

THE VIRTUAL
CURRENCY
REGULATION
REVIEW

SECOND EDITION

Editors

Michael S Sackheim and Nathan A Howell

THE LAWREVIEWS

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PREFACE

We are pleased to introduce the second edition of *The Virtual Currency Regulation Review* (the *Review*). The increased acceptance and use of virtual currencies by businesses and the exponential growth of investment opportunities for speculators marked late 2018 and early 2019. As examples, in May 2019, it was reported that several of the largest global banks were developing a digital cash equivalent of central bank-backed currencies that would be operated via blockchain technology, and that Facebook was developing its own virtual currency pegged to the US dollar to be used to make payments by people without bank accounts and for currency conversions.

The *Review* is a country-by-country analysis of developing regulatory initiatives aimed at fostering innovation, while at the same time protecting the public and mitigating systemic risk concerning trading and transacting in virtual currencies. On 28 May 2019, the International Organizations of Securities Commissions (IOSCO) published a report titled 'Issues, Risks and Regulatory Considerations Relating to Cryptoassets'. This report provided guidance on the unique issues concerning overseeing cryptoasset trading platforms that provide onboarding, clearing, settlement, custody, market making and advisory services for investors under the umbrella of a single venue. IOSCO advised global regulators of these platforms that their goals should be to ensure that investors are protected, fraud and manipulation are prevented, cryptoassets are sold in a fair way and systemic risk is reduced – the same goals that apply to securities regulation. IOSCO also advised that national regulators should share information, monitor market abuse, take enforcement actions against cryptoasset trading platforms when appropriate and ensure that these venues are resilient to cyberattacks. In the United States, the US Securities and Exchange Commission has not yet approved public offerings of virtual currency exchange-traded funds. The US Commodity Futures Trading Commission (CFTC) has approved of virtual currency futures trading on regulated exchanges and the trading of virtual currency swaps on regulated swap executed facilities. US regulators remain concerned about potential abuses and manipulative activity concerning virtual currencies, including the proliferation of fraudulent virtual currency Ponzi schemes. In May 2019, the US Financial Crimes Enforcement Network issued guidance concerning the application of bank secrecy laws relating to financial institutions with respect to identifying and reporting suspicious activities by criminals and other bad actors who exploit convertible virtual currencies (virtual currencies whose values can be substituted for fiat currencies) for illicit purposes. The CFTC also issued an alert offering potential whistle-blower rewards to members of the public who report virtual currency fraud or manipulation to the CFTC.

Fortunes have been made and lost in the trading of virtual currencies since Satoshi Nakamoto published a white paper in 2008 describing what he referred to as a system for peer-to-peer payments, using a public decentralised ledger known as a blockchain and

cryptography as a source of trust to verify transactions. That paper, released in the dark days of a growing global financial market crisis, laid the foundations for Bitcoin, which would become operational in early 2009. Satoshi has never been identified, but his white paper represented a watershed moment in the evolution of virtual currency. Bitcoin was an obscure asset in 2009, but it is far from obscure today, and there are now many other virtual currencies and related assets. In 2013, a new type of blockchain that came to be known as Ethereum was proposed. Ethereum's native virtual currency, Ether, went live in 2015 and opened up a new phase in the evolution of virtual currency. Ethereum provided a broader platform, or protocol, for the development of all sorts of other virtual currencies and related assets.

Whether virtual currencies will be widely and consistently in commercial use remains uncertain. However, the virtual currency revolution has now come far enough and has endured a sufficient number of potentially fatal events that we are confident virtual currency in some form is here to stay. Virtual currencies and the blockchain and other distributed ledger technology on which they are based are real, and are being deployed right now in many markets and for many purposes. These technologies are being put in place in the real world, and we as lawyers must now endeavour to understand what that means for our clients.

Virtual currencies are essentially borderless: they exist on global and interconnected computer systems. They are generally decentralised, meaning that the records relating to a virtual currency and transactions therein may be maintained in a number of separate jurisdictions simultaneously. The borderless nature of this technology was the core inspiration for the *Review*. As practitioners, we cannot afford to focus solely on our own jurisdictional silos. For example, a US banking lawyer advising clients on matters related to virtual currency must not only have a working understanding of US securities and derivatives regulation; he or she must also have a broad view of the regulatory treatment of virtual currency in other major commercial jurisdictions.

Global regulators have taken a range of approaches to responding to virtual currencies. Some regulators have attempted to stamp out the use of virtual currencies out of a fear that virtual currencies such as Bitcoin allow capital to flow freely and without the usual checks that are designed to prevent money laundering and the illicit use of funds. Others have attempted to write specific laws and regulations tailored to virtual currencies. Still others – the United States included – have attempted to apply legacy regulatory structures to virtual currencies. Those regulatory structures attempt what is essentially 'regulation by analogy'. For example, a virtual currency, which is not a fiat currency, may be regulated in the same manner as money, or in the same manner as a security or commodity. We make one general observation at the outset: there is no consistency across jurisdictions in their approach to regulating virtual currencies. That is, there is currently no widely accepted global regulatory standard. That is what makes a publication such as the *Review* both so interesting and so challenging to assemble.

The lack of global standards has led to a great deal of regulatory arbitrage, as virtual currency innovators shop for jurisdictions with optimally calibrated regulatory structures that provide an acceptable amount of legal certainty. While some market participants are interested in finding the jurisdiction with the lightest touch (or no touch), most legitimate actors are not attempting to flee from regulation entirely. They appreciate that regulation is necessary to allow virtual currencies to achieve their potential, but they do need regulatory systems with an appropriate balance and a high degree of clarity. The technology underlying virtual currencies is complex enough without adding layers of regulatory complexity into the mix.

It is perhaps ironic that the principal source of strength of virtual currencies – decentralisation – is the same characteristic that the regulators themselves seem to be displaying. There is no central authority over virtual currencies, either within and across jurisdictions, and each regulator takes an approach that seems appropriate to that regulator based on its own narrow view of the markets and legacy regulations. We believe optimal regulatory structures will emerge and converge over time. Ultimately, the borderless nature of these markets allows market participants to ‘vote with their feet’, and they will gravitate toward jurisdictions that achieve the right regulatory balance of encouraging innovation and protecting the public and the financial system. It is much easier to do this in a primarily electronic and computerised business than it would be in a bricks-and-mortar business. Computer servers are relatively easy to relocate; factories and workers are less so.

The second edition of the *Review* provides a practical analysis of recent legal and regulatory changes and developments, and of their effects, and looks forward to expected trends in the area of virtual currencies on a country-by-country basis. It is not intended to be an exhaustive guide to the regulation of virtual currencies globally or in any of the included jurisdictions. Instead, for each jurisdiction, the authors have endeavoured to provide a sufficient overview for the reader to understand the current legal and regulatory environment.

Virtual currency is the broad term that is used in the *Review* to refer to Bitcoin, Ether, tethers and other stablecoins, cryptocurrencies, altcoins, ERC20 tokens, digital, virtual and cryptoassets, and other digital and virtual tokens and coins, including coins issued in initial coin offerings. We recognise that in many instances the term virtual currency will not be appropriate, and other related terms are used throughout as needed. In the law, the words we use matter a great deal, so, where necessary, the authors of each chapter provide clarity around the terminology used in their jurisdiction and the legal meaning given to that terminology.

Based on feedback on the first edition of the *Review* from members of the legal community throughout the world, we are confident that attorneys will find the updated second edition to be an excellent resource in their own practices. We are still in the early days of the virtual currency revolution, but it does not appear to be a passing fad. The many lawyers involved in this treatise have endeavoured to provide as much useful information as practicable concerning the global regulation of virtual currencies.

The editors would like to extend special thanks to Ivet Bell (New York) and Dan Applebaum (Chicago), both Sidley Austin LLP associates, for their invaluable assistance in organising and editing the second edition of the *Review*, and particularly the United States chapter.

