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On the term "virtual currency"

Two years ago the terms crypto currency and virtual currency were on everyone's lips. Today people talk about digital assets and want to express that they are not currencies and that the technology cannot only be used as an medium of exchange. With Directive 2018/843/EU amending the 4th Anti-Money Laundering Directive, the European legislator has for the first time created a legal definition for the concept of virtual currency which, on closer inspection, proves to be quite revealing. In Austria, too, the legal definition is now anchored in national law. This article sheds light on the facets of the legal definition and shows that it is possible to gain new insights for legal practitioners.

1. Introduction

While two years ago the terms crypto currency or virtual currency were on everyone's lips, Bitcoin & Co has in the meantime established a different word. Today, people talk about **digital assets** and want to express the fact that these are not currencies and that blockchain technology can not only be used to create means of exchange, but also to manage **means of payment** or as a basis for **securities issues**.[1]

The deflationary use of the term 'virtual currency' is to be welcomed, as for the first time it now offers the opportunity to give it sharp contours. This endeavor is supported by the European legislator, which created its own **legal definition** of virtual currency for the first time with Directive 2018/843/EU **amending the 4th Anti-Money Laundering Directive**.[2] The dimensions of the definition under European and national constitutional law should be pointed out once again here.[3]

Article 3 no. 18 of the 5th Anti-Money Laundering Directive defines the term virtual currency. Accordingly, 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".[4]

The definition has already been implemented in Austria.[5] Specifically, a new no. 21 was added to Article 2 FM-GwG. The Austrian legislator adopted the legal definition under European law in the same wording. From 10 January 2020[6], i.e., at the exact end of the implementation period of the Directive, the definition quoted above will also be part of national Austrian law.

For legal practitioners, the new legal definition has a clarifying function within the framework of the FM-GwG. In conjunction with Article 2 no. 22 FM-GwG, which determines who is a virtual currency service provider, a new group of obliged parties is created. Virtual currency service providers are those service providers who offer one or more of the following services: (i) services to safeguard private cryptographic keys on behalf of its customers, to hold, store and transfer virtual currencies (custodian wallet provider; Article 2 no. 22 point a FM-GwG); (ii) exchange between virtual currencies and fiat currencies (no. 22 point b); exchange between one or more forms of virtual currencies (no. 22 point c); transfer of virtual currencies (no. 22 point d); participation in and provision of financial services related to an issuer's offer and sale of virtual currencies (no. 22 point e). Only points a) and b) are based on the provisions of the 5th Anti-Money Laundering

1 See *Jilch*, Depot in der Hosentasche: FMA bewilligt Blockchain-Emission, DiePresse, 6. 12. 2018.

2 Directive 2015/849/EU.

3 *Piska*, Kryptowährungen und ihr Rechtscharakter – eine Suche im Bermuda-Dreieck, ecolex 2017, 632 ff; *Piska/Völkel*, Kryptowährungen reloaded – auf dem Weg aus dem Bermuda-Dreieck, ecolex 2017, 816.

4 In the German version: *„virtuelle Währungen‘ sind eine digitale Darstellung eines Werts, die von keiner Zentralbank oder öffentlichen Stelle emittiert wurde oder garantiert wird und nicht zwangsläufig an eine gesetzlich festgelegte Währung angebunden ist und die nicht den gesetzlichen Status einer Währung oder von Geld besitzt, aber von natürlichen oder juristischen Personen als Tauschmittel akzeptiert wird und die auf elektronischem Wege übertragen, gespeichert und gehandelt werden kann*".

5 Implementation took place in the course of the EU Financial Adaptation Act 2019; at the time of completion of this publication, the text of the Act adopted by the National Council was available; see 644 dB XXVI GP.

6 See Article 43 para. 4 FM-GwG.

Directive, points c) to e) are supplements of the Austrian legislator.

