedings concerning crypto asset service providers are opened in the Member State where the providers have their registered office (COMI presumption).

With regard to jurisdiction, there should be the same treatment of creditors’ claims independently from the qualification of such claims as credit or proprietary. Indeed, Article 6.1 of EIR Recast recognises the principle of vis attractiva, stating that:

> the courts of the Member State within the territory of which insolvency proceedings have been opened in accordance with Article 3 shall have jurisdiction for any action which derives directly from the insolvency proceedings and is closely linked with them.

Such rule posits that claims of investors against a crypto asset service provider, as they derive from insolvency proceedings and are linked to them, would be subject to the COMI principle with regard to jurisdiction. Here, the characterisation of the investors’ claims is not relevant, as they are still subject to the vis attractiva rule laid down in provision of Article 6(1) of EIR Recast.

However, the possibility of characterising some crypto assets as property leads to different treatment with regard to the law applicable to

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crypto-investors’ claims, as different conflict-of-law rules apply to crypto assets investors’ claims depending on whether they are deemed to be of a personal or proprietary nature.

If we assume that investors’ rights are qualified as rights of claims, such claims would be subject to the *lex fori*, such that the applicable law would be that of the place where the insolvency proceedings were opened. By contrast, different conflict-of-law rules apply to claims having a proprietary nature. In fact, Article 8 of *EIR* Recast contains an exception to the *lex fori* principle with regard to the rights *in rem* of creditors or third parties. The first paragraph of this article establishes that:

> the opening of insolvency proceedings shall not affect the rights *in rem* of creditors or third parties in respect of tangible or intangible, moveable or immoveable assets, both specific assets and collections of indefinite assets as a whole which change from time to time, belonging to the debtor which are situated within the territory of another Member State at the time of the opening of proceedings.

Among the actions explicitly excluded from the application of the *vis attractiva* principle (*i.e.* the law of the Member State in which the proceeding is held), there are “the right to demand assets from, and/or to require restitution by, anyone having possession or use of them contrary to the wishes of the party so entitled,” as set forth under Article 8(2)(c), of *EIR* Recast.

On this issue, the ECJ confirmed that restitution claims are independent from the insolvency proceedings, as it expressly stated that restitution “constitutes an independent claim, as it is not based on the law of the insolvency proceedings and requires neither the opening of such proceedings nor the involvement of a liquidator.”

Thus, the qualification of digital assets such as cryptocurrencies as property would imply considering creditors’ claims as proprietary in nature; such actions would then fall under the provision of Article 8(2)(c), as they would be included among “the right to demand assets from, and/or to require restitution.” Owners of digital assets would then be able to lodge a claim for the restitution of their crypto-properties without being subject to the insolvency proceedings and its rules, because such a claim would be an independent one and would not fall under the law of the insolvency proceedings.

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107 *German Graphics Graphische Maschinen GmbH v Alice van der Schee*, ECJ Case C-292/08, Judgment of the Court (First Chamber) of 10 September 2009, ECLI:EU:C:2009:544.
108 For an in-depth analysis of the topic, see Matthias Haentjens, de Graaf and Kokorin, (n 66).
With reference to the law applicable to crypto assets claims of a proprietary nature, at this stage, there is still no unanimously approved solution, since, as noted in the previous paragraph, the issue of finding connecting factors that would fit the blockchain is still subject to debate. In the EU legal framework, reference should be made to Article 67(1)(f) of the recent MiCA Proposal, which provides that the agreement between crypto asset service providers authorised for the custody and administration on behalf of third parties and clients should include the reference to the law applicable to that agreement. It is thus a contractual choice of law applicable to the agreement, stipulated by the parties. Given that claims of a proprietary nature are not included in the *vis attractiva* of the debtor’s COMI, establishing the law applicable to such claims in advance may provide some legal certainty to crypto-investors, and a reduction of the transaction costs that would arise if there were no predetermination of the law applicable to such claims.

Therefore, the treatment of creditors of an insolvent crypto asset service provider is strongly influenced by the legal qualification of the nature of the creditors’ claim. In the event that creditors are deemed to have a personal claim, it will follow that they will be creditors of the bankruptcy estate (which also includes the digital assets they deposited) for a credit right corresponding to the monetary value of their asset, subject to the bankruptcy reduction and to competition with other unsecured debt (with satisfaction depending on the payment priorities). Regarding jurisdiction and applicable law, in this case, their actions would be affected by the *vis attractiva* of the insolvency proceedings, and be fully subject to the provisions laid down under EIR Recast. As a consequence, crypto asset service providers’ clients must lodge their claims (credit) in the Member State where the insolvency proceeding was opened, and the law of that State will apply.

Conversely, should it be determined that the action is proprietary in nature, then the creditors will be able to claim the return of the crypto assets deposited, directly claiming the restitution of the digital assets they own. In this case, they will not compete with the other creditors of the bankruptcy, and will be entitled to full restitution (in the ideal case where the insolvency trustee manages to get access to the crypto asset service provider’s assets, given the technological challenges raised by blockchain). With regard to jurisdiction over such a claim, since it derives from and is linked to the insolvency proceeding, it is subject to the COMI principle established in the EIR Recast, and therefore will lie with the Member State where the bankruptcy proceeding was opened. On the other hand, there are greater uncertainties concerning the law applicable to claims qualified as being of a proprietary nature. On this point, the most
feasible solution appears to be that offered by Article 67(1)(f) of the recent MiCA Proposal, giving the parties the possibility of choosing the applicable law.

In summary, then, the various types of crypto assets demand particular attention before investing, since the buyer must evaluate carefully the legal nature of such assets (activity facilitated by the publication of the white paper by the issuer, as imposed by the MiCA Proposal for certain crypto assets), as such nature has a significant impact on regulation and protection in the event of the insolvency of the providers. Indeed, certain crypto assets, such as electronic money tokens, that give a right to claim against the crypto asset service provider as laid down in Article 44 of the MiCA Proposal, allow the investor to simply make a personal claim. As a consequence, such claims will be subject to payment priorities along with the other creditors of the provider, as well as to the COMI principle and to the lex fori with regard to jurisdiction and applicable law. In contrast, however, given that “the crypto-assets are automatically created through mining as a reward for the maintenance of the DLT or the validation of transactions” as provided by Article 4(2)(b) of the MiCA Proposal, should be considered properties. Such a qualification has different benefits in the context of insolvency proceedings of crypto-asset service providers. First of all, cryptocurrency investors have a right to ask for the restitution of their assets and not merely a right to make a claim. In addition, while jurisdiction would be subject to the COMI principle, the parties could choose the applicable law in the contract, as laid down in the MiCA Proposal, resulting in more legal certainty, to the benefit of investors and of the legal system in general.