Michael S Sackheim and Nathan A Howell

Sidley Austin LLP

New York and Chicago

August 2019

BELGIUM

*Michiel Van Roey and Louis Bidaine*¹

I INTRODUCTION TO THE LEGAL AND REGULATORY FRAMEWORK

i Virtual currencies

Virtual currencies are defined by the European Central Bank (ECB) as ‘a digital representation of value, not issued by a central bank, credit institution or e-money institution, which, in some circumstances, can be used as an alternative to money’.² It clarifies that even though they can be used as an alternative to money, virtual currencies are not money or currency from a legal perspective.³ It provides further clarification by proposing three subcategories of virtual currencies that are classified according to their interaction with legal tender (or similar instruments) and on their ability to be used to purchase tangible goods and services.⁴ These three subcategories are:

- a Closed virtual currencies schemes: these are virtual currencies that have no interaction with the physical world. They cannot be obtained using legal tender (or similar instruments), nor can they be exchanged back into legal tender, and they cannot be used for purchasing goods and services in the physical economy. An example given by the ECB is World of Warcraft (WoW) gold, an in-game virtual currency that WoW players can use to better equip their avatars to reach higher levels in the game.
- b Virtual currencies schemes with unidirectional flow: these are virtual currencies that can be purchased using fiat currency but cannot be converted back into fiat currency. Examples are Facebook credits or air miles in frequent flyer programmes.
- c Virtual currencies schemes with bidirectional flow: these are virtual currencies that users can buy and sell according to an exchange rate with fiat currency, and that can be used to purchase physical goods and services. The most notable example of bidirectional virtual currencies are cryptocurrencies, which form the main subject of this chapter considering their increasing influence and controversy in today’s economy.

1 Michiel Van Roey, representing MVR Legal BV, is general counsel and ICO legal adviser at Profila GmbH and Belux legal counsel at Cisco Systems, and Louis Bidaine is a Junior Associate at Stibbe Brussels.

2 European Central Bank (2015), ‘Virtual Currency Schemes – a further analysis’, <https://www.ecb.europa.eu/pub/pdf/other/virtualcurrencyschemesen.pdf>, p. 4.

3 ‘From an economic perspective, the virtual currencies currently known about do not fully meet all three functions of money defined in economic literature: (i) medium of exchange, [. . .], (ii) store of value [. . .], 3) unit of account’, European Central Bank (2015), o.c., 23. This opinion is shared by the Advocate-General of the Belgian Court of Cassation, André Henkes (https://datanews.levif.be/ict/actualite/il-faut-une-legislation-sur-les-crypto-monnaies/article-normal-885869.html?cookie_check=1562445348).

4 https://datanews.levif.be/ict/actualite/il-faut-une-legislation-sur-les-crypto-monnaies/article-normal-885869.html?cookie_check=1562445348). European Central Bank (2015), o.c., 6.

ii Cryptocurrencies and tokens⁵

Although Bitcoin⁶ is still by far the most well-known cryptocurrency with the highest market capitalisation, altcoins have emerged in the past few years, and they are bringing innovation to the first generation Bitcoin protocol. Several second (and even third⁷) generation cryptocurrencies and tokens have emerged over the past few years. One well-known example is Ether, the cryptocurrency for operating the distributed application platform Ethereum, an open-source, blockchain technology-based software platform that runs smart contracts. Ether has many uses; it provides software developers with incentives to write smart contracts and compensates them for their attributed resources;⁸ it can be used for executing smart contracts and for paying for goods and services on the Ethereum network. Ethereum, as a platform, is further used to develop other cryptocurrencies and tokens (i.e., ERC20 tokens such as Tron (TRX), OmiseGO (OMG), Icon (ICX)⁹) through initial coin offerings (ICOs) (see Section VII).

Recent years have shown the incredible potential of virtual currencies and tokens. Just as every new technology does, virtual currencies face obstacles and uncertainties that affect their market price substantially. As discussed in this chapter, the uncertainty about the legal framework that applies to virtual currencies and tokens is still a major hindrance to their development and adoption in the market.

II SECURITIES AND INVESTMENT LAWS

i Financial market regulators

The financial market in Belgium is regulated by two autonomous supervisory bodies, namely the Financial Services and Markets Authority¹⁰ (FSMA) and the National Bank of Belgium (NBB).¹¹ The FSMA and NBB are in charge of supervising and monitoring companies operating in the Belgian financial market, and they each have clearly defined roles.

5 The term cryptocurrency often (wrongly) serves as a collective term for different crypto instruments, covering both those that are meant as a means of payment (the actual 'coins' or 'cryptocurrencies', such as Bitcoin) as well as crypto instruments that have a utility or an investment function. For the purpose of this chapter, the latter utility and investment instruments are referred to as 'tokens'. For a more detailed overview of the difference and reasoning behind the distinction between cryptocurrencies and tokens, see A Snyers and K Pauwels, 'De ITO: A new kid on the block in het kapitaalmarktenrecht', *TBH* 2019, Vol. 2, 179.

6 On 17 December 2017, Bitcoin's market capitalisation attained an all-time high of US\$332 billion.

7 Third generation cryptocurrencies such as Cardano (ADA) are considered to be more sustainable, interoperable and scalable. <https://steemit.com/cryptocurrency/@ramsteem/cardano-ada-3rd-generation-of-cryptocurrency>.

8 'Ether, the crypto-fuel for the Ethereum network', see <https://www.coindesk.com/information/what-is-ether-ethereum-cryptocurrency>.

9 Ethereum Request for Comment, a technical standard or universal language used for smart contracts on the Ethereum blockchain that implement tokens and that cause them to be traded with other tokens on the Ethereum network, <https://cointelegraph.com/explained/erc-20-tokens-explained>.

10 See <https://www.fsma.be/en>.

11 See <https://www.nbb.be/en>.

The FSMA protects the interests of Belgian financial consumers, and is responsible for supervising financial products, financial information published by companies and financial service providers.¹²

The NBB is responsible for overseeing individual financial institutions (e.g., credit institutions, investment firms, payment institutions, electronic money institutions, insurance companies) and the proper functioning of the financial system as a whole.

ii Regulatory framework governing financial markets

As there is no virtual currency-specific legislation on securities and investment laws in Belgium, we elaborate on the existing framework that applies to securities and investments laws. This framework governs financial instruments, investment instruments and financial products, and assesses if and to what extent it applies to virtual currencies and its market participants.

Regulatory framework governing financial instruments and investment services

The Belgian legislation on financial instruments consists of the Act of 21 November 2017 regarding the infrastructures of the market for financial instruments, which transposes Directive 2014/65 into national law (the Act on Financial Instruments), and the Act of 25 October 2016 on access to investment services companies, and on the legal status and supervision of portfolio management and investment advice companies (the Act on Investment Services). The Act on Financial Instruments and the Act on Investment Services are the national laws implementing the second Markets in Financial Instruments Directive (MiFID II).¹³ This MiFID-based legal framework aims to foster investor protection and to cope with new trading technologies, practices and activities.

Virtual currencies as financial instruments

MiFID II and the above-mentioned Acts implementing it apply to certain types of entities (such as investment firms or credit institutions) that offer investment services and activities¹⁴ relating to financial instruments. The core of this legislation revolves around the notion of financial instruments.¹⁵ The term financial instruments covers a range of instruments, including transferable securities and derivative products.¹⁶

It is essential for market participants to assess whether virtual currencies fall under the concept of financial instrument. For this assessment, the distinction made earlier between unidirectional scheme virtual currencies and bidirectional scheme virtual currencies is relevant. The first two categories of virtual currencies, namely the closed and unidirectional

12 This also covers supervising currency exchange offices and intermediaries in banking and investment services, see <https://www.fsma.be/en>.

13 Directive 2014/65/EU of 15 May 2014 on markets for financial instruments and amending Directive 2002/92/EC and Directive 2011/61/EU.

14 Defined as 'a service or activity detailed hereafter that relates to financial instruments' and includes eight different services and activities, including the 'reception and transmission of orders in relation to one or more financial instruments', 'execution of orders on behalf of clients' or 'operating a multilateral trade facility', Article 2(1) Act on Investment Services.

15 See Article 4, 15° MiFID II, which refers to Section C of Annex I, in which the list of financial instruments is detailed. See Article 3, 16° Act on Financial Instruments, which refers to Article 2, 1 Belgian Act of 2 August 2002 on the supervision of the financial sector and financial services.