Virtual currency service providers who intend to offer their activities in Austria or from within Austria must register with the FMA in advance (Article 32a FM-GwG). The FMA may refuse registration if, on the basis of the information and documents to be provided during the registration process, it has doubts as to whether the requirements of the FM-GwG are met or if it has doubts as to the personal reliability of either the service provider or its managing director or owner (Article 32a para. 2 FM-GwG). The FMA may also revoke registrations once made (Article 31 para. 3 point 3 FM-GwG) and prohibit the activities of non-registered service providers (Article 32b FM-GwG). Anyone offering services relating to virtual currencies without registration commits an administrative offence with a penalty of up to € 200,000 (Article 34 para. 4 FM-GwG).

In view of these obligations and legal consequences, the contours of the legal definition are therefore of great importance. This article deals with the new legal definition of the term virtual currency and shows how it can be distinguished from other terms such as means of payment, payment instruments or electronic money.

2. Technology-neutral definition

The authors of the legal definition under Union law primarily had **blockchain technology** in mind – and **Bitcoin** as an archetypal form.[7] Against this background, it is remarkable that the definition does not contain any elements tailored to the use of a particular technology. On the contrary, the legal definition is strikingly **technology neutral**.

In business, Bitcoin and similar digital assets are trusted because of certain characteristics they have. However, these characteristics all originate in the blockchain technology used. This technology ensures that (i) all transactions performed are **recorded**, (ii) **transactions once performed are not subsequently modifiable**, and (iii) the **knowledge of a private key** is required for retransmission. It is also these three characteristics that give Bitcoin and similar incorporeal objects a **special position** in Austrian private law.[8]

It is precisely because of these characteristics that virtual currencies are accepted as a means of exchange at all. However, the European legislator has not taken them into account in the legal definition. This is only apparently a contradiction. Instead of defining features that ensure the acceptance of the virtual currency, the legislator demands that it be "*accepted by natural or legal persons as a means of exchange*". Why they are accepted as a means of exchange is not what matters. The element of **fact of acceptance** as a medium of exchange is discussed in detail below.[9] It is of **central importance**.

A first examination shows that the legal definition comprises six elements. First, virtual currencies must be a "*digital representation of value*". Second, this digital representation has not been "*issued or guaranteed by a central bank or a public authority*". Third, it is "*not necessarily attached to a legally established currency*" and, fourth, it "*does not possess a legal status of currency or money*". Fifth, however, it is "*accepted by natural or legal persons as a means of exchange*" and, sixth, can "*transferred, stored and traded electronically*".

The meaning of the individual elements is examined in more detail below. The fact that European lawmakers regard **Bitcoin** as the **archetypal example of virtual currencies** and that Bitcoin therefore (at least at present) fulfils **all elements** of the legal definition can also serve as an anchor point for interpretation.

3. Digital representation of value

To be considered a virtual currency, it must first be a "digital representation of value". Both the meaning of the phrase "digital representation" and the meaning of the word "value" are open to closer examination.

3.1. Digital representation ...

7 See the impact assessment of the Commission on the proposal of the 5th Anti-Money Laundering Directive 450/2016/COM, in which Bitcoin is cited several times as the most prominent example.

8 *Völkel*, Privatrechtliche Einordnung virtueller Währungen, ÖBA 2017, 385; *Fleißner*, Eigentum an unkörperlichen Sachen am Beispiel von Bitcoins, ÖJZ 2018, 437, die einen Eigentumserwerb im engeren Sinn vertritt; but see *Vonkilch/Knoll*, Bitcoins und das Sachenrecht des ABGB, JBl 2019, 139, die einen Eigentumserwerb (nur) im weiteren Sinn bejahen.

9 See point 7.

Since it must be a digital representation, it can be inferred in the negative that purely **analog representations** are **not covered** by the legal definition. For example, since monopoly money lacks a digital representation, it cannot be a virtual currency, even if it fulfils all other elements of the definition. A more practical example would be coin vouchers without digital records of their issue. In practice, of course, such systems hardly occur at all. Even physical vouchers are, as a rule, based on a digital representation, for example in the form of a database in which issue and redemption are precisely recorded.

It may also be questioned whether the requirement for digital representation influences the classification of virtual currencies such as Bitcoin if their public address and associated private keys are stored on a **physical wallet**.[10] This theory is to be rejected, since in such cases at least one **digital representation** (namely on the blockchain) still exists. The non-digital representation in the form of a physical wallet is merely supplementary. Such additional non-digital representations do not harm the qualification as virtual currency as long as a digital representation forms the basis.

