



# PAYSYS REPORT

Issue 2-3 – May 2021

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### **1. Planned EU regulation of crypto assets: New wine in old and new wineskins!**

Currently, the European Commission's proposed "Regulation on Markets of Crypto-assets" (MiCAR) is under discussion at the EU level. The regulation focuses on so-called stablecoins based on distributed ledger technology (DLT). The methodological, technologically non-neutral approach leads to a number of unresolved demarcation problems compared to the previously regulated types of scriptural money and e-money.

#### **Appendix: Asset-referenced token (ART) as regulatory response to Libra 1.0**

### **2. POS terminals in Europe: Update**

The majority of card payments in the EU continue to be made card-present (83%) at around 16 million physical POS terminals. Terminal growth continues unabated (10%). However, the development is completely different in the individual member states. Based on the 2019 figures, our analysis of last year (issue 5/2020) will be updated.

# Planned EU regulation of crypto assets: New wine in old and new wineskins!

(hg) At the end of September 2020, the European Commission presented a draft for a "Regulation on Markets in Crypto-assets"<sup>1</sup>, in short MiCA-Regulation or even shorter MiCAR. It is about nothing less than the regulation of crypto-assets (including cryptocurrencies) and its ecosystem: issuers (if any) and service providers in the EU.

Instead of a Directive, the Commission is resorting to the tool of a Regulation, sending a clear signal. The design and issuance of cryptocurrencies are to be uniformly subjected to a European law. The draft, which has hardly been dis-

cussed in public so far, is already at an advanced legislative stage.<sup>2</sup>

Several committees of the European Parliament and the ECB<sup>3</sup> have already submitted their draft opinions. A presidency compromise proposal is expected shortly. It is still planned that the law will be adopted and enter into force by the end of 2021, after which it will be applied after 18 months.

## Our Comment:

It is really astonishing that up to now the Commission's draft has passed the political stage relatively smoothly so far. The amendments proposed so far - especially by the Committee on Economic and Monetary Affairs (ECON) - mainly aim at even stricter restrictions compared to the Commission's draft due to the feared threat to monetary sovereignty by cryptocurrencies. We have heard only a few protests from the relevant crypto scene.

Either they are lobbying quietly or the latest Bitcoin rise and fall has sent some into a delirium state. Where is the public outcry? After all, MiCAR means the legal end of the crypto-assets previously known as stablecoins in the EU. But more on that later.

MiCAR is an important milestone. So far, attempts have been made at the national level to get a grip on crypto-assets, e.g. by applying existing financial laws, covering either financial instruments (according to MiFID II), or e-money (according to EMD2). As the respective directives are interpreted and implemented differently in national laws, significant national differ-

ences exist in the regulation of crypto-assets. Some member states, however, have launched new laws for crypto-assets.

In addition to the elimination of the patchwork, the plans of Facebook & partners to issue so-called stablecoins are another driver of this legislative initiative. The group plans to issue cryptocurrencies worldwide that will be pegged in value to a basket of currencies (Libra 1.0) and/or to a single existing official currency (Libra 2.0 or Diem). Regulation of stablecoins is the key concern of MiCAR. In this paper, we will therefore focus on these and other crypto-assets that can be used as a means of payment.

### How does MiCAR fit into the regulatory landscape?

#### New wine in new wineskins?

Jesus already addressed the question of whether new wine requires old or new wineskins. Based on the premise that an innovative product or service requires regulation, there are basically two regulatory approaches that

can be considered: new product-specific regulation or application of existing laws to the new product (if necessary by adding to or expanding the statutory definition). The latter approach would be preferred for practical reasons, if the innovation corresponds to the business and risks of the already regulated products: "same business, same risks, same rules".

Let's take the example of the e-scooter, which has conquered the inner cities of European metropolises. Do the existing traffic rules apply to (e-)bikes or to muscle-powered scooters, or do we need new rules? The question has so far been solved by different approaches in different countries.



This fundamental question also arises in the regulation of crypto assets. Is a cryptocurrency a new type of money or just a new technological tool? To what extent does the technical design determine the categorization of the previously regulated types of money (cash, scriptural/book money and e-money)? Do "tokenization" and the use of distributed ledger technology create new risks that require new regulation?

Before we go into the MiCAR approach, another definitional issue needs to be discussed, as the regulation of crypto-assets with a payment function (cryptocurren-

cies) at the EU level is not new territory.

**MiCAR vs. AMLD5: Crypto-assets vs. virtual currencies**

At the EU level, there is an explicit regulation of so-called virtual currencies within the framework of the amendment of the Money Laundering Directive (AMLD5).

As a consequence of this directive, since 2020 at the latest, providers engaged in exchange services and custodian wallet providers in the field of virtual currencies have been subject to obligations under anti money laundering law.

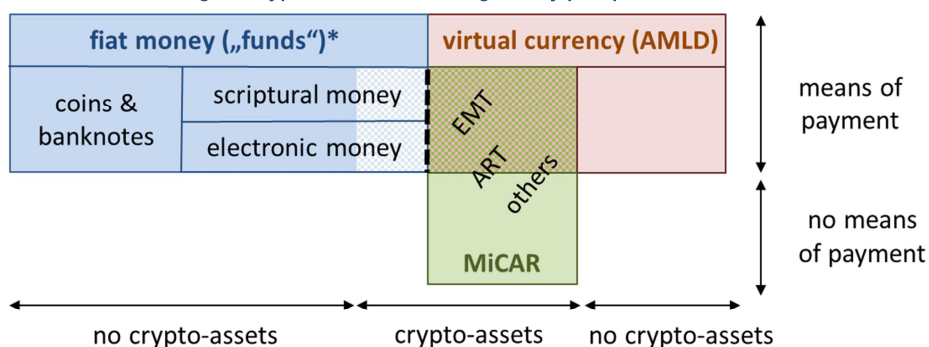
The AMLD has clearly targeted virtual currencies in particular the crypto-assets, which are used as means of exchange.<sup>4</sup> However, virtual currencies according to the AMLD and crypto-assets according to MiCAR are by no means identical in definition.

The term virtual currencies is deliberately defined very broadly by the AMLD as a catch-all term.<sup>5</sup> It actually includes any digital representation of value that is not issued as money by the respective central bank or is indirectly controlled and managed by it through a regulatory link (scriptural money or e-money of credit and e-money institutions subject to licensing<sup>6</sup>).

In short: virtual currencies are, with some exceptions<sup>7</sup>, all non-cash types of money that are not regulated as "funds" according to Art. 4 (25) PSD2 (banknotes, coins, scriptural money or e-money). Even shorter: virtual currencies are (almost) all digital money types that do not fall under fiat money. The common denominator is the function as a means of payment.

The differentiation is not private versus state issuance, but the possibility of steering and controlling by the central bank through regulatory linkage. The differentiation is therefore technology-neutral.

Fig. 1: Crypto assets: multi-regulatory perspectives



\* Excluding central bank issued scriptural money and digital currency (CBDC)

Fig. 2: Definitions of stablecoins according MiCAR (Art. 3)

stablecoins (MiCAR)	stable value by referring to the value of	medium of exchange
asset-referenced token (ART)	<i>“several fiat currencies that are legal tender, one or several commodities or one or several crypto-assets, or a combination of such assets”</i>	<ul style="list-style-type: none"> <li>• No mandatory requirement according to the definition criteria</li> <li>• Contradictory statements in Recitals</li> </ul>
electronic money token (EMT)	<i>“a fiat currency that is legal tender”</i>	<i>“the main purpose of which is to be used as a means of exchange”</i>

Overall, these functional and control policy perspectives of AMLD<sup>B</sup> make sense for virtual currencies, since fiat money is already systemically subject to prudential and money laundering regulation.