16 Article 2(24) MiFID II.

scheme ones, should not be considered financial instruments. Closed scheme virtual currencies cannot be obtained using legal tender, and unidirectional scheme virtual currencies, although they can be obtained using legal tender, cannot be converted back into legal tender or similar instruments.¹⁷ Their (limited) transferability does not qualify them as investment.¹⁸

The situation for bidirectional scheme virtual currencies is less straightforward because not all virtual currencies that fall in this category have the same characteristics. Below, we distinguish the three different characteristics of bidirectional scheme virtual currencies. They are used:

- a* as a means of payment (coins or cryptocurrencies, allowing the owner to use them to pay for certain goods and services that are purchased on the internet (e.g., using Bitcoin to make an online purchase of a wellness session or appointment));
- b* as a means of investment (investment tokens, granting the owner an economic interest in the company behind the token, linked to the performance of the company); or
- c* for a utilitarian purpose (utility tokens, granting the owner access to certain goods or services that are offered on the platform of the issuer).¹⁹

In some specific cases, a token can even have a hybrid function: for example, Ether can be used in many ways on the Ethereum network, but it also functions as a means of payment for buying other tokens in the process of ICOs.²⁰

If a bidirectional scheme virtual currency constitutes a means of payment only or has only a utility function, it seems unlikely that it can be considered a financial instrument under Belgian law. Cryptocurrencies and utility tokens are not included in the list of financial instruments in the Act on Financial Instruments, nor do they seem to fall under the scope of transferable securities, as they do not represent a certain right on the company that issued the token.²¹ However, the problem with cryptocurrencies and utility tokens is that apart from their principal use, they are being traded on virtual currency exchanges, and fluctuate in price just as other virtual currencies do, and therefore also seem to have some investment function. This can be illustrated by Siacoin.

Siacoin is a utility token that can be used on the Sia storage platform, a decentralised storage platform that:

- a* leverages under-utilised hard drive capacity around the world to create a data storage marketplace;
- b* allows users to obtain Siacoins when they make their laptops' hardware available for the benefit of the platform; and
- c* allows users to store files by paying Siacoins in return.²²

17 N Vandezande, *Virtual Currencies: A Legal Framework*, Cambridge, Intersentia, 2018, 321.

18 *ibid.*, 322.

19 This distinction between payment, utility and asset tokens is used by the FSMA (Communication No. FSMA_2017_20 of 13 November 2017 on (initial coin offerings), see https://www.fsma.be/sites/default/files/public/content/EN/Circ/fsma_2017_20_en.pdf, p. 2, as well as by other financial market authorities such as the Swiss Financial Market Authority (FINMA), see <https://www.finma.ch/en/news/2018/02/20180216-mm-ico-wegleitung/>; A Snyers, K Pauwels, 'ICOs in Belgium: Down the Rabbit Hole into Legal No Man's Land? Part 1', *International Company and Commercial Law Review*, 2018, Issue 8, 491.

20 A Snyers, K Pauwels, *o.c.*, 487.

21 T Spaas and M Van Roey, 'Quo Vadis Bitcoin?', *Computerrecht* 2015/84, June 2015, ed. 3, 118.

22 See <https://sia.tech/>.

There is no doubt that Siacoin is a utility token, but a person that bought US\$1,000 of Siacoins on 7 January 2016 at a rate of US\$0.000017 (to obtain roughly 59 million Siacoin tokens) and sold that same amount of utility tokens two years later on 7 January 2018 at US\$0.09715 would have made approximately US\$5.7 million in profit in just two years' time.²³ Even if the primary purpose of Siacoin is utilitarian, it has been functioning in practice as a means of investment.

Apart from this example, it is undeniable that certain bidirectional scheme virtual currencies can serve primarily as investments, especially if such currency is issued by a private company in the framework of an ICO and has characteristics that entitle investors to a share in the profits of the blockchain-based company that issues the virtual currency, that carries voting rights or that gives right to some kind of interest revenue.²⁴ In these scenarios, the tokens convey a certain right to the issuer (as per transferable securities), and their value is linked to the success of the company's business. It seems likely that virtual currencies with these characteristics would be considered a financial instrument under Belgian law.

Obligations under the Act on Financial Instruments and the Act on Investment Services

If bidirectional scheme virtual currencies were considered financial instruments under Belgian law, virtual currency market players providing investment services and activities²⁵ relating to virtual currencies would have to comply with the certain obligations on transparency or licensing, or both,²⁶ that are imposed by the above-mentioned financial legislation, which includes obligations regarding rules of conduct:²⁷ to act in an honest, fair and professional way that best serves the customer's interest; to provide customers with information that is clear, fair and not misleading; and to offer services specifically tailored to the customer's situation.

The regulatory framework governing investment instruments

The legal framework governing investment instruments consists of the Prospectus Act of 2018 (the Prospectus Act).²⁸ The Prospectus Act requires that a prospectus for a public offer²⁹ of investment instruments be drafted. A list of such instruments can be found in Article 3(1) of the Prospectus Act. Its scope of application is very broad because investment instruments cover a catch-all category of 'all other instruments that enable carrying out a financial investment, regardless of the underlying assets'.³⁰ Because virtual currencies are all traded on

23 See <https://coinmarketcap.com/currencies/siacoin/>.

24 See <https://cointelegraph.com/explained/ico-explained>; A Snyers, K Pauwels, 'ICOs in Belgium: Down the Rabbit Hole into Legal No Man's Land? Part 1', *International Company and Commercial Law Review*, 2018, Issue 8, p. 489.

25 The Belgian Act on Investment Services, implementing into Belgian law certain provisions of MiFID II, is aimed to arrange access to and the provision of investment services, which it defines as 'a service or activity detailed hereafter that relates to financial instruments' and includes the following eight services and/or activities, see Article 2(1) Belgian Act on Investment Services.

26 For example, Article 6 Belgian Act on Investment Services reads 'investment firms governed by Belgian law must, before taking up their activities, obtain one of the following authorisations from the supervisory authority, irrespective of the place where they will carry on their activities [. . .]'.

27 See 'Subpart 9, 'Market rules', Articles 30–34 Act on Financial Instruments.

28 Act of 11 July 2018 regarding public offers of investment instruments and the admission of investment instruments on a regulated market (Prospectus Act), Belgian State Gazette, 20 July 2018.

29 See Article 4(2) Prospectus Act for the definition of public offer.

30 Article 3 §1, 11° Prospectus Act.

exchange platforms, and because their highly volatile nature leads to market speculation, it could be argued that bidirectional scheme virtual currencies would all fall under the scope of investment instrument within the meaning given to the term under the Prospectus Act.³¹ Hence, companies offering these virtual currencies to the public and certain intermediaries that act on their behalf would have to comply with the prospectus requirement under certain circumstances.³²

FSMA guidance and FSMA regulation on financial products

The FSMA has taken a rather neutral approach to virtual currencies, putting the onus on market participants to self-assess whether a given virtual currency would fall under the above-mentioned financial legislation. The FSMA mentions that this assessment should be based on the specific characteristics of the virtual currency, and states that the regulatory status of virtual currencies is to be assessed on a case-by-case basis.³³

Apart from the neutral stance of the FSMA in relation to virtual currencies and the absence of any virtual currency-specific legislation in Belgium, the FSMA has adopted a regulation that applies to financial products (which are to be considered a subsection of the financial instruments as discussed earlier). This regulation prohibits the 'distribution, in Belgium, as a professional activity, to one or several retail customers of a financial product whose return depends directly or indirectly on a virtual money'.³⁴ This ban on the distribution of financial products, which are defined as savings, investment or insurance products,³⁵ applies to virtual money, which is, in its turn, defined as 'any form of unregulated digital currency that is not legal tender'. This ban would apply to derivatives if return depends directly or indirectly on a virtual currency. This would mean, for example, that exchange-traded funds (ETFs),³⁶ which would invest the money of investors only in virtual currencies, would be banned from offering their services in Belgium. This is highly topical considering the multiple requests for virtual currency ETFs that are currently pending before the United States Securities and Exchange Commission (SEC). The SEC must give its decision on these requests by 18 October 2019.³⁷

In the explanatory note accompanying the regulation, the FSMA describes various risks associated with virtual money, from hacking of trade platforms to lack of authority

31 A Snyers, K Pauwels, 'ICOs in Belgium: Down the Rabbit Hole into Legal No Man's Land? Part 1, *International Company and Commercial Law Review*, 2018, Issue 8, p. 499.