3.2. ... of value

If one only considers the German version of the Directive, the digital representation of value could mean a **simple numerical value**.[11] The English word order of value (in contrast to a value) speaks against this interpretation. Instead, it suggests that it is based on a **certain value** or **market value**, i.e. a digital representation **of value**. This interpretation is also compatible with the German version, which is why it should be preferred. Digital assets must therefore have a certain value in order to be considered virtual currencies.

Digital assets that are not of value are therefore not considered virtual currencies. A whole series of further questions could be examined in detail, such as what value it should actually depend on and how this value can be determined. These questions may be relevant in detail, but fundamental new insights can no longer be gained from their research. It follows from a second element, namely the **acceptance as a means of exchange** discussed below, that digital assets must have a certain value in order to be regarded as virtual currencies.[12]

3.3. Central point of contact

Correctly, then, as in the English version of the Directive, we are talking about a digital representation of value. The digital representation of value is the central connecting point. The other elements of the legal definition merely describe supplementary properties that a digital representation must have in order to be considered a virtual currency.

But what is such a digital representation in practice? The European legislator essentially had blockchain technology and Bitcoin as archetypal embodiments of virtual currencies in mind. For the European legislator, Bitcoin is therefore in any case a digital representation of value which also has the other properties of a virtual currency. In general terms, it can therefore be stated with regard to blockchain technology that the respective coins or tokens[13] as digital representations form the starting point for checking whether they are virtual currency. Thus, the term digital representation largely coincides with the term digital asset as it is commonly used today. Whether a digital asset is a virtual currency is thus determined by the other elements of the legal definition.

4. Not issued or guaranteed by a central bank or a public authority

The second element of the legal definition is described in negative terms. Virtual currencies are not issued or guaranteed by a central bank or a public authority. Thus, there is no virtual currency if the digital asset is issued or guaranteed by a central bank or a public authority.

4.1. Issued or guaranteed

The phrase "issued or guaranteed" means that a particular entity (central bank or public authority) performs one or both of these functions.

10 On physical wallets see *Völkel*, ÖBA 2017, 385; *Fleißner*, ÖJZ 2018, 437; *Vonkilch/Knoll*, JBl 2019, 139 ff.

11 This applies also for the French version: *„représentations numériques d'une valeur“*.

12 See point 7.

13 On the term tokens see *Rericha/Nicholas*, Initial Coin Offering: Ein Fall für die FMA? ecolex 2017, 1116; *Völkel*, ZTR 2017, 103 ff; *Paulmayer*, Initial Coin Offerings (ICOs) und Initial Token Offerings (ITOs) als prospektpflichtiges Angebot nach KMG? ZFR 2017, 259.

On the surface, **issue** simply means issue. However, the term conceals subtleties that need to be taken into account. For example, the term covers only the **first issue**, but no subsequent resale. Emission means the first placing on the market. Furthermore, the term "issue" is only used if the issue is made by an issuer, i.e. if the issue is made by a specific person.[14] Although other persons may participate in an issue, there can only be one issuer. This understanding of the issue concept can also be applied to digital assets based on blockchain technology. The **issuer** is the first to have **digital assets** by knowing the **private key**.

The **guarantee** in general usage is to **take responsibility** for one's own or another's promise. In order for a person to be able to give a guarantee, such a promise must exist beforehand according to this understanding. In the most possible sense of the word, the assumption of a new promise of one's own could be subsumed under Guarantees. It is questionable what exactly the European legislator wanted to express with it, because grammatically the element of fact refers to the guarantee of the digital asset and not to promises in connection with digital assets. The exact meaning seems unclear here.