As far as regulations prior to the MiCAR draft are concerned, the regulatory perspectives on crypto-assets were thus characterised by the criteria:

- Link to official currency: yes or no
- Means of payment function: yes or no

(see Fig. 1)

**The MiCAR-Approach**

The MiCAR design, compared to the AMLD approach, is based on a completely different, rather opposite perspective. The starting point is not the function of the object, but its technological basis. MiCAR regulates crypto-assets, defined as:

*“a digital representation of value or rights which may be transferred and stored electronically, using distributed ledger technology or similar technology” (Art. 3 (2)).*

**ARTs in particular would pose a potential threat to monetary sovereignty and monetary policy.**

Distributed ledger technology (DLT) is defined as follows: *a type of technology that supports the distributed recording of encrypted data* (Art. 3 (1)). Accordingly, the decentralized, distributed recording of digital values or rights is crucial. It is already remarkable in itself that a certain technology is the requirement for the application of a financial law.

With regard to the regulatory requirements for issuers and service providers, the Regulation draws a distinction between three types of crypto-assets:

- electronic money tokens (EMTs),
- asset-referenced tokens (ARTs) and
- other crypto-assets (including utility tokens).

Both EMTs and ARTs are called “stablecoins” as central focus of the Regulation. The criteria for separating stablecoins into two categories are based on the characteristics of the relevant crypto-assets, such as the reference for its value (a single currency, a basket of currencies, goods or other assets) and obviously their intensity of usage as a means of payment: (see Fig. 2).

In view of the usual assumption that ARTs in particular would pose a potential threat to monetary sovereignty and monetary policy, one would expect that precisely the payment function of these crypto-assets, which is fundamental to their qualification as money, would be an important criterion.

However, the statements in MiCAR about the payment and store-of-value function of ART are somehow confusing and contradictory:

- a neutral description of the characteristics: *“often aim at being used by their holders as a means of payment to buy goods and services and as a store of value”* (recital 9);
- a regulatory requirement as consequence of the

payment functionality: "They could therefore be widely adopted by users to transfer value or as a means of payments and thus pose increased risks in terms of consumer protection and market integrity compared to other crypto-assets. Issuers of asset-referenced tokens should therefore be subject to more stringent requirements than issuers of other crypto-assets." (recital 25)

- a regulatory incentive to ensure the payment functionality as main purpose: "To ensure that asset-referenced tokens are mainly used as a means of exchange and not as a store of value, issuers of asset-referenced tokens, and any crypto-asset service providers, should not grant interests to users of asset-referenced tokens for time such users are holding those asset-referenced tokens." (recital 41).

It is logically incomprehensible to me why the "system-threatening" and risky payment function of ART should be additionally promoted.

Wouldn't it have been enough to simply include the payment function in the definition - as is the case with the EMT?

However, the payment function is not the decisive

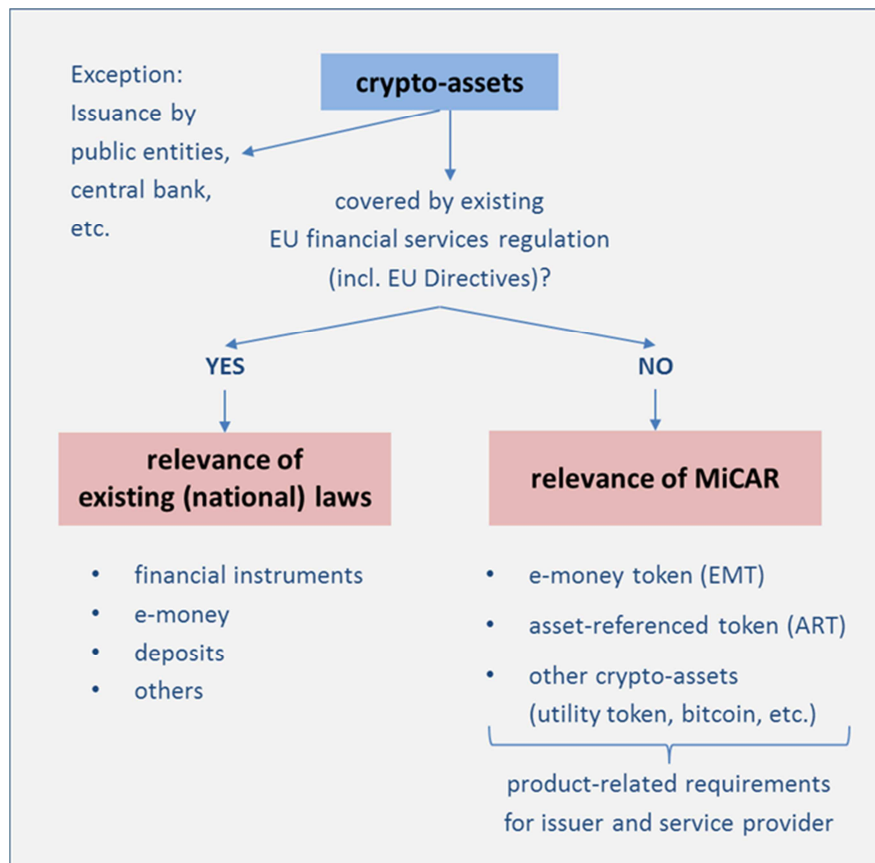
criterion for the demarcation between stablecoins (AMT and ART) and the category "other crypto-assets", but the value referencing. Crypto-assets without value referencing, such as Bitcoin, Ether and Dogecoin, fall into the "other crypto-assets" category regardless of their use as a means of payment.

Value referencing in combination with a technical design (here: DLT) as a definitional criterion for regulatory classification is - at least with regard to types of money and means of payment - a new approach. Is this a paradigm shift or rather a knee-jerk reaction to the BigTech plans for stablecoins?

Nota Bene: The eventual value reference as a defining criterion is not to be confused with the previous regulatory obligation of a value-based peg to the respective currency unit (official currency).

From a monetary policy perspective, the fixed value link of privately issued scriptural money and e-money, which is ensured by the issuer's obligation to redeem at par at any time in legal tender money (directly or indirectly), is a crucial regulatory requirement for classification as fiat money. We will come to the corresponding requirement for stablecoins later.

Fig. 3: MiCAR methodology.





## This approach could only work if the terms were clearly defined

This is exactly what is lacking in the MiCAR

Back to the methodological approach of MiCAR. The regulation obviously follows the approach of "new wine in new wineskins", whereby the new crypto-asset is technologically defined by DLT. Further, MiCAR distinguishes between two types of products (EMT and ART) and a catch-all asset (other crypto-assets). However, according to Art. 2, crypto-assets can also fall under the already existing EU financial regulation.

This methodological approach has far-reaching consequences. If the MiCAR comes into force in its current version, this would mean that there are (at least in theory), crypto-assets that from a regulatory perspective could be classed as (see Art. 2):

- financial instruments (according MiFID II)
- e-money (according EMD2),
- deposits (incl. structured deposits)<sup>9</sup>,
- securitisations,
- EMT,
- ART, or as
- other crypto-assets (including utility tokens).

So: New wine (crypto-asset) in old and new wineskins! An issuer or a service provider must therefore check in advance whether the crypto-asset falls under the existing EU financial regulation or whether MiCAR should be applied.