32 Article 7 Prospectus Act.

33 See https://www.fsma.be/sites/default/files/public/content/EN/Circ/fsma_2017_20_en.pdf, p.2.

34 Article 2(2) FSMA regulation of 3 April 2014, which was approved by a Royal Decree of 24 April 2014, published in the Belgian Official Gazette on 20 May 2014; for the full text, see https://www.fsma.be/sites/default/files/public/sitecore/media%20library/Files/fsmfiles/wetgeving/reglem/en/reglem_24-04-2014.pdf.

35 Article 2, 39 Belgian Act of 2002 on the supervision of the financial sector and on financial services.

36 'An exchange-traded fund (ETF) is a passive investing instrument that tracks underlying benchmark indexes (such as the NASDAQ-100 Index, S&P 500, Dow Jones, and others), commodities, bonds, or portfolios of assets and replicates their performances. ETFs can be traded like a common stock on exchanges, combining the diversified holdings of a fund with the low cost and tradability of a share': <https://cryptoren.com/wiki/exchange-traded-fund-etf-meaning/>.

37 'Bitwise Files With US Securities and Exchange Commission to Launch Crypto ETF', see <https://cointelegraph.com/news/bitwise-files-with-us-securities-and-exchange-commission-to-launch-crypto-etf>; <https://cointelegraph.com/news/sec-postpones-vaneck-bitcoin-etf-yet-again-should-we-expect-an-approval-in-2019>.

supervision and price volatility. The FSMA also describes several dishonest practices that have been identified in relation to derivative cryptocurrency products where the distribution of such derivative financial products to consumers has led to significant losses to the investors in question. This clearly indicates that the FSMA intends to use this regulation to protect small retail customers and investors against these very complicated financial products.

III BANKING AND MONEY TRANSMISSION

i Electronic money directive

The Act of 11 March 2018 regarding, inter alia, the emission of electronic money (e-money) (the E-money Act),³⁸ which is the Belgian law implementing the provisions of the E-money Directive,³⁹ aims to facilitate the emergence of new, innovative and secure e-money services as well as to encourage effective competition between all market participants.

The E-money Act defines e-money as ‘electronically, including magnetically, stored monetary value as represented by a claim on the issuer which is issued upon receipt of funds for the purpose of making payment transactions [. . .] and that is accepted by a natural or legal person other than the electronic money issuer’.⁴⁰ Only bidirectional scheme virtual currencies⁴¹ might have some resemblances to this definition of e-money, that is, they are both stored electronically and some virtual currencies are accepted as a means of payment by other parties than the e-money issuer. However, virtual currencies should not be considered e-money under the E-money Act. The main argument supporting this is that virtual currencies are not issued upon receipt of funds because a virtual currency is created digitally.⁴² The requirement that e-money needs to be issued upon receipt of funds means that the e-money issuer cannot just create new e-money units, because only central banks have a monopoly over money creation.⁴³ However, this is just what a virtual currency issuer does: digitally creating a certain amount of virtual currencies through software development. In addition, virtual currencies usually do not create a claim on the issuer, with the exception

38 Article 1 Section 3, 3°–4° Belgian E-money Act.

39 Directive 2009/110/EC of 16 September 2009 on the taking up, pursuit and prudential supervision of the business of electronic money institutions amending Directives 2005/60/EC and 2006/48/EC and repealing Directive 2000/46/EC (E-money Directive), see <https://eur-lex.europa.eu/legal-content/en/ALL/?uri=CELEX:32009L0110>.

40 Article 2(2) E-money Directive and Article 2, 77° Belgian E-money Act.

41 As closed scheme virtual currencies cannot be obtained using legal tender or exchanged back into legal tender, they fall outside the definition of e-money (which needs to be ‘issued upon receipt of funds’). The same applies for unidirectional scheme virtual currencies, which have a limited transferability and cannot be redeemed back into legal tender. Although see the definition of e-money in N Vandezande, *Virtual Currencies: A Legal Framework*, Cambridge, Intersentia, 2018, 222–223.

42 N Vandezande, o.c., 272; according to Zeeshan Feroz CEO of Coinbase UK, Coinbase will be allowed to issue e-money and to provide payment services, see <https://cryptoslate.com/coinbase-issued-e-money-license-uk-europe/>.

43 N Vandezande, o.c., 218.

of certain bidirectional scheme virtual currencies that could be considered to be a means of investment.⁴⁴ Consequently, virtual currencies fall outside the scope of the Belgian legal framework concerning e-money.⁴⁵

ii Payment service directive

Payment services are regulated at EU level by the Payment Services Directive II (PSD II),⁴⁶ which has been transposed into Belgian law through the adoption of the Act of 11 March 2018⁴⁷ (the Payment Services Act). PSD II and the Payment Services Act aim to govern payment services and payment service providers, and to harmonise consumer protection and the rights and obligations for payment providers and users.

Although the Payment Services Act does not regulate the emission of virtual currencies per se, the question arises of whether certain virtual currency market players provide services that could be considered payment services, and whether these players can be seen as part of a certain limited number of payment service providers⁴⁸ that have a monopoly over the provision of such services in Belgium.⁴⁹ If so, a licence needs to be obtained from the NBB before any payment service provider can offer payment services in Belgium to consumers.⁵⁰

The Payment Services Act defines payment services as any payment service set out in Annex I, which lists eight different payment services, including the execution of payment transactions, money remittance, payment initiation services and account information services.⁵¹ This definition seems very broad, but this broadness is mitigated by several

44 See Section II, 'virtual currencies as financial instruments or investment services'.

45 As a side note, the E-money Directive and the E-money Act put into place a system of e-money licences that institutions can obtain only if they fulfil certain requirements. Even though virtual currencies are not considered e-money, it is interesting to see that some actors, such as the exchange platform Coinbase, have taken a proactive stance towards the regulatory framework on e-money. On 21 March 2018, Coinbase obtained an e-money licence from the United Kingdom Financial Conduct Authority, which means Coinbase is looking to expand its offering beyond virtual currencies, or is anticipating changes in e-money legislation, see https://support.coinbase.com/customer/en/portal/Articles/2928609-e-money-license?b_id=13521.

46 Directive (EU) 2015/2366 of the European Parliament and of the Council of 25 November 2015 on payment services in the internal market, amending Directives 2002/65/EC, 2009/110/EC, and 2013/36/EU and Regulation (EU) No 1093/2010, and repealing Directive 2007/64/EC, see <https://eur-lex.europa.eu/legal-content/en/TXT/?uri=CELEX:32015L2366>.

47 Act of 11 March 2018 on the legal status and the supervision of payment institutions and electronic money institutions, access to the activities of payment service providers and the issuance of electronic money, and access to payment systems. Article 107 PSD II provides for full harmonisation, namely that 'member states can neither keep nor introduce provisions that are different from those contained in the Directive', which entails that EU legislation in relation to payment services is fully harmonised throughout the EU.

48 That is, credit institutions; e-money institutions; bpost; NDD; ECB; federal, regional, community and local Belgian authorities, when they are not acting as a public authority; and payment institutions.

49 Article 1 PSDII and corresponding Article 1 Payment Services Act.

50 Article 6 Payment Services Act.

51 '1. Services enabling cash to be placed on a payment account as well as all the operations required for operating a payment account; 2. Services enabling cash withdrawals from a payment account as well as all the operations required for operating a payment account; 3. Execution of payment transactions, including transfers of funds on a payment account with the user's payment service provider or with another payment service provider: (a) execution of direct debits, including one-off direct debits; (b) execution of payment transactions through a payment card or a similar device; (c) execution of credit transfers, including standing orders; 4. Execution of payment transactions where the funds are covered by a credit line for a payment

exemptions in Article 3 of the Payment Services Act. For example, according to the limited network exemption, services based on a payment instrument ‘allowing the holder to acquire goods or services only in the premises of the issuer [. . .]’ or ‘that can be used only to acquire a very limited range of goods or services’ fall outside the scope of the Payment Services Act.⁵²

Based on this latter exemption, closed scheme virtual currencies and (most) unidirectional scheme virtual currencies can be excluded directly based on their (absence of or limited) transferability. This exemption could even apply to certain bidirectional scheme virtual currencies if their use is limited according to what is described above.⁵³ Whether virtual currency service providers will fall within the scope of the Payment Services Act will have to be assessed on a case-by-case basis taking into account the factual circumstances of each case.

