ABSTRACT. The contribution of cryptocurrencies into the share capital of corporations represents an extremely contemporary topic that allows to understand how the traditional principles on which company law is based, such as the effectiveness of legal capital, deal with these radically new assets. In the article, it is considered whether the contribution of cryptocurrencies fulfils the legal requirements of stock contributions not only in the Italian system but also, through the comparative lens, in the major European legal systems. It should be preliminarily noted that the greatest difficulties in drawing a conclusion whether cryptocurrencies are eligible for the formation of legal capital are, on the one hand, the conversion of the value of cryptocurrencies into legal currency, also considering the volatility of the asset, and, on the other hand, the anonymity of blockchain technology that clashes with anti-money laundering laws.


\* Law School Graduate, Roma Tre University.
1. Contribution of virtual currencies into the legal capital. An introduction to the issue

Cryptocurrencies (or virtual currencies) are digital representations of value that are not issued or guaranteed by a central bank or a public authority and are used by subjects who conventionally recognize them as a means of exchange.

Recently, a definition of cryptocurrencies was introduced by the EU Directive no. 2018/843 (Article 1, no. 2.d), according to which a virtual currency is a “digital representation of value that is not issued or guaranteed by a central bank or a public authority, is not necessarily attached to a legally established currency and does not possess a legal status of currency or money, but is accepted by natural or legal persons as a means of exchange and which can be transferred, stored and traded electronically.”

The relevance of cryptocurrencies in the market economy is a steadily increasing phenomenon\(^1\) even if the contribution of these assets into the share capital of a company is still essentially unexplored.

In Italy, there have been two recent judgments issued by the Tribunal and the Court of Appeal of Brescia\(^2\) regarding the contribution of cryptocurrencies, which represent the starting point of this article.

The specific case concerns the legal possibility to contribute a certain amount of a cryptocurrency named “ONECOIN” during an onerous increase of the share capital in a limited liability company (S.r.l.). The notary requested to draft the minutes of the shareholders' meeting pointed out that it was not sufficiently endowed with the legitimacy requirements, since it was not possible to provide a sufficiently precise evaluation of the contribution of cryptocurrencies, due to the high volatility of the asset.

Both the Tribunal and the Court of Appeal confirmed the Notary’s conclusion, although based on different reasons.

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\(^1\) According to www.coinmarketcap.com, there are a total of 5,430 cryptocurrencies on the market in June 2021, however their number is constantly increasing.

The court of first instance relies on the general assimilation of cryptocurrencies to contributions in kind and thus rejected the request of the company to record the resolution in the companies’ register, stating that the cryptocurrency to be transferred could not be assimilated to an asset susceptible of an economic evaluation, as provided by Article 2646 Italian Civil Code. “ONECOIN”, as stated in the judgement, represents indeed a virtual currency in an embryonic phase (the applicant itself has highlighted that the “listing” of ONECOIN on the main platforms was still a mere a project under construction).

On the other hand, the Court of Appeal’s judgment adopts the opposite approach, by assimilating cryptocurrencies to cash as a means of exchange, similarly to what happens in the case of the contribution of a currency not having legal tender in Italy. Starting from that assumption, the Court of Appeal deducts that the absence of a trading venue, that can assign the cryptocurrency a certain value denominated in euro, makes it impossible to recognize the legitimacy of the transfer.

The critical point arising from both judgments is therefore the difficulty, if not the impossibility to precisely appraise virtual currencies. This task turns out to be particularly challenging in light of the volatility characterizing cryptocurrencies today and that will hardly disappear in the future. Indeed, the value of virtual currencies is determined in accordance with demand and offer, which are significantly volatile and lack any support from central banks, and largely depends on the degree of trust expressed by the market toward currencies which are not recognized an official payment function.

2. The legal nature of cryptocurrencies between contribution in cash and contribution in kind

There is a top choice that seems identifiable in the above-mentioned cases and from which it seems appropriate to move: when it comes to legal capital, should cryptocurrencies be assimilated to a contribution in kind or in cash? While the Tribunal seems to favour the first option, the Court of Appeal, on the other hand, reconsiders this assumption and comes to equate cryptocurrencies to cash.
The traditional legal approach\textsuperscript{3} believes that the notion of “contribution in cash” includes only the contribution in a currency having legal tender in the State, thus excluding assets in some ways similar to cash, such as bills and Treasury bonds or currencies having legal tender in a State different from the State of incorporation of the company.