Despite this ambiguity, the fact is revealing. The restriction to digital assets not issued by central banks or public bodies proves that the European legislator recognized the possibility of a **central issue**. However, there is no indication in the legal definition that only **digital assets generated decentrally** such as Bitcoin should be covered by the definition. From this, it can be concluded that decentralized generation, such as Bitcoin, is not an essential feature of virtual currencies. For example, centrally issued coins or tokens can also be virtual currencies in the sense of legal definition if they fulfil all the elements of the definition.[15]

4.2. Central banks

Central banks are the institutions responsible for the monetary policy of a particular currency area or state. For example, these are the European Central Bank (ECB) for the € or the Bank of England for the Pound Sterling. Central banks **draw money**, among other things, by purchasing eligible financial instruments from banks or companies participating in the system. There is no need to produce banknotes or coins in this process. Liabilities are recorded (if not exclusively) at least in digital form. Because of the technology-neutral link, the **book money produced by central banks** unconditionally fulfils the first element of the legal definition (digital representation of value) and probably also the other elements, too. Thus, book money issued by central banks would probably be regarded as a virtual currency within the meaning of legal definition – a result that European lawmakers would probably not want. The exclusion of such institutions was therefore absolutely necessary.

4.3. Public authorities

The Directive does not provide any information on what exactly distinguishes a **public authority**. For interpretation, the CRR can be used, which contains a legal definition of the term. Article 4(8) CRR defines a public sector body as "*a non-commercial administrative body responsible to central governments, regional governments or local authorities, or to authorities that exercise the same responsibilities as regional governments and local authorities, or a non-commercial undertaking that is owned by or set up and sponsored by central governments, regional governments or local authorities, and that has explicit guarantee arrangements, and may include self-administered bodies governed by law that are under public supervision*".

The example of Venezuela shows that the exception of the issue or guarantee by central banks or public bodies can in practice be significant. The state, shaken by crises, launched its own crypto currency under the name Petro in 2018.[16] The Petro as a crypto currency issued or guaranteed by a central bank or at least public authority would not be recorded as a virtual currency within the meaning of legal definition.

5. Possibility of attachment to a legally established currency

14 Assisting with the issue of third parties can be described as a third-party issue; *Kalss/Oppitz/Zollner*, Kapitalmarktrecht[2] § 34 Rz 1.

15 See also in particular the requirement of acceptance as a means of exchange.

16 *Ellsworth*, Venezuela: „Superman"-Kryptowährung Petro wird zum Superflop, DiePresse, 7. 9. 2018.

According to the third element of the legal definition, virtual currencies are not necessarily **attached to a legally established currency**. Obviously, virtual currencies do not necessarily have to be attached to a legally established currency, but such a tying does not harm the qualification as a virtual currency.

Furthermore, it is noticeable that the legal definition does not contain any restriction with regard to the person or institution making such an attachment. In contrast to the issue and guarantee (after the second element of the definition), this element does not mean that the link, for example, is made by a central bank or public body. This suggests that an **attachment** of a digital asset to a legally defined currency can **in principle be made by any person** without a digital asset losing its quality as a virtual currency.

Of course, it is questionable what the legislator exactly means by attachment. Attachment usually means **linking** or fixing. Linking to a legal currency will therefore be a mechanism that links the value of the digital asset to a legal currency. The exact design of this mechanism is not relevant according to the legal definition. It is therefore necessary to think of all types of private law arrangements, but also of monetary policy measures. The scope of this element could, for example, be the issue of coins or tokens, which can always be bought and sold at a fixed price[17] through a certain legal or economic arrangement on the market.

6. Lack of legal status of currency or money

Fourth, digital assets do not possess a **legal status of a currency or money**. Conversely, this means that granting the status of currency or money leads to a loss of the adjective "virtual". Such digital assets would therefore no longer be virtual currencies.

Interesting is the question of what applies when a state decides to grant a classic virtual currency such as Bitcoin the status of a currency or money by law. Would this result in Bitcoin no longer being regarded as a virtual currency? This may not be the case in all cases. The defining characteristic will probably relate exclusively to the legal position that the **EU** or its Member States assign to certain digital assets.

7. Acceptance as a means of exchange

Fifth, the legal definition states that virtual currencies are **accepted by natural or legal persons as a means of exchange**. This is probably the central element of the definition, the meaning of which cannot be emphasized enough.

7.1. Natural or legal persons

At first glance, the naming of **natural or legal persons** does not seem to have any significant independent significance. Because of the independent interpretation of these terms under European law, there is no restriction in Austria with regard to the legal partnerships under Austrian private law. Instead, the reference to natural persons or legal entities should probably be seen against the background that the legislator was aware of the blockchain experiments of large corporations and banks[18] and that **such digital assets** that are **accepted exclusively by legal entities** but for which there is no market among natural persons should also be explicitly covered.