The proposed approach could only work if the terms listed above were clearly defined and could be clearly differentiated from each other. This is exactly what is lacking in the MiCAR. Overall, this sounds like a job-creation programme for lawyers.

In the following, we would like to explain this problem in more detail using the example of traditional e-money and scriptural money.

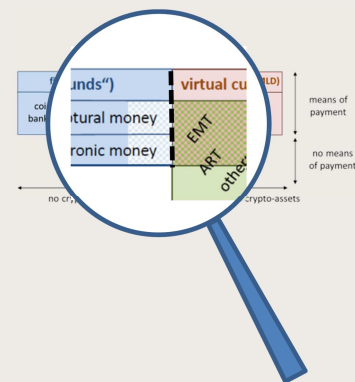
### Problems of demarcation

- **E-money token vs. traditional e-money**
- **Tokenised bank money: deposit or e-money token? (see box)**

As pointed out above, MiCAR introduces new definitions that will co-exist with definitions in existing regulations. That creates many problems because all of these definitions are not consistent. In particular, it will be difficult to clearly separate different instruments and the accompanying regulatory regimes.

Below the distinction between e-money tokens and traditional e-money as well as between deposits and e-money tokens will be discussed.

### E-money token vs. traditional e-money



According to Wikipedia, stablecoins are defined as follows: "cryptocurrencies whose price is steered through active or automated financial policy with the aim to minimise the volatility of the price of the stablecoin, relative to a national currency, a currency basket or other assets".

Stablecoins that are tied in value to a **single** currency (such as the proposed stablecoin Diem) are systematically and definitionally close to regulated conventional e-money. The labeling as "e-money token" fits. These digital currencies are effectively a reboot of the genuine e-money of the 1990s, such as Mondex or Digi-Cash, then a prepaid bearer instrument (digital cash) stored on chips (cards, PCs, etc.) and suitable as a digital means of payment at the POS or on the Internet. It was a new type of money in several respects and not comparable to cash or scriptural money.

The regulation of the new money via a dedicated Directive (EMD1 in 2000) was justified. New wine in new wineskins. The second e-money directive (EMD2 in 2009) softened the technology-based definition criteria of e-money, allowing account-based balances to fall under e-money (such as PayPal).

First, this definitional change led to complex demarcation problems in regulatory practice between traditional e-money and scriptural money, which will continue with both types of money as crypto-asset. More on this later.

Second, the definitional criterion of technical design (*"electronically, including magnetically, stored monetary value"* - Art. 2(2) of EMD2) comprises not only digital cash (bearer instrument), but apparently also payment accounts in which e-money is centrally registered as an account balance. Based on the definition and the administrative practice of the supervisory authorities, there is accordingly no reason why e-money accounts cannot also be registered in a decentralized manner on the blockchain. It is therefore not surprising that in some EU member states such crypto-assets are regulated as e-money.

A crypto-asset that meets the other definitional requirements of e-money under EMD2 (claim on the issuer, issued on the receipt of funds for making payment transactions accepted in a three-party relationship) would so far fall under EMD2. Now, MiCAR requires that such e-money that qualifies as EMT falls under MiCAR (Art. 2).

## MiCAR leads to the stablecoin mutating into a "fixed" coin.

E-money in the form of a crypto-asset that meets the definition criteria of EMD2 and is additionally only value-linked to a legal currency would thus no longer fall under EMD, but under MiCAR. This can of course be regulated in this way, whether it makes sense is another question because the demarcation of e-money and crypto assets becomes tricky.

In particular, the question arises as to which crypto-assets that meet the e-money criteria of EMD2 contin-

ue to fall under EMD2 and not under MiCAR. In Art. 2 (2), however, MiCAR explicitly provides for this case. With some imagination, one can construct such a product, but let's leave these quibbles.

In the case of one type of crypto assets, the EMT, MiCAR definitely hits the skids in Art. 43 (1c): EMT shall be deemed to be 'electronic money' as defined in the EMD2.

What is valid now, the MiCAR or the EMD2? According to Art. 2, both at the same time. But how can this be possible?. A classic circular argument.

The answer has significant consequences because, for example, if EMD2 applies, PSD2 also applies to crypto-asset service providers. The relevance of PSD2 to EMT but not to ART means that the PSD2 protections for users of these payment instruments apply to EMT but not to ART.

This is where Mastercard's criticism rightly comes in: *"the proposed Regulation does not achieve a level playing field between the issuers and service providers of asset referenced tokens and e-money tokens."*<sup>10</sup>

Currently, most current stablecoins with a value-based peg to a single currency will not meet the definitional criteria of classic e-money, as for example the requirement *"represented by a claim on the issuer"* is missing.

However, MiCAR will change this. A number of MiCAR's planned requirements in Art. 44 imply that an EMT will have to meet almost all of the **definitional criteria** of e-money under EMD2 **as conditions**, such as.

- „provided with a claim on the issuer“
- *"issuance at par value and on the receipt of funds"*
- *"redeemability at any moment at par value"* (in cash or by credit transfer)

This means that a stablecoin turns into a "fixed" coin with a required fixed 1:1 parity to legal tender. So Art. 44 has the consequence that the legal currency is no longer merely the reference base to stabilise the token's value but the crypto-asset itself becomes – just like scriptural money and regular e-money – a digital representation of this currency. It would then no longer fulfil the EMT's own definition criteria, i.e. *"that purports to maintain a stable value by referring to the value of a fiat currency that is legal tender"* (Art. 3 (4)).

The crucial feature of stablecoins is amputated in the same regulatory act.

At the end of the day, MiCAR leads to the stablecoin mutating into a "fixed" coin or e-money. Consistently, MiCAR requires that EMT - like e-money - may only be issued by credit institutions and e-money institutions (Art. 43).

Due to the de facto requirement of fixed exchange rates and exchangeability at par into an official currency, EMT, like classic e-money, is a type of fiat money. Welcome to the club! The juxtaposition of "crypto-assets" versus "fiat money" repeatedly mentioned in MiCAR is obsolete, at least for EMT.

MiCAR indirectly leads to a ban on the issuance of one-currency-stablecoins in the EU. This may be politi-

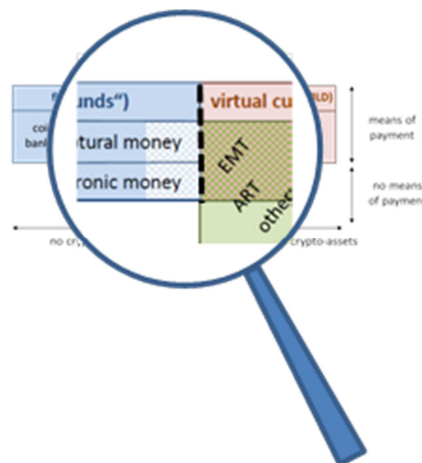
cally intended, but it systematically requires a change in the EMT definition. If the Highway Code first properly defines an e-scooter as a product, but then goes on to require that this vehicle have a saddle, pedals, and much larger tires, it becomes an e-bicycle and no longer meets the e-scooter definition criteria.

Another circular argument. Here, too, the chosen, non-stringent methodology of MiCAR takes its revenge.

### Tokenised bank money: deposit or e-money token?

Many banks are currently planning the "tokenization" of account-based deposits (keyword: tokenized commercial bank money or tokenized book money). This does not mean that the previous current accounts will be decentralized onto the blockchain instead of centralized account management. From today's perspective, that would be "cool" and innovative, but not an efficiency gain.