Furthermore, this restrictive notion appears to be functional to the discipline that the law reserves for the contribution in cash, for which no expert appraisal is needed, it being obviously superfluous since cash itself measures the value of the contribution. Furthermore, the possibility of paying, at the time of subscription, only 25% of the value of the contribution finds its rationale in the fact that a currency having legal tender is the fungible asset \textit{par excellence} and therefore it will be always available on the market (Articles 2342, para. 2, and 2464, para. 4, of the Italian Civil Code).

On the other hand, it is clear that the contribution of cryptocurrencies in a company’s legal capital cannot prescind from a conversion of its virtual value into a value denominated in a measurement unit with legal tender. Therefore, according to the conventional wisdom just outlined (that was accepted by the court of first instance), the contribution of a cryptocurrency must be excluded from the notion of contribution in cash and, if anything, must be assessed according to the regime of contributions in kind.

The opposite argument (i.e. contribution of a cryptocurrency as cash contribution), expressed by the Court of Appeal, includes virtual currency in the notion of cash by observing that it performs the traditional functions that economic theory attributes to money: a medium of exchange, a unit of account and a store of value. In other words, according to this thesis, the qualification of an entity as cash depends on the function it performs on the market and not on whether it is a legal tender currency.

This latter thesis does not convince legal scholars:\textsuperscript{4} in particular, the most


perplexing statement is the consideration of digital currency as a unit of account.

It should be noted, however, that legal tender currency fulfils that function as a result of the determination of its nature as a unit of account by a central authority, ensuring the stability of that value by being charged with monetary policy choices. That stability is completely unknown to cryptocurrencies, whose value is by definition volatile, since it depends exclusively on market dynamics and thus on the amount of supply and demand on the reference platform. Therefore, the decentralization of a system such as the blockchain, which does not provide and does not allow any external stabilizing intervention – and is, somehow philosophically based exactly on the denial of States’ and central banks’ role –, excludes that cryptocurrencies may represent a unit of measurement on the market.

Therefore, cryptocurrencies do not fall within the notion of cash conventionally adopted to date. Moreover, assuming that they represent an *aliquid novi* intended to broaden the notion of money, it should be noted that recently both domestic\(^5\) and European\(^6\) legislatures have taken steps to include cryptocurrencies within the notion of means of payment, thus differentiating it from legal tender currency.

This is also clear from a case decided by the European Court of Justice\(^7\) in 2015, stating that transactions involving non-traditional currencies, “in so far as those currencies have been accepted by the parties to a transaction as an alternative to legal tender and have no purpose other than to be a means of payment, are financial transactions.”

Lastly, a resolution of the Italian tax agency, released in 2016, stated that cryptocurrencies represent a decentralized payment system, using a network of peer-to-peer subjects, independent from any specific regulatory discipline or a central authority governing its stability.\(^8\)

\(^5\) Art. 12 qq) Legislative Decree no. 90/2017 of 25 May 2017, defines virtual currency as a means of exchange for the purchase of goods and services and transferred, archived and negotiated electronically.

\(^6\) Art. 1 d) of UE Directive no. 2018/843 of 30 May 2018, defines virtual currency as a means of exchange that does not have the legal status of currency or money.

\(^7\) European Court of Justice, C-264/14, 22 October 2015.

\(^8\) Agenzia delle Entrate, resolution no. 72/E 2016 at <https://www.agenziaentrate.gov.it/portale/documents/
Such evidences confirm that not only scholars, but also legislature and regulators qualify virtual currencies within the category of payment systems, thus differentiating them from legal currencies.

Furthermore, they offer the opportunity to examine if the same conclusions about the qualification of virtual currencies should be extended also to a transnational dimension.

Thus, it is fundamental to analyse, above all, the impact that European law has had on company law. The aim of harmonizing member States’ laws on companies is pursued by the European legal system through the so-called “double track” criterion, which means that the coordination of national provisions applies only to public limited companies and not limited liability companies. The reasons behind the choice can be summarized in that the activities of public limited companies predominate in the economy of member States and frequently extend beyond their national boundaries.