The reference to natural persons or legal entities should therefore be understood as meaning that acceptance as a means of exchange within one of the two groups should suffice. There is no support for another interpretation, such as that a digital asset is to be accepted either only by natural persons or only by legal persons. As long as digital assets are only accepted as a means of exchange in at least one of the two groups, this is sufficient for qualification as a virtual currency.

7.2. The term medium of exchange

Virtual currencies are referred to by European lawmakers as a **means of exchange** and not as a means of payment. This is no coincidence; the Commission's first proposed definition[19] contained the

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17 The term exchange rate is deliberately avoided.

18 See the Impact Assessment of the Commission on the proposal of the 5th Anti-Money Laundering Directive 450/2016/COM.

19 See the Proposal of the Commission 2016/0208(COD), in which the term virtual currency was still defined as „*a digital representation of value that is neither issued by a central bank or a public authority, nor necessarily attached to a fiat currency, but is accepted by natural or legal persons as a means of payment and can be transferred, stored or traded electronically*“.

concept of means of payment. In order to give meaning to the element of the definition, the **distinction between means of payment and means of exchange** is, of course, essential.

Payment is generally the fulfilment of a monetary debt. Means of payment is therefore a means that can be used to **settle a monetary debt**. The European legislator essentially distinguishes **three types** of means of payment, namely (i) e-money as defined in the E-Money Directive[20], (ii) payment services and payment instruments as defined in PSD II[21] and (iii) other means of payment as defined in CRD IV.

7.2.1. No electronic money

Electronic money is any 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[22] and which is accepted by a natural or legal person other than the electronic money issuer.[23] The special feature of electronic money is that it is first issued by an electronic money issuer to a customer against prepayment. **Electronic money is a claim** against the electronic money institution and thus book money. In the case of payment with electronic money, the claim right is transferred from the payer to the payee, who can redeem it in accordance with an agreement concluded with the electronic money issuer. The value of electronic money depends on the solvency of the electronic money issuer.

7.2.2. No payment services and no payment instruments

Payment services are the activities listed in Annex I to the PSD II, e.g. in addition to cash deposits (**establishment of a claim** against the payment service provider) and cash withdrawals (**extinction of the claim**), the execution of payment transactions or the issuing of payment instruments. A payment transaction is essentially the placing, transferring or withdrawing funds;[24] payment instruments are personalized device(s) that are used to issue a payment order and thus ultimately are used again for payment transactions.

Payment transactions differ from the transfer of electronic money only cosmetically. By their very nature, payment transactions also presuppose the **existence of a claim** that can be transferred. In the case of a payment transaction, the claim is transferred from the payer to the payee. As a result, the payment transaction and the value of a payment instrument ultimately depend on the creditworthiness of the payment institution, as does the case with electronic money.[25]

7.2.3. No other means of payment

As **other means of payment**, traveller's cheques and bankers drafts are mentioned demonstratively in Annex I no. 5 to CRD IV. The mention of these instruments makes it clear once again that other means of payment also refer to **debt rights** vis-à-vis an institution, whereby payment is made by transferring the debt right to another person. By handing over a traveller's cheque or a bankers draft, the right to claim against the institution concerned may be transferred to another person.[26] Thus, the value of these other means of payment also ultimately depends on the solvency of the issuing institution.

It is precisely this point, i.e. the **dependence** of a means of payment on the existence and **creditworthiness of a particular person**, that explains why a **special regulatory framework** exists for electronic money, payment services, payment instruments and other means of payment. Promises are easily made and claims are fleeting, as anyone who has ever had to write off a claim as uncollectable knows.[27]

In summary, payment is the fulfilment of a monetary debt and **means of payment** is a means that can be used to **fulfil a monetary debt**. In addition to ordinary money (banknotes and coins), the European legislator defines it as (i) electronic money, (ii) payment services and instruments and (iii) other means of payment. **Common** to these means of payment in the broader sense is the **existence of a claim against an institution**.