IV ANTI-MONEY LAUNDERING

At the EU level, the Fourth Anti-Money Laundering Directive (AMLD4),⁵⁴ transposed into Belgian law through the adoption of the Act of 18 September 2017 on the prevention of money laundering and terrorism funding (the AML Act),⁵⁵ aims to intensify efforts to effectively combat money laundering and terrorism financing. It does so by imposing certain risk assessment obligations and obligations to identify customers (know your customer (KYC)), and putting in place transaction monitoring procedures for obliged entities (i.e., certain financial and credit institutions as well as certain legal entities and natural persons in the exercise of their professional activities).

The AML Act applies to goods and property derived from criminal activity and to funds used in terrorism financing.⁵⁶ Although virtual currencies could be seen as both goods or property and funds, the AML Act only imposes reporting obligations on obliged entities.⁵⁷ These types of entities are listed exhaustively, but no virtual currency market participant is mentioned. Therefore, adding virtual currencies to the concepts of goods or property and funds would not have any actual effect, given that they are not considered to be obliged entities that need to report on any anti-money laundering (AML) or terrorism-funding activities.⁵⁸

service user: (a) execution of direct debits, including one-off direct debits; (b) execution of payment transactions through a payment card or a similar device; (c) execution of credit transfers, including standing orders; 5. Issuing of payment instruments and/or acquiring of payment transactions; 6. Money remittance; 7. Payment initiation services; 8. Account information services.⁵

52 Article 3(k) Payment Services Act; N Vandezande, *Virtual Currencies: A Legal Framework*, Cambridge, Intersentia, 2018, 258.

53 N Vandezande, *Virtual Currencies: A Legal Framework*, Cambridge, Intersentia, 2018, 272.

54 Directive 2015/849 of 20 May 2015 on the prevention of the use of the financial system for the purposes of money laundering or terrorist financing, amending Regulation (EU) No. 648/2012 of the European Parliament and of the Council, and repealing Directive 2005/60/EC of the European Parliament and of the Council and Commission Directive 2006/70/EC.

55 Articles 2, 3 and 5 AML Act.

56 Article 3 AML Act.

57 Article 4, 18 AML Act.

58 N Vandezande, *Virtual Currencies: A Legal Framework*, Cambridge, Intersentia, 2018, 298.

The EU legislature amended AMLD4 through the adoption of the Fifth AMLD (AMLD5).⁵⁹ With AMLD5, the European Commission specifically adds certain players in the virtual currency industry to the list of obliged entities, namely providers engaged in exchange services between virtual currencies and fiat currencies as well as custodian wallet providers.⁶⁰ If and when those amendments are adopted and implemented in Belgian law, it will limit the existing pseudo-anonymity or anonymity⁶¹ of virtual currencies⁶² even further. These new obliged entities in the virtual currency space will be compelled to take ‘appropriate steps to identify and assess the risks of money laundering and terrorist financing’,⁶³ and to put in place policies, monitoring and procedures to mitigate and manage effectively the risks of money laundering and terrorism-financing. They will also have a reporting obligation when they know, suspect or have reasonable grounds to suspect that certain activities are linked to money laundering.⁶⁴

Although AMLD5 will provide more transparency in the market and will discourage illegal activity to some extent, it only addresses certain service providers of bidirectional scheme virtual currencies. For example, the definition of a custodial wallet provider is limited to ‘an entity that provides services to safeguard private cryptographic keys on behalf of its customer, to hold, store, and transfer virtual currencies’.⁶⁵ This definition might affect multi-currency desktop wallet providers such as Exodus,⁶⁶ Jaxx⁶⁷ or MyEtherWallet,⁶⁸ but virtual currency owners (including those involved in criminal activities) have a wide range of cold wallets and hardware wallets at their disposal (such as Ledger⁶⁹ or Trezor⁷⁰) through which only they, as owner, have access to the private cryptographic keys. There are, therefore, still numerous ways to hold, store and transfer virtual currencies without becoming subject to the KYC or transaction monitoring procedures conducted by the new obliged entities under AMLD5. This Directive might therefore only have limited effect, and additional legislative efforts will be necessary to effectively tackle criminals using virtual currencies.

AMLD5 has not yet been transposed into Belgian law: Belgium has until 10 January 2020 to do so.⁷¹ In the meantime, it seems that the Belgian Executive Branch (in particular, the

59 Directive (EU) 2018/843 of the European Parliament and of the Council of 30 May 2018 amending Directive 2015/849 on the prevention of the use of the financial systems for the purposes of money laundering or terrorist financing, and amending Directives 2009/138/EC and 2013/36/EU.

60 New Article 2(1)(3) (g) and (h) AMLD4, see Article 1 AMLD4 Amendment.

61 Take Bitcoin as an example: the information in the blockchain does not allow users to access it directly, but contains the exact time and size of each transaction as well as the Bitcoin addresses of the payer and the payee. Together with other information that is stored outside of the Bitcoin protocol, certain transactions can therefore be properly traced back to identifiable persons. The anonymity that Bitcoin and certain other virtual currency offer is only partially anonymous; it is better to speak of a pseudo-anonymous than an anonymous one system: T Spaas and M Van Roey, ‘Quo Vadis Bitcoin?’, *Computerrecht* 2015/84, June 2015, ed. 3, 114.

62 New Article 13. 4 AMLD5, see Article 1 AMLD4 Amendment.

63 New Article 8.1, 4A AMLD5, see Article 1 AMLD4 Amendment.

64 New Article 8.2 and Article 47 Section 1 AMLD5, see Article 1 AMLD4 Amendment.

65 New Article 3(19) the AMLD5, see Article 1 AMLD4 Amendment.

66 See <https://www.exodus.io/>.

67 See <https://jaxx.io/>.

68 See <https://www.myetherwallet.com/>.

69 See <https://www.ledgerwallet.com/>.

70 See <https://trezor.io/>.

71 Article 4 AMLD4 Amendment.

Minister of Finance responsible for combating tax fraud), in cooperation with the FSMA and NBB, is taking a proactive stance on the issue and is considering adopting Belgian legislation that would oblige virtual currency exchange platforms to formal registration and other AML requirements.⁷²

V REGULATION OF EXCHANGES

Virtual currency exchanges play a key role. They offer exchange services to users, and allow them to acquire virtual currencies with fiat money or other virtual currencies.⁷³ Currently, no specific legislation exists that regulates the business activities of a virtual currency exchange. However, the following is a brief overview of whether virtual currency exchanges would fall under one of the following Belgian laws:

i AML Act

Virtual currency exchanges currently do not fall under the AML Act, but some of them will be seen as obliged entities within the scope of AMLD5, which will be implemented into Belgian law before 10 January 2020. The amended AML Act will not apply to all virtual currency exchanges, however, as it lists only providers engaged in exchange services between virtual currencies and fiat currencies as obliged entities. Virtual currency exchanges such as Binance,⁷⁴ which only allow users to buy and sell virtual currencies using Bitcoin or Ether, will not be subject to the AML obligations.

ii E-money Act

Since virtual currencies fall outside the scope of the EU and Belgian legal framework concerning e-money, the E-money Act does not apply to virtual currency exchanges.

iii Act on Financial Instruments and Belgian Act on Investment Services

These two pieces of legislation could apply to exchanges if a certain bidirectional scheme virtual currency was seen as a financial instrument, and if a virtual currency exchange offers investment services or activities in relation to this financial instrument: for example, the reception and transmission of orders in relation to one or more financial instruments. Although no guidance from the FSMA or NBB has been given on the issue, it is likely that certain virtual currency trading platforms, exchange services and virtual currency investment companies already provide such activities, so they could fall within the scope of these two laws. The fact that the virtual currency exchange Blocktrade.com sought approval from the European Financial Market Authority under MiFID II seems to indicate that some exchanges do consider that they are subject to financial legislation.⁷⁵

72 Response by the Minister of Finance, who is charge of combating tax fraud dated, 28 November 2017, to certain parliamentary questions posed by Mr Gilles Foret (MR politician) on 4 October 2017 (Bulletin No. B134, q. 1856), <https://www.lachambre.be/kvvcr/showpage.cfm?section=qrva&language=fr&cfm=qrvaXml.cfm?legislat=54&dossierID=54-b134-902-1856-2016201718654.xml>.