Directive no. 2017/1132/EU of the European Parliament and of the Council\(^9\) confirms the abovementioned “double track” criterion, thus regulating capital formation, maintenance and alteration only of public limited companies (see Article 44 (1) of the Directive). Therefore, a number of rules of minimum harmonization are shared by public limited companies throughout Europe, such as Société anonyme (SA) in France, Aktiengesellschaft (AG) in Germany, Sociedad Anónima (SA) in Spain and società per azioni (S.p.A.) in Italy.

Among those rules, the directive provides that, for any consideration other than in cash, a report shall be provided by one or more independent experts appointed by an administrative or a judicial authority. The experts’ report must contain a description of the assets comprising the consideration as well as the appraisal methods employed and, lastly, must state that the values set by the application of those methods correspond at least to the nominal value of the shares to be issued for them.

Considering that it is always needed to convert the value of virtual currencies

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into euros through an expert estimate, we may say that the contribution of cryptocurrencies in European public limited companies could only be subject, if anything, to the rules of contributions in kind.

The issue is more complex for limited liability companies, as there is no such a harmonized regulation from the European legislature.

The Italian limited liability company (S.r.l.), under this aspect, is similar to the public limited one (S.p.A.) since it requires, for any contribution in kind, an expert appraisal, even if with less formalities than the S.p.A. For example, the review of the appraisal by the board of directors is provided only for the S.p.A., in order to assure a bilateral acceptance of the value from both the expert and the company. Therefore, there is no doubt that contributing cryptocurrencies also in the legal capital of a S.r.l. should be subject to the procedure of contributions in kind.

On the other hand, in the limited liability companies of the most relevant countries in Europe, the expert appraisal is not always mandatory, as limited liability companies are not covered by EU harmonized company law.

In the French limited liability company (Société à responsabilité limitée, SARL), which represents the company type which is the most similar to the Italian one in this respect, an evaluation is requested of each contribution in kind through a report drawn up by an auditor. However, and this marks the difference with the Italian legal system, shareholders may decide, under certain conditions, to determine the value by themselves without the intervention of an external auditor (Article L-223-9 Commerce Code).  

In Spain, the Real Decreto Legislativo no. 1/2010\(^{11}\) provides, as a default regime, that contributions in kind must be described in the articles of incorporation of a limited liability company along with their evaluation in euros (Art. 63), thus without considering an expert appraisal as mandatory. However, it is also established that shareholders may

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\(^{10}\) Shareholders may decide by unanimous resolution that the involvement of an auditor shall not be mandatory if no contribution in kind exceeds a value of 7,500 euros and if the total value of all the contributions in kind not subject to appraisal by an auditor does not exceed half of the capital. If there is no auditor for the evaluation proceeding, the members shall be jointly liable with respect to third parties for the value attributed to contributions in kind (Article L 223-9 Commerce Code).

\(^{11}\) Real Decreto Legislativo no. 1/2010 of 2 July 2010.
delegate this evaluation to experts, in order to avoid being exposed to liability towards the company and third parties for the effectiveness of the attributed value (Art. 76).

A different discipline from that of the Italian S.r.l. in this respect is that of the German limited liability company (Gesellschaft mit beschränkter Haftung, GmbH). The Act on Limited Liability Companies (part 1, section 5)\(^{12}\) provides that, if contributions in kind are to be made, shareholders shall set forth the evaluation of the asset in a report. No reference is made in the Act to the intervention of an expert to estimate the value, even if that is a solution that shareholders can certainly opt for.

Given the above, it is to say that in limited liability companies, even if the expert appraisal is not always mandatory, the contribution of virtual currencies (if allowed) must follow the procedure established for contributions in kind, since it is impossible to prescind from a translation of their value in euros. Anyway, it’s clear that relying on an expert appraisal is particularly recommended for the contribution of cryptocurrencies considering both the difficulties to establish a value for such an asset and the shareholders’ liability regime about the evaluation of the contribution.

**3. Evaluation of the contribution in cryptocurrencies between volatility issues and the absence of a regulated market**

Assuming that contribution of cryptocurrencies should be included among contributions in kind, it is now necessary to understand if they fulfil the legal requirements for those assets.