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20 Directive 2009/110/EG dated 16. 9. 2009.
21 Directive 2015/2366/EU dated 25. 11. 2015.
22 The E-Money Directive also refers to Article 4 no. 5 PSD 1 (Directive 2007/64/EG).
23 Article 2 no. 2 E-Money Directive.
24 Article 4 no. 5 PSD II.
25 Article 4 no. 14 PSD II.
26 See the explanation of *Waldherr/Ressnik/Schneckenleitner* in *Dellinger* (Hrsg), BWG, 9. Lfg (2017) § 1 Rz 59 f; see also *Saria*, Zum Reisescheck, ÖBA 1999, 797.
27 As a result, this also applies to the legal tender, i.e. money. The risks may be more subtle and the mechanisms complex in detail, but in the end the lessons of history count: money can also become worthless.

The payment itself consists in the transfer of the respective claim to the payee.

7.2.4. *Negative definition of medium of exchange*

In contrast to payment, **no money and no means of payment** are involved in the exchange. With the clarification that only such digital assets should also be virtual currencies which are means of exchange, the European legislator clarifies that digital assets which are means of payment do not fulfil the concept of virtual currency. This result is also confirmed by Recital 10 of the 5th Anti-Money Laundering Directive, which states that virtual currencies "*should not be confused with electronic money as defined in [the E-Money Directive],[28] with the larger concept of 'funds' as defined in [the PSD II] [29], nor with monetary value stored on instruments exempted as specified in [the PSD II][30], nor with in-games currencies, that can be used exclusively within a specific game environment* ".

As a result, the best way to describe the means of **exchange property** is therefore to describe it **negatively**: Digital assets are means of exchange if they are not **means of payment** in the sense of the term, i.e. if they are not electronic money, payment service, payment instrument or other means of payment. Bitcoin – as an archetypal example of a virtual currency – is a means of exchange and not a means of payment.

7.2.5. *Excursus: Blockchain is not per se a payment network*

Since May 2018, the FMA has held the legal view that **blockchains such as the Bitcoin blockchain** are **payment networks**.[31] This legal view has been rejected by the jurisprudential literature.[32] The enforcement of this legal view was certainly devastating for the mining industry in Austria. Blockchain technology can very well be used to create a payment network, for example when coins or tokens represent a **debt right** to claim against an institution. However, **Bitcoin** and similar digital assets are not means of payment, so the blockchains underlying these virtual currencies are not **payment networks**.

7.3. The concept of acceptance

Not every digital asset that meets the definition of a means of exchange is automatically a virtual currency. Only those digital assets that are **accepted** as means of exchange are included in the definition. First of all, it is noticeable that the European legislator uses the word "accepted" to refer not to a legal but to an actual transaction: It does not matter whether a digital asset **must** be accepted legally or contractually as a means of exchange. The economic or legal reason why a digital asset is accepted as a means of exchange is also irrelevant according to the definition. The acceptance of the virtual currency Bitcoin, for example, results solely from the fact that the **general public attaches value** to it. On the other hand, there is no specific **legal reason** for acceptance as a means of exchange. According to the definition, this is **not required**.

Conversely, the existence of a certain economic or legal reason is not harmful, either. If, for example, the acceptance of a digital asset as a means of exchange on the market exists because one person has contractually assured another person to purchase this digital asset on the market and thereby generates demand, there may also be a legal and economic reason for the acceptance, but this does not prevent the qualification as a virtual currency.[33] The only thing that matters is whether the **digital asset is actually accepted as a means of exchange**.

It is also noticeable that the word "accepted" is used exclusively to describe **the demand** for the digital asset. The available supply, on the other hand, is completely excluded. It is therefore irrelevant whether a digital asset is offered on the market by one person, by 1,000 persons or by nobody (any longer). The only decisive factor is whether it is accepted by natural or legal persons as a means of exchange, i.e. whether there is

28 Article 2 no. 2 E-Money Directive.

29 Article 4 no. 25 PSD II includes banknotes and coins, scriptural money and electronic money.

30 Article 3 point k and l PSD II.

31 FMA FAQs on the application of the Alternative Investment Fund Managers Act dated 22. 5. 2018.

32 *Völkel*, Mining von virtuellen Währungen als Alternativer Investmentfonds? ZFR 2018, 317; *Gorzala/Hanzl*, Mining, ÖBA 2018, 560.