73 Coinbase is one of the numerous exchangers on the marketplace <https://www.coinbase.com/join>.

74 See: <https://www.binance.com>.

75 'New Cryptocurrency Exchange Targets European Regulatory Compliance', Forbes.com, 30 July 2018, see <https://www.forbes.com/sites/heatherfarmbrough/2018/07/30/new-fully-regulated-cryptocurrency-exchange-launches/#efe578c335d9>. Because of the lack of clarity as to which legislation applies to virtual

The Belgian crypto exchange Bit4you SA, on the other hand, has a different view on the matter. On its website, Bit4you states that its ‘first activities launched on 29 August 2018 are not subject to any licence under the current Belgian and European legislation’. In its terms and conditions, it does, however, proactively implement AML and KYC procedures, even though, as explained above, virtual currency exchange platforms are (currently) not subject to the AML Act.⁷⁶

Although Bit4you mentioned during its launch that it obtained the approval of the FSMA and NBB, the latter quickly rectified such statement. Both institutions admit to having spoken to the company, but concluded that the services offered by Bit4you fall outside their respective competences considering that the direct purchase or sale of virtual currencies is not regulated in Belgium.⁷⁷

VI REGULATION OF MINERS

Miners play an important role in virtual currencies networks. The core activity of miners is validating virtual currency transactions by solving a cryptographic puzzle for which they use specialised mining hardware. In return for this, or as a reward, they get a sum of newly mined virtual currencies. In some cases, miners can earn additional transaction fees from users that require faster confirmation of a transaction.

There is no specific Belgian legislation that regulates miners’ activities. Nevertheless, any natural person or legal entity that earns money through mining activities could still be subject to Belgian tax law, and might have to pay personal or corporate income taxes.⁷⁸

VII REGULATION OF ISSUERS AND SPONSORS

i Initial coin offerings, initial token offerings and token generating events

In the first quarter of 2018, more than US\$6.3 billion was invested in virtual currency companies worldwide via the sale of crypto instruments and digital tokens.⁷⁹ These public sales have different names and are referred to as initial coin offerings (ICOs), initial token offerings (ITOs) and token generating events (TGE). For the sake of this chapter and taking into account the wide adoption of the term ICO, we will collectively refer to the different kind of public sales of crypto instruments as ICOs.

According to the FSMA, ICOs are operations through which ‘project developers offer digital tokens to the public via the internet as a way of funding the development of the

currency exchanges, they seem to take a very cautious stance. On the website of Kraken, the exchange states that ‘Bitcoin’s legal status is still being defined, but Kraken takes a highly proactive and informed approach to ensuring legal compliance’, and ‘our approach is to operate conservatively, entirely within the bounds of current law, and to constantly monitor regulatory developments so that we can anticipate changes before they occur’.

76 Terms and conditions of Bit4you SA, available via the URL: <https://www.bit4you.io/terms-and-conditions>.

77 See <https://trends.knack.be/economie/bedrijven/geen-groen-licht-voor-belgisch-bitcoinplatform/article-normal-1191265.html>.

78 See Section IX.

79 <https://www.coindesk.com/6-3-billion-2018-ico-funding-already-outpaced-2017/>.

project'. Although ICOs resemble initial public offerings and crowdfunding campaigns to a considerable degree, ICOs are still largely unregulated and are often carried out by companies without any proven track record or a viable product, which makes them risky investments.⁸⁰

It should be underlined that the success of virtual currency companies in Belgium is very relative compared to other jurisdictions such as Switzerland or Germany. To date, there has not yet been an ICO conducted out of Belgium, although the increase in ICO activity and in virtual currency awareness will definitely affect Belgium in the coming years.

ii Regulatory framework in Belgium that applies to ICO issuers

At present, there is no specific legislation aimed at ICOs, so there are no ICO-specific regulatory requirements for companies that are planning a token sale in Belgium. However, existing legislation often has a wide scope that might apply to ICOs.⁸¹ As mentioned in Section II, financial legislation might apply to certain bidirectional scheme virtual currencies, depending on the specific characteristics of the virtual currencies issued (i.e., whether they are a means of payment, investment or utility). This is the current stance of the FSMA, and also that of other financial market authorities throughout the world.⁸²

On 13 November 2017, the FSMA issued a communication on ICOs in which it warned ICO issuers that their operations might fall under the scope of application of various EU and Belgian legislation.⁸³ This communication makes clear the FSMA's cautious position regarding the applicable legal framework on ICOs in Belgium. The FSMA did not want to exclude any *law a priori*.

At first sight, not all Belgian laws to which the FSMA refers in its communication seem inapplicable to ICO issuers. For example, ICO issuers fall outside the scope of application of the AML Act, despite the Belgian legislature's adoption of the AMLD5 amendments that consider (only) virtual currency exchange platforms and custodian wallet providers to be obliged entities.⁸⁴ In addition, it is not clear how ICO issuers would fall within the scope of the Belgian Crowdfunding Act,⁸⁵ as this Act applies to crowdfunding service providers that

80 Instead, these companies promise to develop a certain blockchain-based product or service in the future, funded by the money they acquired via the ICO. In consideration for the money they receive from the token sale (which can be up to US\$1.7 billion for one ICO), these companies will provide tokens that grant the holders with some benefit in the future (access to a platform, discounts to products or services to be developed, etc.). 'Telegram raised \$1.7 billion through its two private pre-sales, making it the largest ICO ever. The popular messaging tool is reportedly planning to build an ecosystem of token-based services constructed inside the messenger app, such as distributed file storage and micropayments for peer-to-peer transactions', see <https://cryptoslate.com/most-successful-icos-of-2018-so-far/>.

81 A Snyers, K Pauwels, o.c., 484.

82 The same goes for the United States, Japan, the United Kingdom, France, Germany, Switzerland, Hong Kong, among others. See *Autonomous Next*, using analysis from Bloomberg, as of 19 March 2018, Thomas Reuters, Latham & Watkins LLP, pp. 98–106, see <https://www.lw.com/thoughtLeadership/crypto-utopia-autonomous-next>.

83 In its communication, the FSMA warns ICO issuers that their operations could fall within the scope of various EU directives, including MiFID II, AMLD4, the Alternative Investment Fund Managers Directive and the Prospectus Directive, as well as numerous Belgian laws, including AMLD4 and the Act on AML, the Prospectus Act and the Royal Decree of 24 April 2014 on the commercialisation ban on offering financial products to consumers without professional occupation (as discussed in Section II.iii).