The starting point of the analysis is the second paragraph of Article 2464 of the Italian Civil Code, according to which all assets susceptible of an economic evaluation can be conveyed to a S.r.l., thus opening the door to the contributions of virtual assets, including the cryptocurrencies.

No like provision is set forth in the regime of S.p.A. and Article 2342 of the Italian Civil Code merely says that it is possible to have contributions in kind, without further clarification but the express exclusion of the previsio
(Article 2342, para. 5). Nonetheless, for all public limited companies it is the European harmonized law (Article 46 of Directive no. 2017/1132/EU\textsuperscript{13}) to provide that subscribed legal capital may be formed only of “assets capable of economic assessment.” We can assume that the Italian legislature did not consider the insertion of this definition necessary within the S.p.A. discipline, since it is a principle already inherent in the reference to contributions in kind and in their appraisal procedure in the Italian Civil Code.\textsuperscript{14}

The same reference is not expressly included in all the aforementioned domestic company laws in Europe.\textsuperscript{15} However, we can assume it from the fact that those disciplines require an economic evaluation for any contribution in kind.

Therefore, we can conclude that the conferral requirement for contributions in kind in general is that the asset should be susceptible of an economic evaluation. Besides that, some domestic laws, such as the Italian one for the S.p.A., exclude some contributions in kind from those allowed.

In the first place, therefore, the contribution must be an “asset element,” which means a quid allowing to account a positive value in the company’s assets.

It does not seem that this first requirement represents an obstacle for cryptocurrencies, since the contribution of virtual currency surely determines that positive accounting. Cryptocurrencies are, in fact, attributed by some scholars\textsuperscript{16} to the category of legal goods pursuant to Article 810 of the Italian Civil Code and by others are considered to be debt instruments.\textsuperscript{17}

\textsuperscript{13} Directive no. 2017/1132/EU of 4 June 2017.
\textsuperscript{14} A complete analysis of the notion of contribution within the Italian S.p.A. is offered in the commentary of Article 2342 Italian Civil Code by V. De Stasio and G. Nuzzo, in P. Abbadessa and G.B. Portale (eds.), \textit{Le società per azioni}, volume 1, Milano, Giuffrè, 2016, pp. 344 ff.
\textsuperscript{15} Only the \textit{Real Decreto Legislativo} no. 1/2010, bearing the company law in Spain, provided that assets or patrimonial rights must be susceptible of economic evaluation (Article 58).
\textsuperscript{17} M. Miccoli, \textit{Bitcoin fra bolla speculativa e controllo antiriciclaggio}, in Notariato, 2018, pp. 151 ff., remarks that, since the purchase of cryptocurrencies takes place through an annotation of an information register, it can well be configured as a receivable.
Secondly, the contribution must be “susceptible of economic evaluation.” This is the most complicated requirement to deal with, as is clear from the two judgments analysed above, where the main issue is indeed the impossibility to precisely appraise virtual currencies.

The abovementioned term, in spite of its apparent plainness, is very elusive and problematic since it underlines the balance between two opposing interests. On the one hand, that of the company to acquire the widest possible variety of contributions useful for the company’s business and, on the other hand, that of creditors to limit the contribution only to assets that are actually capable of creating a guarantee for the repayment of the company’s obligations.

The prevailing theory\(^\text{18}\) tries to reconcile those two interests by considering that the “susceptibility of economic evaluation” occurs if it is possible to attribute the asset a value that is as objective as possible. Therefore, in order to appraise the transferability of a given asset, it is necessary to verify whether or not that asset has a value on the market (the so-called “exchange criterion”).