33 Note that this case – person A promises person B to buy on the market but not to buy from person B – does not result in a means of payment in the broader sense. If the case were so that person A promised person B to buy person B's digital assets at a certain price, it would very likely be a means of payment (probably e-money).

demand. Even if there were **no supply at all** for a particular digital asset, but only demand, this would have no legal effect on its qualification as a virtual currency.

Acceptance thus describes an actual process of demand for a digital asset. The questions as to which persons or **how many persons** have to accept the digital asset as a medium of exchange have not yet been clarified. Is it sufficient if a digital asset is requested by **only one person**? What about a digital asset that is only requested by a **certain group**, such as students, or only in a **certain country**?

A first indication is provided by Recital 11 of the 5th Anti-Money Laundering Directive, according to which "[*l*]*ocal currencies [...] that are used in very limited networks such as a city or a region and among a small number of users should not be considered to be virtual currencies*". A similar restriction is also found in the PSD II and the E-Money Directive. This refers to the exception for so-called **limited networks**.

The (more recent) PSD II contains a separate **legal definition** for the scope of the limited network.[34] In Austria, this was implemented in Article 3 para. 1 no. 11 ZaDiG 2018. The (older) E-Money Directive still lacks a legal definition; the reference to the exception for limited networks can only be found in a **Recital**.[35] In Austria the exception for limited networks for e-money was also legally ordered with a reference to the provisions of the ZaDiG 2018.[36] In Austrian practice, the exception for the limited network is also **applied analogously** to the issue and administration of means of payment according to Article 1 para. 1 no. 6 BWG.[37] The latter are, moreover, other means of payment according to CRD IV, so that, as a result, all means of payment are excluded from the scope of the limited networks exception.

In summary, the following picture emerges: The European legislator has expressly provided for an **exception for limited networks** within the framework of the PSD II, such an exception is also affirmed on the basis of the Recitals for the E-Money Directive and was also legally prescribed by the Austrian legislator for electronic money. Recital 11 of the 5th Anti-Money Laundering Directive contains a similar reference to **local currencies** and **limited networks** which should **not be regarded as virtual currencies**.

For the question of at what level of demand a digital asset is sufficiently accepted to constitute a virtual currency, the answer arguably can thus be based on the legal definition of the limited network in the PSD II. There is, however, one **major difference** to be taken into account: While the definition of the PSD II is based on the **(contractual) intention** of a payment service provider or e-money issuer, the **assessment of the acceptance** of a digital asset does neither depends on whether there is an issuer at all nor on its intentions. Rather, it is the **actual circumstances** that are decisive. If the demand for a digital asset is so low that (if it were a payment instrument or e-money) it could be called a limited network, this digital asset is not considered a virtual currency.

This raises the question of how to deal with the **acceptance** of **new digital assets** as a means of exchange. This can be relevant for hard forks[38] or newly issued coins or tokens. Digital assets must be accepted as a means of exchange in order to be considered a virtual currency. This could initially be interpreted as meaning that new digital assets cannot be virtual currencies at all, since in practice they could not yet be accepted as a means of exchange. This interpretation overlooks the fact that acceptance as a medium of exchange does not depend on a transaction, but on market demand. **As long as there is demand on the market** that goes beyond what would be typical of a limited network, new digital assets **are also virtual currencies**.

At the same time, it also means that **not every new digital asset is automatically a virtual currency**. With certain new digital

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34 Article 3 point k PSD II.