84 See Section IV.

85 Act of 18 December 2016 regulating the recognition and delineation of crowdfunding and containing various financial provisions (Crowdfunding Act).

organise alternative investments via an alternative investment platform. Under the existing law, these alternative investments are defined as ‘the service consisting of marketing investment instruments via a website or any other electronic means issued by corporate issuers’.⁸⁶ In our view, an ICO issuer does not market such alternative investment services, especially not if the ICO relates to a cryptocurrency or a utility token. In addition, in most cases, it is not the ICO issuer but rather an intermediary third-party company (e.g., Blockstarter, Coinlaunch, Coinlist) that will launch the cryptocurrency or token on the market.⁸⁷

In conclusion, it seems that the principal legislation that ICO issuers should comply with when launching a virtual currency that could be considered an investment instrument on the Belgian market is the Prospectus Act. Under the current Prospectus Act, a prospectus must be drafted for every public offer of investment instruments having a total value of €5 million⁸⁸ or more. This prospectus document must be approved by the FSMA before it is made available to the public.⁸⁹ Both the form and the contents of the prospectus are regulated. It should notably include a ‘short description of the risks related to the investment concerned and the essential characteristics of this investment, including all rights attached to securities’ and ‘the reasons behind the offer and the intended use of the funds collected’.⁹⁰

VIII CRIMINAL AND CIVIL FRAUD AND ENFORCEMENT

Virtual currencies are susceptible to misuse as part of criminal activities, and the exponential increase in the value of virtual currencies has not gone unnoticed by cybercriminals. In Belgium alone, there were more than 300 cases of Bitcoin-related scams or thefts during 2017, a number that was surpassed in the first five months of 2018 with more than 329 complaints.⁹¹ Criminal activity, specifically against virtual currency users, can happen on virtual currency exchanges,⁹² during virtual currency transactions⁹³ or when merely holding virtual currencies in a user’s wallet.⁹⁴ Additionally, the certain degree of anonymity offered by virtual currencies such as Bitcoin (BTC), Monero (XMR) and Zcash (ZEC) makes virtual currencies attractive for transferring illegally obtained funds.

86 Article 4, 2° Crowdfunding Act.

87 For example of such intermediaries, see <http://blockstarter.tech/>; <https://coinlaunch.co/>.

88 Article 22 Section 1 Prospectus Act; Exceptions to this principle are listed in Article 3 Section 2 Prospectus Act.

89 Article 23 Prospectus Act.

90 Article 24 Section 2 b) and d) Prospectus Act.

91 ‘Kris Peeters met en garde contre une fraude aux cryptomonnaies en plein essor’, see https://www.rtbf.be/info/economie/detail_kris-peeters-met-en-garde-contre-une-fraude-aux-cryptomonnaies-en-plein-essor?id=9936983; see <https://www.hln.be/geld/dit-jaar-al-voor-minstens-2-2-miljoen-euro-aan-fraude-met-cryptomunten-a2e03709/?referer=https%3A%2F%2Fwww.google.com%2F>.

92 The famous Mt Gox theft in which hackers stole around US\$473 million worth of cryptocurrencies, and the DAO hack, which led to a loss of around US\$70 million worth of cryptocurrencies, <https://coincodex.com/Article/51/5-biggest-crypto-hacks-of-all-time/>.

93 ‘Hacker Makes Over \$18 Million in Double-Spend Attack on Bitcoin Gold Network’, see <https://www.bleepingcomputer.com/news/security/hacker-makes-over-18-million-in-double-spend-attack-on-Bitcoin-gold-network/>.

94 The hacking of virtual currency wallets, which can be held online, locally on a computer’s hard drive, a USB stick or even offline in cold wallets, is certainly one of the most sensitive issues. For more information on virtual currency wallets and security risks, see T Spaas and M Van Roey, ‘Quo Vadis Bitcoin?’, *Computerrecht* 2015/84, June 2015, ed. 3, 114.

To date, no specific criminal legislation concerning virtual currencies has been adopted in Belgium. Unlike other jurisdictions, the legal use of those currencies is not prohibited in Belgium.⁹⁵ Nevertheless, certain illegal use of virtual currencies or illegal activity relating to virtual currencies must still comply with the general provisions of Belgian criminal law or specific legislation in relation to computer-related infractions (see subsection ii).

i General provisions of Belgian criminal law

Under the general Belgian law provisions, there are at least three criminal infractions that could apply to illegal activity relating to virtual currencies.⁹⁶

The first criminal offence is common theft, which is covered by Article 461 of the Belgian Criminal Code, which states that ‘anyone who fraudulently appropriates anything that does not belong to him is guilty of theft’. Theft of virtual currencies, just as theft of any other form of asset or good, is punishable by prison sentences of up to five years and a fine of up to €4,000.⁹⁷

The second criminal offence is a scam as prohibited under Article 496 of the Criminal Code, which could also be very relevant with respect to virtual currencies. A scammer is defined as a person who:

with the intention of appropriating property belonging to another person, takes or receives money, movable property, commitments, discharges, debt liberations [. . .], either by the use of false names or false capacities or by the use of cunning tricks to make one believe that false companies of an imaginary power or of an imaginary credit exist, to expect or cause a successful outcome, an accident or any other mysterious event, or to otherwise abuse trust or credibility.

This description covers a wide range of situations that could apply to the rigged sale of virtual currencies, and to fake trading platforms and virtual currency exchanges. As an example of this wide coverage, the FSMA, following numerous complaints from Belgian citizens, published a blacklist of virtual currency trading platforms that are suspected of scamming people into investing money for virtual currencies via an exchange where those people never really received any virtual currencies in return or their money back.⁹⁸ Another form of scam

95 For example, Ecuador banned virtual currencies and Bitcoin in particular as early as 2014, see <https://www.ibtimes.co.uk/ecuador-reveals-national-digital-currency-plans-following-Bitcoin-ban-1463397>.

96 Apart from theft and scams, money laundering of virtual currencies that are illegally obtained is a significant criminal activity as well, which can be punishable under certain conditions under the rather broadly described criminal offence of fencing, set out in Article 505 Belgian Criminal Code, which reads: ‘a penalty of 15 days to 5 years prison sentence and/or a fine of €26 to €100,000 shall be imposed on the following individuals: 1. Those who have unlawfully received some or all of the items taken, diverted, or obtained by means of a crime or other offense [. . .].’

97 Article 263 Criminal Code mentions up to €500, which has to be multiplied by a factor of eight for criminal sanctions. The Act of 25 December 2016 amending the Act of 5 March 1952 on the surcharges on criminal fines stipulates that as from 1 January 2017, criminal fines are to be multiplied by a factor of eight instead of six.

98 ‘Belgian Financial Services Markets Authority Warns of Fraud in Cryptocurrency Trading Platforms, Publishes List of Alleged Fraudulent Cryptocurrency Exchanges’, see <https://www.crowdfundinsider.com/2018/02/128731-belgian-financial-services-markets-authority-warns-fraud-cryptocurrency-trading-platforms-publishes-list-alleged-fraudulent-cryptocurrency-exchanges/>.

could be a fraudulent ICO involving a natural person or legal entity that convinces investors to buy tokens, which happen to be fake, and the person or entity suddenly disappears with the investors' money.

Scams in relation to virtual currencies, just as any other form of asset, are punishable by a prison sentence of up to five years and a fine of up to €24,000.⁹⁹

The third criminal offence relates to money laundering as prohibited under Article 505 of the Criminal Code. This provision states notably that a penalty of 15 days' to 5 years' imprisonment or a fine of €26 to €100,000 (or both) shall be imposed on 'those who will have bought, received in exchange for free, possessed, kept, managed the goods referred to in Article 42,3° [pecuniary benefits directly derived from a crime, or the goods and value which have been substituted to them and income from benefits invested] while they knew or should have known the origin of those goods at the beginning of those operations' as well as 'those who will have converted or transferred goods referred to in Article 42.3°, with the aim of concealing or disguising their illicit origin or to help any person entangled in a crime from where those goods stem from, to escape the legal consequences of their actions'.

Given the advantages that virtual currencies (notably their relative anonymity) represent for criminals in conducting their illegal activities, Article 505, and the seizures of assets it can lead to, is one of the most useful provision of the Criminal Code to fight illegal uses of those currencies.

ii Specific legislation regarding computer-related infractions

The Belgian legislature enacted specific pieces of legislation regarding computer-related infractions that are actually more suitable for prosecuting any criminal activity involving virtual currencies.¹⁰⁰

First, the infraction known as unauthorised access to computer systems (also known as hacking) can apply if a person accesses a computer system and he or she knows that the access was unauthorised (Article 550 *bis*, first paragraph, Criminal Code). Hacking is punishable under criminal law by a prison sentence of up to two years and a fine of up to €200,000.¹⁰¹

Second, the hacker might commit the infraction known as concealment of data (Article 550 *bis*, third paragraph, Criminal Code) at the same time if he or she processes or transfers data that was stored on a third-party computer system or that was treated or transmitted by the third-party computer system. Concealment of data under Belgian law is punishable by prison sentence up to two years and a fine of up to €200,000.¹⁰²

A third infraction under Belgian law is computer-related fraud, which applies to anyone who, with fraudulent intent, obtains an unfair economic advantage while altering, changing

99 Article 496 Criminal Code mentions up to €3,000, which has to be multiplied by a factor of eight for criminal fines.

100 Article 504 *quater*, and Article 550 *bis* and *ter* Criminal Code.

101 Article 550 *bis*, Section 1 Criminal Code mentions up to €25,000, which has to be multiplied by a factor of eight for criminal fines; a computer system is understood as 'any system for storage, processing or transmission of data'.