It is clear that the exchange criterion encounters some difficulties when it comes to cryptocurrencies, as an official regulated market for them does not exist, while there are only several exchange platforms. This assumption contributes to the volatility of the price of cryptocurrencies, which recommend adopting a weighted average of the prices recorded on those platforms in the appraisal.\(^\text{19}\)

The affirmed volatility of the value of cryptocurrencies is certainly not a valid

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\(^{19}\) For example, one of the most popular cryptocurrency market information sites (www.coinmarketcap.com) states that: «the price of any cryptocurrency is a volume weighted average of market pair prices for the cryptocurrency. The higher percentage of volume contributed from the pair, the more influence it has on the average price. The rationale for using a weighted average is because in general, markets with higher volume have higher liquidity and are less prone to price fluctuations. Some prices are manually excluded from the average, denoted by an asterisk (*) on the markets tab if the price does not seem indicative of a free market price; for example, when an exchange disables withdrawals or deposits, or regulatory conditions make it impossible for anyone else outside of a certain geographical region to buy coins. Some prices are also automatically excluded when our algorithms detect that the reported price is a significant outlier when compared to other market pairs for the same cryptocurrency, denoted by three asterisks (**) on the markets tab.»
reason, by itself, to exclude their transferability, as the contribution of assets with an equally unstable value, such as credits, is allowed. At the same time, it is undeniable that the absence of a reference market reflects on the expert’s choice of alternative and less objective appraisal criteria.

There is no doubt that these criteria strongly depend on the cryptocurrency taken into consideration in the specific case and in particular on the volume of exchanges involving that currency on the market.

The notoriousness of a currency is then fundamental in a system based essentially on trust: the more solid and popular the virtual currency is, the more users will take part in its system and contribute to increase its value. The numerical data of the users are, in fact, a fundamental parameter to identify the value of cryptocurrencies as their evaluation is nothing more than a result of the combination of demand and offer.

In this sense, it is clear that cryptocurrencies with a high market cap and therefore a large level of diffusion are more easily convertible into “real” currency. A different conclusion must be reached, however, in the case of cryptocurrencies that are not very widespread and adopted, the conversion of which is therefore made uncertain, if not, even impossible.

The Tribunal of Brescia, on closer inspection, does not deny the possibility of contributing cryptocurrencies, but rather distinguishes between “genus” (cryptocurrencies, in general) and “species” (that cryptocurrency, in particular). What indeed is denied is only the transferability of cryptocurrencies whose evaluation system is characterized by a high level of self-reference.

4. The anonymity of blockchain technology and the traceability of payments

Some legal authors consider that the existence of the elements requested by Article 2464 Italian Civil Code only sanctions the abstract transferability of a specific

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20 G. ZANARONE, Della società a responsabilità limitata, in P. Schlesinger (ed.), Il Codice civile. Commentario, Milano, Giuffré, 2010, pp. 293 ff.; OLIVIERI, Investimenti e finanziamenti nelle società di capitali, Torino, Giappichelli, 2008, pp. 56 ff., where in particular it is noted that an asset is not susceptible of being contributed, if it cannot be materially released according to its own characteristics.
asset, not the actual possibility to transfer it by converting it into euros. According to this theory, in order to affirm its actual transferability, it would be needed to verify that the transferor has fulfilled all the formalities needed to make the asset available to the company, not only legally but also practically.

In the case of a transfer of cryptocurrencies, it is not possible to guarantee with absolute certainty that the cryptocurrency is in the legal ownership and material availability of the company, since the only thing that can be proved is the cryptocurrency transfer between two anonymous virtual wallets through the production of a so-called transaction password. On the contrary, there is no way to ascertain whether or not the company is the holder of the virtual portfolio, which is qualified as the beneficiary of the payment.

Therefore, even if the cryptocurrency operations are fully traced from an objective point of view, they cannot be from a subjective one. In fact, there is an IT register, public and immutable, in which there is an indelible trace of the transfer from a public key to another public key. However, the holders of the private keys associated with the public keys involved in the transfer, are unknown.

It should be noted, in fact, that the anonymity of the actual parties involved in the transaction does not derive from a form of protection (in some way reversible or suspended) of the data, but from a feature that is intrinsic to the technology adopted.

In 2018, the Italian National Council of Notaries\(^{21}\) stated therefore that transactions in cryptocurrencies are only “apparent transactions,” since both parties involved declare they are holders of their respective accounts, without however providing any proof of such statements.

This sort of anonymity surrounding cryptocurrencies represents an obstacle to the aim pursued with the anti-money laundering legislation, whose aim is that of making financial transactions clear and transparent, therefore introducing an additional issue in the debate about the contribution of the cryptocurrencies into legal capital.