Rather, the goal is the additional creation of programmable money that can be used in the context of smart contracts. The expected use cases are many: machine-to-machine (M2M) payments, payments in the IoT world, micro-payments (pay-per-use), etc. People don't want to wait for the digital euro in the form of a CBDC (Central Bank Digital Currency). Moreover, it is questionable whether the planned design of the digital euro (account-based and/or as a bearer instrument without required use of DLT) by the ECB is suitable as programmable money. The banks also want to prevent any Fin- or BigTechs from getting too big a piece of the hoped-for pie.



Now, assuming that a bank or a group of banks offers the programmable money as crypto-assets using DLT or a similar technology (as defined by MiCAR), the question is whether and in which cases MiCAR has to be applied or whether the previous



rules for traditional demand deposits apply.

Unfortunately, MiCAR does not provide a clear answer to this question. It only states that regulation should not be applied to crypto-assets that qualify as deposits as defined in Art. 2 (1), point (3) of the Directive 2014/49/EU. This directive refers to deposits (including current accounts) that fall under the deposit guarantee schemes. A deposit is defined here as follows:

*"a credit balance which results from funds left in an account or from temporary situations deriving from normal banking transactions and which a credit institution is required to repay under the legal and contractual conditions applicable, including a fixed-term deposit and a savings deposit..."* (followed by a number of exceptions that are not relevant in this context).

### Tokenised bank money: it could be a deposit

A bank deposit is therefore generally account-based. The central question is: does an account have to be held centrally at a credit institution (central ledger) or do we continue to speak of a deposit in the sense of the above Directive if the credit is registered in a decentralized manner on a distributed ledger? Is the term "tokenized deposit" a contradiction in terms?

Well, the term "token" (by the way, unfortunately not defined in MiCAR), as well as "coin" (e.g. in the sense of a stablecoin) suggests a digital bearer instrument that changes hands digitally, similar to cash. In most cases, however, crypto-assets are precisely not bearer instruments, but rather decentralized registration or account management and account balance validation by a large number of entities ("validators"). The juxtaposition of account-based versus token-based often used in the relevant crypto publications is misleading, or at least confusing, unless one understands token-based to mean a bearer-based digital asset, as the ECB does in its "Report on a digital euro" (2020). As a rule, however, the crypto-assets designated as tokens on the basis of DLT are (decentral) account-based.<sup>11</sup>

Are the "tokenised" accounts planned by the banks also still accounts, however, in the sense of the above-mentioned definition of bank deposits? *"The only difference between a traditional account-based system and a blockchain is that the accounts are not kept in a central database but in a decentralised append-only database"* (Chaum, Grothoff and Moser<sup>12</sup>). This clarifies the technical classification, but does it also clarify the legal one?

Scriptural money - and thus also deposits - has been subject to many technical innovations in the history of money, from written entries in books (book money) to complete digitization on some back-end server. The accounts as a list of receivables and payables between the bank and the account holder, however, have always been managed by the bank as the central instance - regardless of the technical design: execution of payment transactions, reversals, validation of the account balance, etc. Now, with a DLT account, these tasks are largely performed by a variety of other entities, possibly without a contractual relationship with the crypto-asset issuer (non-permissioned ledger). The account management is effectively outsourced.

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## The terms "tokenised scriptural money" would be inherently contradictory.

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A variety of questions arise, such as: What requirements must the bank meet and what obligations must it assume in order to remain the master? Is a superordinate liable entity required as a central issuer if several banks are involved? Under what rules do the new types of crypto-asset service providers fall, which are listed in detail in MiCAR but missing from PSD2?

To summarize: Does a distributed ledger account meet the previous criteria of a traditional cash current account or is there - as an IMF Working Paper concludes - a *"fundamental distinction between the two concepts"*<sup>13</sup>? In short: Does the new wine fit into old wineskins?

### Tokenised bank money: it could be an e-money token

The banks' plans so far are to offer these DLT accounts for certain applications (e.g. in combination with payments resulting

from smart contracts) and certain customer segments in parallel with, but interoperable with, existing payment accounts. Without DLT, such a parallel account circuit (funded by deposits using traditional accounts) is generally classified for regulatory purposes as e-money.

Due to the definitional opening of e-money as a bearer instrument (genuine "token") by account-based e-money, the demarcation between account-based e-money and bank deposits, especially if both types of accounts are held at one bank, is difficult in practice.<sup>14</sup> Any interest (bank deposits: allowed; e-money: not allowed; by the way: what about negative interest?) cannot be used as a distinguishing feature in today's world. For many supervisory authorities, the direct application of payment accounts in interbank payment transactions, e.g. through the use of interbank payment instruments such as SDD and SCT, is a criterion for legal classification as bank deposits or scriptural money.

E-money accounts, on the other hand, usually (with the exception of e-money in the form of prepaid credit cards) form a closed loop. The use of e-money in interbank payment transactions can only take place via a bridge (in effect: exchange between two types of money by withdrawal from the e-money account and deposit to current account/deposit and vice versa). Under the realistic assumption that the decentralized DLT accounts form an island-like parallel circuit connected to the mainland via bridges, a regulatory classification as EMT is obvious and actually mandatory from a systemic perspective.<sup>15</sup>

The terms "tokenised scriptural money" or "tokenised deposits" used today would be inherently contradictory, at least for the transitional phase of co-existence. Tokenised bank money is not precise either, but would fit better. Unfortunately, the repurposing of the word "token" for decentralized DLT registrations of credit positions cannot be reversed in the crypto world.

What else would be the difference, technically and legally, between a crypto-asset that is exempt from MiCAR as a bank deposit under Art. 2 and a bank-issued EMT that meets MiCAR requirements? Are they not the same products? Same product, same rules? Well, into which regulatory pot do these crypto-assets in the form of account-based DLT-bank money fall? Do the MiCAR requirements for EMT apply to this product as well?

Another argument for classifying account-based DLT-bank money as EMT is MiCAR's stated goal that "*any definition of 'e-money tokens' should be as broad as possible to capture all the types of crypto-assets referencing one single fiat currency*" (recital 10).

### Conclusion

The answer to the classification question may be premature until MiCAR is in its final form. Until then, there is still time for banks to resolve this important question, as it is by no means a purely academic issue. Classification as an EMT would have significant consequences for issuer banks based on the current draft version of MiCAR. For example, according to Art. 43 (1b) of MiCAR, several provisions of EMD2 (Titles I and II) that are relevant only for e-money institutions when issuing traditional e-money (such as general prudential rules) would also apply to credit institutions when issuing EMTs.

It is noteworthy that in a recent report, the Deutsche Bundesbank classifies tokenized bank money under "*traditional form of money*" rather than "*crypto-token*" without discussion, suggesting that MiCAR does not apply to this manifestation of book money.<sup>16</sup> Are we perhaps engaging in a phantom discussion here?

### Problems of demarcation: First Conclusions

The MiCAR methodology means that crypto-assets defined there may fall under the previous EU financial legislation or under the new MiCAR, depending on their design. EMTs may even fall under both categories as a contradictory result. The key provision is Art. 2, but it is silent on the design question. The Recitals do not provide helpful guidance either.

Further complicating the demarcation problems is the fact that the previous regulations are generally not uniformly implemented in national laws through the transposition of directives, whereas MiCAR as a

regulation will represent a uniform European law. Wherever the regulation includes the relevance of EU Directives, the goal of a uniform EU regulation is potentially at risk.