35 See Recital 5 of the E-Money Directive: „*This Directive should not apply to monetary value stored on specific pre-paid instruments, designed to address precise needs that can be used only in a limited way, because they allow the electronic money holder to purchase goods or services only in the premises of the electronic money issuer or within a limited network of service providers [...], or because they can be used only to acquire a limited range of goods or services.*“

36 See Article 2 para. 3 no. 1 E-Money Act.

37 See *Waldherr/Ressnik/Schneckenleitner* in *Dellinger* (Hrsg), BWG, 9. Lfg (2017) § 1 Rz 57a.

38 In a hard fork, the software behind an existing blockchain, such as the Bitcoin blockchain, is modified by some users so that it is no longer compatible with the original software. This creates a new blockchain, as was the case when Bitcoin Cash was separated from the Bitcoin protocol.

assets, this is also a desired result. However, the case that new digital assets are sold without any value, or at least a realistic chance of value, is problematic if they are sold fraudulently. If such worthless coins or tokens are not accepted as a means of exchange, they are not considered virtual currency. However, this would also mean that their **sale** would **not be a service in relation to virtual currencies** and would not be subject to the registration obligation pursuant to § 32a FM-GwG or trigger the legal consequences of a lack of registration. One of the most undesirable excesses of the blockchain industry would thus not be subject to the supervisory regime of the FMA from the outset.

This result is unsatisfactory, as there is **obviously a demand among the buyers** of these new digital assets. In my view, it can therefore be argued that the **purchase of such worthless digital assets** by a person also **indicates** their general willingness to accept these digital assets as a **means of exchange**. If the boundary of the restricted network is crossed and the other criteria are met, then such digital assets are also virtual currencies.

8. Electronic transfer, storage and tradability

Sixth, the legal definition requires that virtual currencies be transferred, stored and traded electronically. The first striking feature is that electronic transmission and storage each describe a factual process, while electronic tradability – more than mere transmission – describes a legal or economic process.

Can be **transferred** describes the **transfer of digital assets** from one person to another. First, it can be said that digital assets must be transferable from one person to another in order to be considered virtual currency. For example, a one-time registration that does not allow transfer would not be sufficient. What matters here is the general transferability of the digital asset and not the transferability of a single coin or token. If, for whatever reason, the digital assets cannot or can no longer be transferred from one person to another, it is no longer a virtual currency.

Can be **stored** describes how a person's digital assets are stored for themselves. This first requires that the digital assets **generally cannot be transferred to another person against the will of their owners**. Electronic storage can therefore be read as a counterpart to electronic transfer. If the digital assets – for whatever reason – can actually be transferred electronically to another person by persons other than the owner without the owner's intervention, then it is not (anymore) a virtual currency.

In contrast to transferability and storage capacity, can be **traded** has a legal and economic component. Tradability is to be understood as meaning that it depends on a **fundamental possibility** to trade digital assets and not on whether trading venues actually exist for trading. Nor will the term depend on whether **trading is permitted or prohibited**.

9. Summary of results

In summary, it can first be stated that the European legislator has legally defined the concept of the virtual currency in a technology-neutral manner. When defining it, the legislator likely had **Bitcoin as an archetypal example** of a virtual currency in mind. Interpretation of the definition can be based on the assumption that **Bitcoin fulfils all six elements of the legal definition**:

1. Virtual currencies are **digital representations of value** (digital assets). They must have a certain value in business transactions in order to be considered virtual currencies.
2. Virtual currencies are **not issued or guaranteed by a central bank or public authority**. Issuing is the first issue. Guaranteed is the assumption of third-party or own liabilities. If digital assets are issued or guaranteed by a central bank or public body, they are not virtual currencies.
3. Virtual currencies can be **attached to a legal currency**. Attachment is a legal or economic mechanism that links the value of the digital asset to a legal currency.
4. Virtual currencies **do not have the legal status of a currency or money**. This depends on the status of a digital asset in the EU or a Member State.
5. Virtual currencies are **accepted by natural or legal persons as a means of exchange**. This is the core element of the legal definition:
   - The term "**medium of exchange**" is best understood in **negative** terms and

requires that a digital asset is **not e-money** as defined by the e-money directive, nor a **payment service or payment instrument** as defined by PSD II, **nor any other means of payment** as defined by CRD IV.
- The concept of **acceptance** requires a certain **minimum of actual demand** for the digital asset on the market. If the demand for a digital asset is limited to a **limited network** within the meaning of PSD II, there is **not sufficient acceptance**.

6. Virtual currencies can be **transferred, stored and traded electronically**. Only digital assets that can be transferred electronically to a person (transfer), whereby the owner also has the option of preventing transfers without his intervention (storage), fulfill the concept of the virtual currency.