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# Virtual currencies under EU anti-money laundering law

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## A B S T R A C T

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Virtual currencies  
EU law  
E-money  
Payment services  
Anti-money laundering  
AML

The goal of this paper is to analyze the extent to which virtual currencies are regulated under EU financial and economic law, with particular attention to cryptocurrencies. The focus of this paper is put on recent developments regarding anti-money laundering legislation. In the last decade, the EU has adopted several legal frameworks governing different aspects of the payments landscape, most notably regarding payment services and electronic money. However, it remains unclear how virtual currencies – and more in particular cryptocurrencies – fit under those legal frameworks. This paper will first briefly analyze whether core legislation in the fields of payment services and e-money can apply to virtual currencies. Next, and more importantly, the focus will be put on recent developments at the EU level, which aim to bring certain virtual currency service providers under the scope of anti-money laundering rules. While at the moment only such inclusion under anti-money laundering rules appears to be viable, it remains to be seen what the consequences of this evolution are for developments in virtual currencies. This paper provides an analysis of a regulatory issue currently debated by legislators worldwide. In doing so, it aims to provide insights valuable to service providers active in this nascent market.

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## 1. Virtual currencies

### 1.1. Types of virtual currencies

The last few years have brought significant changes to the landscape of commercial transactions. Not only e-commerce – and its mobile offshoot m-commerce – continues to thrive, new forms of payment services and service providers have been introduced. One notable development is the rise of virtual currencies. There are different types of virtual currencies.<sup>1</sup> Some virtual currencies are deployed within a closed system – such

as a virtual world. These virtual currencies can generally not be obtained with legal tender, nor can they be exchanged for legal tender. A second type is the unidirectional virtual currencies, such as Amazon Coins or the now abolished Facebook Credits and Microsoft Points. These virtual currencies can be purchased against legal tender, but they cannot be converted back into legal tender. The last type of virtual currencies is bi-directional virtual currencies. These virtual currencies can be obtained against legal tender, and can be exchanged back into legal tender. The prime examples are so-called cryptocurrencies, such as bitcoin, which are distinct in not being issued by a central authority.

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<sup>1</sup> The typology used here follows that proposed by the European Central Bank. ECB, *Virtual Currency Schemes* (ECB 2012) 13–16. <http://dx.doi.org/10.1016/j.clsr.2017.03.011>

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In terms of usability, closed scheme virtual currencies principally only serve the single purpose for which they are created. An example here is World of Warcraft's Gold, which is obtained through playing this game and can only be spent within the game. Unidirectional scheme virtual currencies generally serve a single purpose, or are limited purpose at most. However, it is possible for such virtual currency to gain a broader use. This is, for instance, the case when a classic loyalty scheme is combined with the issuing of a virtual currency. While originally loyalty schemes were often limited to a particular merchant, broader schemes have developed that allow for much wider redemption.<sup>2</sup> Bidirectional scheme virtual currencies can have a very broad use and could theoretically develop into general-purpose payment instruments. In the case of cryptocurrencies, for instance, their adoption has grown exponentially over the last few years, despite their often volatile exchange rates.

## 1.2. Risk analysis

While the ECB's basic typology is useful to differentiate between types of virtual currencies, it does not take into account their specific risks. Therefore, this section will provide a brief risk analysis, with focus on risks posed to: (1) users; (2) the market; (3) investors; and (4) service providers.

First, users of virtual currencies could be exposed to risks associated with the growth of a virtual currency. For instance, if a closed scheme virtual currency would develop into a unidirectional or even a bidirectional virtual currency, the user of such virtual currency would be exposed to risks that would not have been present initially.<sup>3</sup> A second important risk to users relates to losses due to fraudulent or non-genuine exchanges, wallet or exchange theft or hacking, or identity theft. The European Banking Authority (EBA) has conducted a risk assessment exercise, in which it highly ranked these types of risks, meaning they have a high probability to materialize and a high potential impact.<sup>4</sup> In addition, a risk assessment conducted for the Bitcoin Foundation addressed these issues<sup>5</sup>, as did a similar exercise by the Financial Action Task Force (FATF)<sup>6</sup>. Third, virtual currencies – like legal tender – can experience value fluctuations, which can result in the user incurring losses. The EBA ranks this risk as high, since virtual currency markets are relatively opaque, and prices can be more easily manipulated than on regulated legal tender markets<sup>7</sup>, as does the