### A way to solve the problem: Use another definition of crypto-assets (ECB's proposal)

In its opinion (February 2021), the ECB criticizes the MiCAR definition of crypto-assets as "*wide, catch-all definition*" or "*both technology-specific and broad*".<sup>17</sup> In footnote 12 it refers to a definition that is more precise and more suitable for regulation and which is used by the ECB in their Occasional Paper (No. 223/2019, p. 7<sup>18</sup>):

*“any asset recorded in digital form that is not and does not represent either a financial claim on, or a financial liability of, any natural or legal person, and which does not embody a proprietary right against an entity”.*

As per this definition, according to the ECB, a crypto-asset would not be a financial instrument, e-money, bank money or central bank money (no matter in what form) and would be technology-neutral. This addresses the problems of demarcation currently contained in the MiCAR.

## The e-money issued by PayPal as the largest e-money issuer in the EU would have to be classified as "significant".

Moreover, this delimitation would again be compatible with the definition of virtual currencies in the AMLD. If necessary, the conventional terms (e.g. financial instrument) would have to be supplemented so that they do not exclude the application of DLT as a technological basis.

However, the ECB fails to implement this methodical suggestion by proposing concrete amendments to the text of the MiCAR proposal most likely because the text would have had to be rewritten extensively.

### Deviating rules for significant and partly exempted stablecoins

#### Significant Stablecoins

For so-called significant stablecoins (EMT and ART), additional and stricter regulations apply in some cases, such as higher capital requirements and the involvement of the EBA in the approval process. The criteria (Art. 39) are based, among other things, on

- Customer base (threshold: 2 million of natural or legal persons),
- Value of issued stablecoins (threshold: EUR 1 billion EUR),
- Number and value of transactions (threshold: 500,000 transactions respectively EUR 100 million per day).

Such differentiation by market volume does not exist for traditional (usually account-based) e-money. Based on the above criteria, the e-money issued by PayPal as the largest e-money issuer in the EU would have to be classified as "significant". Accordingly, PayPal can be pleased that their e-money continues to move through traditional centrally managed accounts and, therefore, does not fall under the MiCAR.

Again, this raises the question of the level playing field: same business, same risks, same rules? Why would moving PayPal business to DLT lead to higher risks? MiCAR provides no answer and only states succinctly:

*“Significant e-money tokens can pose greater risks to financial stability than non-significant e-money tokens and traditional electronic money.”*  
(recital 49; underlining by author).

#### Partly exempted stablecoins

For EMTs as well as for ARTs issued in a small volume (outstanding value below EUR 5 million), the approval of the competent authorities is not required. However, all other requirements are relevant. The same applies to stablecoins held exclusively by qualified investors. In both cases, however, a notification to the competent authority is required (Art. 15 respectively Art. 43). The thresholds are identical to the exemption for issuers of traditional e-money (so-called small e-money issuers). As with e-money, however, member states may cancel this waiver for small EMT-issuers.

In contrast to EMD and PSD2, there is no general exemption for stablecoins in MiCAR so far, after which MiCAR would not apply at all. In PSD2 and EMD2, for example, payment instruments that can only be used in limited networks (e.g. city-card) or for a very limited range of goods or services (e.g. fuel card) are exempted from regulation.

This limited network/range-exemption, which is a relevant issue for the payment market, is missing e.g. in MiCAR, but not in ALMD5 for virtual currencies (including crypto assets!).

The consequence: a conventional fuel card with central account management by the issuer is exempt from PSD2 and 5AMLD. A fuel payment app based on a decentralized DLT account, on the other hand, would fall under MiCAR, but not under AMLD's money laundering obligations. It is expected that the next version of the MiCAR draft (probably presidency compromise) will provide only a partial exemption for these limited network/range stablecoins.

It is incomprehensible why one does not simply adopt by reference the original basic exemption from PSD2 in MiCAR. This would achieve regulatory consistency in the regulation of different types of money and payment instruments, at least for exempted areas.

## Where do we go from here?

### Opinion of the ECB (February 2021)

It was to be expected that the ECB would want a number of amendments. In its Opinion of 19 February 2021, it proposes, among other things, the following:

- A significantly greater role of the Eurosystem in the application for authorization in particular for issuers of ART (incl. significant) and significant EMT due to the Eurosystem's exclusive competence "for the conduct of the monetary policy of the Union, and the promotion of smooth functioning of payment systems". In certain cases, the Eurosystem's opinion on the authorization is to be binding.
- Stricter product-specific requirements for ARTs, especially with regard to their potential role as means of payment. For example, ART (like EMT) should represent a claim on the issuer, be issued against receipt of funds and be redeemable at any time. The difference to the EMT, however, is that they are redeemable and exchangeable against market value (instead of at par to the paid-in funds). As a result, an ART based on the value of a currency basket (such as Libra 1.0) becomes de facto an EMT (issuance and redemption at par in relation to the fixed basket, e.g. 0.5 EUR + 0.5 USD).
- Depending on the importance of the payment function, the EBA may determine that significant ART may only be issued by credit or e-money institutions (like EMT).

A few days after the ECB opinion on February 25, the Committee on Economic and Monetary Affairs (ECON)

went one better and proposed in its draft report that the ECB should generally decide on the authorization of EMTs: "*The decision on whether to authorize e-money tokens should fall to the ECB*" (Amendment 10).

Should it really be the task of the ECB to decide on the authorisation of a DLT-based city card? The fear of cryptocurrencies by at least some members of the European Parliament obviously runs deep.

It remains to be seen which proposals will get through. However, it does not look like the ECB's fundamental criticism of the methodology and its change to the definition of crypto assets (already discussed above) will be taken into account. As a result, the demarcation problems with the already regulated types of money (scriptural money and e-money) will remain.

One reason for the introduction of MiCAR was certainly the Facebook plan for Libra and Diem. Was it the MiCAR proposal that drove this potential issuer out of Europe (Switzerland) again?

The stated objective of MiCAR is "*to provide clarity as regards the applicability of the EU financial regulation to crypto-assets (and related activities)*".<sup>19</sup>

In my opinion, this goal has not yet been achieved in the current draft version. Maybe we should take some more time to reflect on the groundbreaking regulation of crypto-assets, so that it becomes a well-rounded solution. All good things come to those who wait.

### Post Scriptum:

#### "There ain't no such thing as a free lunch"

I can't resist quoting an interesting sentence from MiCAR as a post scriptum. For crypto-asset providers that are not an EMT or ART, there are several areas of exemption regarding licensing and other regulations.

For example, providers of NFT (non-fungible-token) and crypto-assets offered for free are largely exempt from MiCAR requirements. However, the exemption of free crypto-assets does not apply if the asset appears to be issued "for free" in exchange for personal data:

*"crypto-assets shall not be considered to be offered for free where purchasers are required to provide or undertake to provide personal data to the issuer in exchange for those crypto-assets"* (Art. 4 (2)).

This is an interesting approach that should definitely be pursued further within the framework of the EU's Digital Strategy. Paying with data is an everyday occur-

rence in the digital economy. There are probably far more payment transactions with personal data than with fiat money, let alone cryptocurrencies (incl. darknet).

Despite the volume, these privately issued data currencies remain largely unregulated to date. Cryptocurrencies appear to pose a threat to state monetary sovereignty. As we discussed above, guardians of official currencies particularly fear new private cryptocurrencies (ART) as a unit of account.