The commitment in the field of anti-money laundering came not only from

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the Italian legislature but also from the European one. The latest effort in this area consist of Directive no. 2018/843 EU of May 2018, also known as the V Anti-Money Laundering Directive. The directive considers the anonymity of virtual currencies particularly risky both for a possible use of that assets by terrorist groups and for their potential misuse for other criminal purposes.

For this reason, the European legislature subjects all the providers of exchange services between virtual currencies and legal tender currencies to the AML/CFT obligations (Anti-Money Laundering/Combating the Financing of Terrorism), thus they are committed to comply with the customer identification requirements. The exchanges that enable the movement of virtual money thus have to identify who hide behind the accounts and also have the burden to report any suspicious manoeuvres to the appropriate authorities.

It is to say that Italy has anticipated the introduction of this commitment with the implementation of the IV Anti-Money Laundering Directive through Legislative Decree of 25 May 2017, no. 90\textsuperscript{22}. Since then, for the activity of virtual currency exchange it is mandatory in Italy to register in a special section of the currency exchange register kept by OAM (\textit{Organismo Agenti e Mediatori})\textsuperscript{23} as required by Article 128-undecies of Legislative Decree no. 385/1993 (TUB).

Despite subjecting exchange providers to these obligations, the V Anti-Money Laundering Directive itself specifies that their role does not entirely address the issue of anonymity attached to virtual currency transactions. It must be considered that, in fact, a large part of the virtual currency environment will remain anonymous because users mostly transact without such providers.

To combat the risks related to the anonymity, the Directive adds the suggestion that the national Financial Intelligence Units (FIUs) of each country should be able to obtain information allowing them to associate virtual currencies to the identity of their owner, also imagining the possibility that users can submit a self-declaration to the designated authorities.

\textsuperscript{22} Legislative Decree no. 90/2017 of 25 May 2017.

\textsuperscript{23} Article 8, para. 1, Legislative Decree no. 90/2017.
According to Article 65 of the Directive, by January 2022 and every three years thereafter, the Commission draws up a report on the implementation of the Directive and submits it to the European Parliament and the Council. The first report, to be published by 11 January 2022, must be accompanied, if necessary, by appropriate legislative proposals also with regard to (i) the aforementioned conferral of powers to the FIUs to establish a central database in which user identities and wallet addresses can be registered and (ii) the definition of a self-declaration form for users of virtual currencies.

Even though European legislature has directly addressed the problem on anonymity, this surely cannot be considered solved at the moment. This issue, which continues to be the biggest obstacle to the transfer of cryptocurrencies to the legal capital of companies, may perhaps be reconsidered in the light of what is currently only a proposal in the European Directive and that is a centralized register allowing to associate the holders of the private keys with the public keys involved in the transfer.

5. Conclusions

When it comes to debating what kinds of assets can be contributed to the legal capital of a company under Italian law, the theoretical starting point is that the transfer of cryptocurrencies is allowed both in a public limited company and in a limited liability company. Only the first are indeed subject to the EU process of harmonization of domestic company laws in the field of capital formation and effectiveness. Therefore, while a uniform answer can be attempted for companies limited by shares – although a certain degree of freedom is left to the member States in the EU – no uniform or even simply harmonized answer can be found when the issue is the contribution of “special” assets to the legal capital of limited liability companies. In particular, the legitimacy of such a contribution should be reviewed in relation to the individual case, according to the criteria provided for the evaluation of the contribution in kind.

It should be noted, however, that the impossibility to verify the coincidence between the owner of the cryptocurrency and the person who actually enters into the subscription agreement with the company, gives rise to non-negligible criticalities even in those hypotheses in which the asset was deemed to be conferrable in light of the requirements set out in Article 2464 of the Italian Civil Code.
The fact that European legislature has begun to tackle the problem of anonymity of virtual currencies is a major step towards homologating them to real currencies, radically changing the way in which these coins are considered in the eyes of those who consider them an attempt to evade tax duties or juggle illegitimate financing.

At present, we may say that the transfer of cryptocurrencies is actually possible only if the capital contribution occurs with the “exchange services” subject to the abovementioned parts’ identification requirements. Only in this way, the transaction loses its anonymity and is fully compliant with anti-money laundering legislation.