ECB.<sup>8</sup> Last, also other behavior could pose risks to users. These can include intermediaries or counterparties failing to meet contractual settlement obligations, lack of acceptance or convertibility of virtual currencies, incorrect debiting, inability to access wallet or exchange services, and price manipulation.<sup>9</sup> The ECB in this regard also points: lack of transparency, lack of continuity, potential illiquidity, and high IT and network dependence.<sup>10</sup> An important element of this risk is that virtual currencies often allow anonymous, or at least pseudonymous, transactions.<sup>11</sup>

A first risk posed to the market concerns the money laundering and terrorist financing risk posed by virtual currencies due to anonymous and rapid transfers.<sup>12</sup> Second, the ECB has warned that virtual currencies could have an effect on price stability and monetary policy, if virtual currencies would substantially modify the quantity of money, have an impact on velocity of money, and interact with the physical world economy.<sup>13</sup> In the 2015 update to its opinion, the ECB confirms that this risk has, however, not yet materialized given the low transaction volume of virtual currencies.<sup>14</sup> Third, there is a risk to payment systems' stability, where it is remarked that virtual currency payment systems could face the same risks as classic payment systems, yet are not subjected to the same regulatory oversight.<sup>15</sup> Last, the ECB warns that the reputation of central banks could be damaged through negative evolutions in virtual currencies, if their use would grow considerably.<sup>16</sup>

For investors, the risks for users of virtual currencies apply as well. Second, investors are particularly exposed to the volatility of cryptocurrencies.<sup>17</sup> While risk is inherent to investments, the European legislator has established protection mechanisms at least to ensure that the non-institutional investor is properly informed about such risk. However, such protection is absent when using virtual currencies. Third, legislators have taken steps to prohibit trade in financial products dependent

<sup>8</sup> European Central Bank, *Virtual Currency Schemes – a further analysis* (ECB 2015) 23. See also: Mariam Kiran and Mike Stannett, 'Bitcoin Risk Analysis' (nemode 2014) < [nemode.ac.uk](http://nemode.ac.uk) > 13. Note that the Bitcoin Foundation expects this matter to resolve itself once cryptocurrency adoption increases. Harper, *op. cit.*, 23.

<sup>9</sup> European Banking Authority, *op. cit.*, 22 and 32; Kiran, *op. cit.*, 13–14.

<sup>10</sup> European Central Bank 2015, *op. cit.*, 20–22.

<sup>11</sup> European Central Bank 2015, *op. cit.*, 22; Financial Action Task Force, *op. cit.*, 9.

<sup>12</sup> European Banking Authority, *op. cit.*, 32–35; HM Treasury, *UK national risk assessment of money laundering and terrorist financing* (HM Treasury 2015) 82–83; Kiran, *op. cit.*, 7; Angela Irwin, Jill Slay, Kim-Kwang Choo and Lin Liu, 'Are the financial transactions conducted inside virtual environments truly anonymous? An experimental research from an Australian perspective' [2013] 16 *Journal of Money Laundering Control* 6, 7; Financial Action Task Force, *op. cit.*, 9. Though Europol reported not to have concrete indications regarding the actual use of virtual currencies with regard to terrorist financing. Europol, 'Changes in modus operandi of Islamic State terrorist attacks' (Europol 2016) 7.

<sup>13</sup> ECB, *op. cit.*, 34.

<sup>14</sup> European Central Bank 2015, *op. cit.*, 17 and 26–27.

<sup>15</sup> European Central Bank 2012, *op. cit.*, 40–42. Though also this risk has yet to materialize. European Central Bank 2015, *op. cit.*, 26–27.

<sup>16</sup> European Central Bank 2012, *op. cit.*, 45.

<sup>17</sup> Kiran, *op. cit.*, 17.

<sup>2</sup> An example are frequent flyer programs. Originally, the collected points were to be used solely to book flights. Nowadays, they can be used to attain a wide range of services, such as hotel bookings or car rentals.

<sup>3</sup> Christopher Thorpe, Jessica Hammer, Jean Camp, Jon Callas and Michael Bond, 'Virtual Economies: Threats and Risks' [2007] *Proceedings of Financial Cryptography and Data Security* 1, 2–3.

<sup>4</sup> European Banking Authority, 'Opinion on 'virtual currencies'' (EBA/Op/2014/08 2014) 21–22 and 31.

<sup>5</sup> Jim Harper, 'Removing Impediments to Bitcoin's Success: A Risk Management Study' [2014] *Bitcoin Foundation Research Brief* 1, 25.

<sup>6</sup> Financial Action Task Force, 'Virtual Currencies: Key Definitions and Potential AML/CFT Risks' (FATF 2014) 9.

<sup>7</sup> European Banking Authority, *op. cit.*, 23.

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