Won't the role of legal tender as a unit of account be much more compromised if I can obtain certain digital

services, which are extremely important to many, exclusively by paying with data currency? Wouldn't one at least have to establish a level playing field for fiat money here and stipulate that the offer is monetarily valued and that I can alternatively pay with fiat money instead of data? Or should the mining and use of these private money surrogates be banned altogether?

It would be a case of practicing consumer protection in its role as both payer and issuer.

## Appendix

### Asset-referenced token (ART) as regulatory response to Libra 1.0

(hg) Do you remember the panic that erupted around the world in spring 2019 among finance ministers and the worry lines that appeared on the faces of central bankers after the Facebook Consortium published plans for Libra as a basket currency?

Why was the Libra concept at the time perceived as a threat to the monetary sovereignty of the state? After all, the issuance of money by private issuers could not have been the problem, since most money in the world today is issued in this way.

However, there were other ingredients that made the soup unpalatable: internationality, the new technology DLT, how to integrate into existing regulations and last but not least a new monetary unit, which should be defined by a basket of leading official currencies (like USD and euro).

People calmed down when the group around Facebook 2020 announced not only a name change to Diem, but also a major product change. Priority was to be given to issuing stablecoins, which were to be pegged in value only to individual currencies: Dollar Diem, Pound Diem, etc.: typical examples of EMT according to MiCAR. A crypto-asset like Libra 1.0 that is value-linked to two or more official currencies rather than one, falls into the ART category. This category is a catch-all for DLT payment assets with a wide variety of value references: currency basket, one or several commodities, one or more crypto-assets or a mixture of previously mentioned assets.

Why does a currency basket asset end up in this high-risk group with the most stringent requirements for issuers? Is one-currency crypto harmless electronic money (EMT) and a two-currency crypto a high-risk product?

From the perspective of risk, consumer protection, and inclusion in the fiat money camp, there is no significant difference between the two products that justifies different regulation. The basket composition remains unchanged, the deposit and withdrawal is made exactly in the basket composition at par using fiat money. So, what is the difference with EMT? What is the problem?

The only reason for classifying it as an ART (rather than an EMT) is the potential threat to the monopoly role of the official currency unit as a unit of account.

The ECB stated in its MiCAR opinion, "*a widespread use of asset-referenced tokens for payment purposes may challenge the role of euro payments, and even undermine the public provision of the unit-of-account function of money.*"<sup>20</sup> A supermarket could price its goods in euros and in Libra, house renting contracts could be converted to Libra, etc. This danger, if it is one, we currently see in a currency distorted country, like Venezuela, but not in the EU, even if times of inflation come back.<sup>21</sup>

For ART, but not for the categories "EMT" and "other crypto-assets", MiCAR provides the legal basis to refuse of the authorization by the respective competent authority (regardless of market significance). A reason for this refusal would be:

*"the applicant issuer's business model may pose a serious threat to financial stability, monetary policy transmission or monetary sovereignty" (Art. 19 (2c)).*

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## Is one-currency crypto harmless electronic money (EMT) and a two-currency crypto a high-risk product?

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Accordingly, the competent authorities may reject a currency basket-based crypto asset as a unit-of-account on the grounds that it poses a threat to the official currency, solely on the basis of its classification as an ART. However, the rejection requires a *"fully reasoned decision"* (Art. 19 (1)).

By the way, account-based monetary value units (e.g. issued as prepaid cards) based on a fixed currency basket, would be traditional e-money according to EMD2. Why does the classification change (ART instead of EMT according to MiCAR) if a bank offers the same product based on DLT?

Same business, same risks, however, different rules! Obviously, law makers see the official currency's unit-of-account function more at risk from DLT account-based products than from central ledger products. But why should this be the case?

That MiCAR provides not only a detailed set of rules for ART issuers (27 articles are related to ART; EMT, by contrast, only 9), but also an additional discretionary right to deny approval, is not surprising. In addition to the innocuous basket currency assets discussed earlier, crypto-assets referenced in value to commodities or to other crypto-assets also fall into this category. This opens the door for the return of precious metal-backed currencies and new commodity currencies, such as a crypto-asset whose value is pegged to a barrel of oil.

However, crypto-assets whose value is tied to other crypto-assets that are in turn referenced to a single currency, the value of the Mona Lisa, an hour's worth of labor, or US junk bonds, are also conceivable, at least theoretically.

The definition of an ART places no limits on the imagination. Is there a market for such stablecoins? Why don't such payment instruments already exist? Are there currently regulatory barriers to issuing such payment instruments as traditional scriptural money? MiCAR raises many, as yet unanswered questions.



# POS terminals in Europe: Update

(hg) In our July 2020 PaySys report (issue 5), we analysed the POS terminal market ("EFTPOS terminals") for card-based transactions in the EU based on available 2018 data from the ECB.

In this report, we analysed the heterogeneous development across member states in terms of growth in the number of terminals and terminal density relative to the number of inhabitants.

The figures also showed an unsurprising correlation between the number of terminals and the volume of card transactions for many countries. In the 2013-2018 period, the number of POS terminals in the EU grew at a rate of 60%, from 9 million to 14.5 million terminals.

One driver for this growth was certainly the cost reduction for card acceptance due to the Interchange Fee Regulation, which came into force at the end of 2015.

The member states Italy and Greece showed the highest terminal density per 1 million inhabitants as a result of national regulations and targeted promotional measures by national governments. In this report, we would like to update and comment on the data based on the 2019 data that is now available.

## Our Comment:

A comment at the outset. Many studies and statistics dealing with the European POS terminal market continue to adopt the country-specific data of the comparative tables of the ECB statistics for the individual member states.

However, the figures quoted there refer to the number of terminals delivered by resident payment service providers (acquirers) in the country itself and outside.

They do not refer to the number of terminals installed in the respective country whose card transactions are processed by domestic and foreign PSPs.

The ECB's overview only shows the development of the terminal business of acquirers located in a specific country. Although the overview is formally correct,

it leads many observers, even professional ones, to the wrong conclusions.

Eliciting the number of terminals installed in a particular member state is relatively complex.<sup>22</sup> The figures presented below are based on the number of EFT-POS terminals installed in each country, regardless of the location of the PSP.

Cards (plastic or virtual in an app) continue to be used predominantly for card-present transactions at physical POS terminals compared to remote usage.

The card-present share of 83% in 2019 (card-non-present: 17%) is almost unchanged from 2018. However, the share is expected to change significantly in favor of remote transactions in 2020 due to the pandemic.

Compared to 2018, the number of POS terminals in the EU (24) increased by 10.4% from 14.5 to almost 16 million terminals. The number has been growing steadily since 2013 (CAGR: 10%). See Fig. 1.

However, growth varies across member states, ranging from 3.6% (Estonia) to 34.6% (Luxembourg). See Fig. 2. Some countries even show a decline: Lithuania, Latvia, Croatia, Netherlands and Portugal.

## Romania has now overtaken Germany.

However, these rates of change should be interpreted with caution. Some growth rates are the result of a retrospective correction of the 2018 data. Accordingly, the 2019 data must also still be regarded as provisional in some countries.

The number of terminals per 1 million inhabitants is much more meaningful. See Fig. 3. Terminal density varies greatly within the EU. Germany is at the bottom with 11,600 terminals per 1 m inhabitants. Romania (last in the 2018 ranking) has now overtaken Germany.

Due to the German Bundesbank's data collection methodology, the actual number of POS terminals in Germany is certainly higher than the reported one. For example, terminals that only accept international scheme cards (and not domestic scheme cards) are not included. Nevertheless, even with more accurate figures, Germany sits somewhere near the bottom of the league table.

As in the previous year, Greece is in the lead with over 70,000 terminals per 1 million inhabitants, followed by Italy with around 60,000 terminals. In both countries, this development is the result of national legislation in recent years.

In Italy, all B2C enterprises (including, for example, tradesmen) must at least accept debit cards. Greece has a similar law. In addition, there are tax disadvantages for consumers who predominantly use cash.

In Greece, tourists also notice the extensive "terminalization" of the country. You can pay for your drink

Fig. 1: Number of EFTPOS-terminals in the EU (24)

Source: ECB SDW

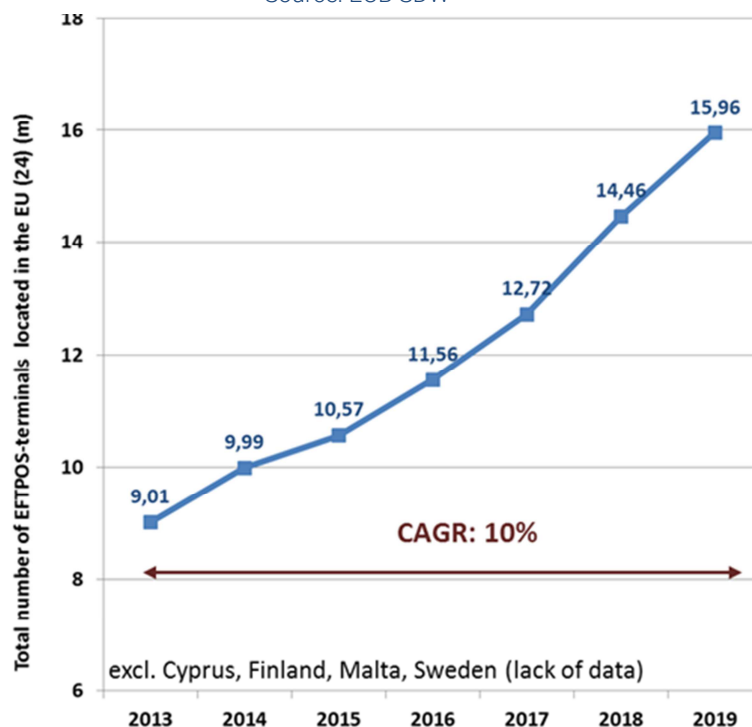
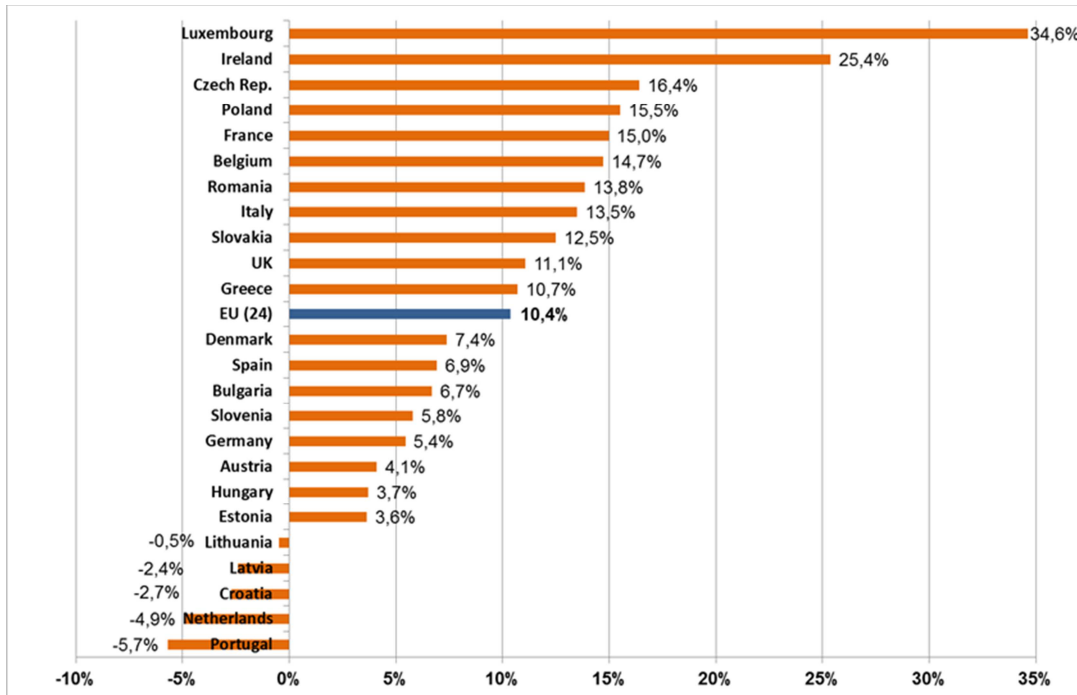


Fig. 2: Growth rates of EFTPOS-terminals in the EU 2018-2019 (excl. Sweden, Finland, Malta and Cyprus); Source: ECB SDW



using an mPOS device on your deck chair on remote beaches of small islands (see photo). Years ago, a completely unrealistic situation. I have even experienced last summer that the tax investigators check the handing out of a sales slip on the beach in the midday heat.



Greece is the prime example of targeted promotion of cashless (card) payments and discrimination against cash transactions at the POS by public authorities in Europe.

Greece complies with several proposals developed by the World Bank's Financial Inclusion Global Initiative (FIGI) in the Electronic Payments Acceptance

Working Group :

- Consumer fiscal incentives (VAT reductions, income tax reductions),
- Lotteries,
- Disincentives for cash-cash transaction limits,
- Mandated acceptance of electronic payments.

The FIGI also mentions "merchant fiscal initiatives", "subsidized POS terminals" and "government adoption of electronic payments".

The European Commission has also placed the topic of "improving the acceptance of digital payments" on the agenda of its "Retail Payments Strategy for the EU." <sup>1</sup> A study is to examine the level of acceptance of digital payments in the EU in 2022. The focus will be on SMEs and public administrations. Depending on the results, the Commission will consider legislative action.

A certain terminal density is an important prerequisite for the further expansion of cashless payments at the physical POS. The decisive factor, however, is demand and thus usage by consumers.

Terminal density per inhabitant is five times and six times higher in Italy and Greece, respectively, than in Germany. However, the number of card-present

payments per inhabitant in these countries is equally low. See Fig. 4.

With reference to the terminal density in Greece, Bitkom, the largest association in the German IT industry, is calling for a legal obligation to accept at least one digital payment option that can be used throughout Europe at every POS in Germany.

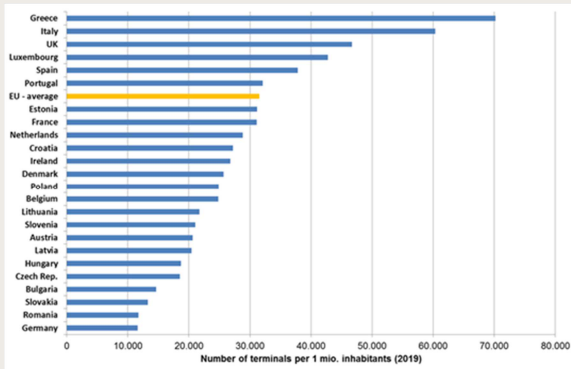


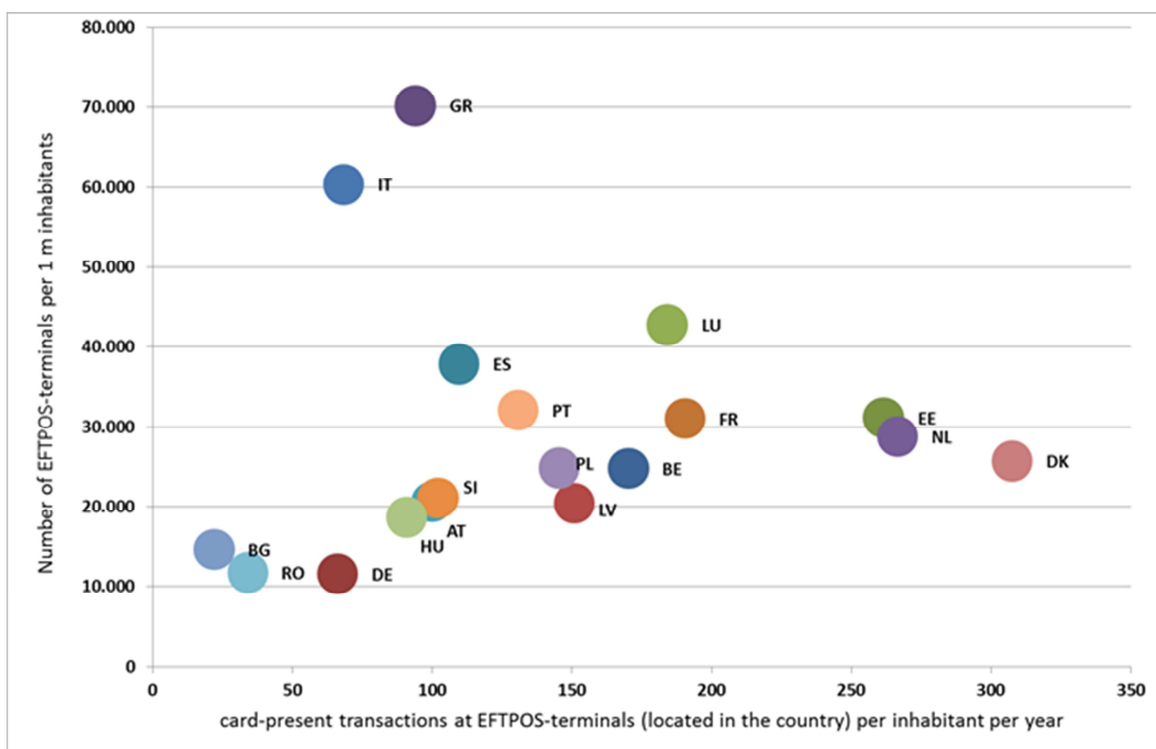
Fig. 3: Number of EFTPOS terminals (located in the country) per 1 m inhabitants (2019)  
Source: ECB SDW

It would be a very welcome regulation for terminal manufacturers, but is the relatively low terminal density really the bottleneck for the card business in Germany?

The example of Denmark shows that a country with a rather average terminal density (25,700 terminal/1 m. inhabitants) can achieve the highest number of card-present transactions per inhabitant in the EU (308 transactions p.a.).

The legal terminal obligation in Italy and Greece obviously leads to useless over-terminalization and thus to misallocation, but not necessarily to a corresponding increase in transactions. Unfortunately, there are no figures for the proportion of inactive terminals in these countries. The rate is likely to be high.

Fig. 4: Card-present transactions in relation to POS terminal density  
Source: ECB SDW



## Notes

- 1 <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52020PC0593>
- 2 On the status of the procedure: <https://eur-lex.europa.eu/legal-content/EN/HIS/?uri=CELEX:52020PC0593>
- 3 Opinion of the ECB of 19 February 2021
- 4 The inclusion of custodian wallet providers as obligated parties under anti money laundering law indicates the focus on crypto-assets. The definition of custodian wallet providers does not refer to virtual currencies in general, but to crypto-assets in particular: „custodian wallet provider’ means an entity that provides services to safeguard private cryptographic keys on behalf of its customers, to hold, store and transfer virtual currencies” (Art. 3 (19)).
- 5 See AMLD Art. 3 (18).
- 6 It is questionable whether balances in payment accounts held by the public with payment institutions and e-money institutions, which may be used exclusively for payment transactions (and are not e-money), can also be designated as scriptural money. With regard to these accounts, unlike demand deposits and e-money accounts, there are no specific legal requirements regarding repayment in cash or other types of money. These balances are also not covered by deposit insurance. Even though the classification of these balances as fiat money may be questioned - due to the lack of a regulatory definition of fiat money - a classification as fiat money would be justified as long as these funds are in practice linked to a legally defined currency.
- 7 This does not apply to virtual currencies, which can only be used as a payment instrument to a limited extent in accordance with Articles 3k and l of PSD2, such as in so-called limited networks. In-game currencies and local currencies are also explicitly mentioned. See Recital 10 and 11 of the EU-Directive 2018/843.
- 8 Directive EU 2018/843 of 30 May 2018. See for the currently valid version of the AMLD: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A02015L0849-20180709>
- 9 Art. 2 does not list funds held in payment accounts of payment institutions. Forgotten or deliberately left out?
- 10 Mastercard’s Position on Markets in Crypto-Assets (MiCA) of 6 December 2020, p. 2
- 11 It even raises the question whether the usual DLT protocols are suitable for true digital bearer instruments. See ECB, Report on a digital euro, October 2020, p. 30.
- 12 David Chaum, Christian Grothoff and Thomas Moser, How to issue a central bank digital currency, SNB Working Papers 3/2021, p. 9
- 13 MF Working Paper WP/20/254, Legal aspects of Central Bank Currency: Central Bank and Monetary Law Considerations, November 2020, p. 12.
- 14 See Podcast “PayTechTalk” No. 58 with Christian Walz and Hugo Godschalk (only in German language): <https://paytechlaw.com/paytechtalk-58-einlagengeschaeft/>  
The U.K. regulator, the FCA, recently (18 May 2021) required e-money issuers to explicitly inform their account holders of the difference between an e-money account and a bank account (particularly with regard to the different safeguarding). For many account holders, the difference is obviously not sufficiently known.
- 15 The FinTechRat at the German Federal Ministry of Finance assumes in its statement “Der digitale, programmierbare Euro” (01/2020) that it will be classified as e-money. See pp. 12-13. At the time of publication, however, the Commission’s draft MiCAR was not yet available.
- 16 See Deutsche Bundesbank, Digitales Geld: Optionen für den Zahlungsverkehr, in: Monatsbericht April 2021, p. 69f. und p. 72.
- 17 ECB, Opinion of the ECB of 19 February 2021 on a proposal for a regulation on Markets in crypto-assets, and amending Directive (EU) 2019/1937 (CON/2021/4), p. 3
- 18 Crypto-Assets: Implications for financial stability, monetary policy, and payments and market infrastructures
- 19 European Commission, Impact assessment on a EU framework on crypto-assets, Executive Summary Sheet, p. 2
- 20 Opinion of the ECB of 19 February 2021, p. 4.
- 21 A sober assessment of the Libra “threat” can be found in “Facebook’s Libra: Game changer or non-starter?”, PaySys Report 6-7, Sept. 2019. See also in the same issue “Facebook’s Libra: E-money or not?”
- 22 How you extract data on the terminals within each country from the data in the ECB Statistical Data Warehouse, we described in our Report No. 5 (July 2020). We would be happy to send you the final result with the current data for 2019 on request. Please send a mail to [paysys-report@paysys.de](mailto:paysys-report@paysys.de)

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PAYSYS REPORT

May 2021

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