102 Article 550 *bis*, 3° Criminal Code mentions up to €25,000, which has to be multiplied by a factor of eight for criminal fines.

or deleting data that is stored on or transmitted by a computer system. Computer-related fraud is punishable under Belgian law by a prison sentence of up to five years and a fine of up to €800,000.¹⁰³

To illustrate, the above-mentioned infractions could apply to a hacker who gains unauthorised access to a virtual currency user's personal computer and virtual currency wallet (unauthorised access to computer systems or hacking) for the purpose of copying the virtual currency user's private key (concealment of data) to ultimately transfer the virtual currencies stored in the user's wallet to the hacker's personal wallet, which would amount to computer-related fraud (computer-related fraud).

iii Seizure of virtual currencies after criminal activity has been committed

Belgian authorities can confiscate virtual currencies that have been illegally obtained in the course of criminal infractions, just as they can confiscate other illegally obtained assets.¹⁰⁴ The government already has in custody a certain amount of Bitcoins that it has seized during criminal investigations,¹⁰⁵ although the value thereof has not been disclosed.¹⁰⁶ In the framework of a criminal investigation in Belgium, brought before the Court of Appeal of Antwerp on 10 November 2016, the police confiscated 3.54 Bitcoins from a drug dealer.¹⁰⁷ To put this in perspective, the US Federal Bureau of Investigation (FBI) is currently the second-largest Bitcoin owner in the world, with a stunning total of 144,000 Bitcoins, which were worth approximately US\$2.8 billion during the all-time high of their value in December 2017.¹⁰⁸

The question that arises is what can or should a government do with such sum of virtual currencies? Should they be forfeited, and, if so, when should they be sold? On 2 March 2018, Koen Metsu asked the Ministry of Justice how many Bitcoins the government has confiscated since January 2015 and whether the government made a loss on the confiscated Bitcoins after confiscating them.¹⁰⁹ Considering the volatility of virtual currencies, this is an important question, given that the US\$2.8 billion worth of Bitcoin from the FBI has lost more than 60 per cent of its value since December 2017.

According to the Ministry of Justice, the Belgian Public Prosecutor is handling hundreds of files concerning virtual currencies, and in at least 10 cases virtual currencies have been seized. However, the Ministry of Justice's response to the parliamentary question did not mention the actual forfeiture of such virtual currencies, but only that 'the law on the missions and composition of the Central Organisation for Seizure and Confiscation (COIV), voted on 18 January 2018, provides that the COIV can manage confiscated virtual values'.¹¹⁰ Apart

103 Article 504 *quater* Criminal Code mentions up to €100,000, which has to be multiplied by a factor of eight for criminal fines.

104 Article 39 *bis*, Law of 17 November 1808 on the Code of Criminal Procedure (Code of Criminal Procedure).

105 C Conings, 'Beslag op Bitcoins', *Computerrecht* 2015, 79.

106 On 2 March 2018, Mr Koen Metsu (NVA politician) asked several questions on virtual currencies in Belgium to the Minister of Justice, Koen Geens, including the quantity of Bitcoins that the government has confiscated since January 2015; this question has not yet been answered by the cabinet of Minister Koen Geens (Bulletin nN. B152, q. 2531).

107 Court of Appeal, Antwerp, 10 November 2016, not published.

108 These Bitcoins were confiscated in the course of the *Silk Road* investigation, see <https://steemit.com/Bitcoin/@loryon/fbi-is-global-stakeholder-in-cryptocurrency-currently-owns-largest-Bitcoin-wallet>.

109 See footnote 113.

110 Response by the Belgian Ministry of Justice dated 9 May 2018 to the questions asked by M Brecht Vermeulen (N-VA (New Flemish Alliance) politician) on 26 April 2018 (Bulletin No. B154, q. 2576).

from this new piece of legislation, it would also be possible to forfeit virtual currencies based on Article 28 *octies* and 61 *sexies*, Section 2 of the Code of Criminal Procedure, which allows the forfeiture of certain assets that are exchangeable (whose value can be easily determined) and whose retention would lead to value reduction.¹¹¹

IX TAX

The number of cryptocurrency owners is drastically increasing, and it is estimated that around 20 million users own Bitcoins. Because of significant price fluctuations in particular, cryptocurrency owners might make considerable gains on their initial investment. For example, someone who bought one Bitcoin on 1 January 2017 at €950 and sold it for €11,050 on 31 December 2017 would have made a €10,100 gain. Cryptocurrencies raise important taxation issues, especially in relation to personal income tax and VAT.

i Personal income tax

Capital gains made by a Belgian resident from the sale of cryptocurrencies are not dealt with specifically in the Belgian Income Tax Code 1992. The existing rules allow the tax administration to tax cryptocurrency gains as either professional income (Article 23 Income Tax Code) or miscellaneous income (Article 90, 1°, Income Tax Code).

If a person's professional occupation is trading cryptocurrencies, the profits generated from this occupation will be taxed as professional income, and will therefore be subject to the progressive tax rates that range between 25 and 50 per cent in Belgium.¹¹²

If, to the contrary, a Belgian resident makes gains on cryptocurrency transactions outside of the scope of his or her professional activity, he or she will benefit from a tax exemption on those gains, but only on condition that the transaction is realised within the boundaries of the normal management of his or her private estate. Article 90, 1° of the Income Tax Code indeed provides for a general tax exemption for capital gains made on private assets of the taxpayer (which include securities or currencies, such as cryptocurrencies, as well as tangible assets and real estate) on condition that they result from the normal management of his or her private wealth. The question on whether a transaction is considered to be realised within that normal management is one based purely on facts. The Belgian courts generally describe normal management' as a conservative, risk-averse and unsophisticated management.

If gains resulting from cryptocurrency investments are made outside the scope of this normal management or derive from speculative transactions, they will be taxed as miscellaneous income, hence at a fixed rate of 33 per cent. It would probably be excessive to conclude that an investment in cryptocurrencies is always speculative because it is volatile, and as such, it implies a certain level of risk. The speculative nature of an investment in cryptocurrencies should always be assessed having regard to all the facts on a case-by-case basis. Indicators of speculation could be, for instance, the very short term of investments, the repetition of cryptocurrency transactions, the financing of the cryptocurrency investment

111 S Royer, 'Bitcoins in het Belgische strafrecht en strafprocesrecht', RW 2016–17, 26 November 2016, No. 13, 497.

112 Article 23 Income Tax Code: 'Professional income is income derived directly or indirectly from activities of every kind [and assimilated income], in particular: 1° profit; 2° benefits; 3° profits and benefits from a previous professional activity; 4° remunerations; 5° pensions, interest and allowances applicable as such'; Article 130 Belgian Income Tax Code lists the progressive tax rates between 25 and 50 per cent.

through loans or the investment of large sums of money (compared to the value of a Belgian resident's entire estate). On the other hand, if a Belgian resident invested a sum of €1,000 in cryptocurrencies and sold them five years later, making a big capital gain on this occasion, arguments could be put forward to sustain the notion that the transaction was made, as a good pater familias, within the boundaries of the general management of his or her private estate. Needless to say, situations are never as straightforward in practice.

As there is a large grey area between the speculative world and the normal management of a person's estate, in practice, taxpayers often apply for tax rulings to obtain legal certainty on the tax treatment of the gains made on their private assets (such as shares). The same applies for cryptocurrency gains. As a practical example, the Belgian Ruling Commission rendered a decision on 5 December 2017 regarding the tax treatment of the capital gains made by a student who developed a software application that automatically traded cryptocurrencies. The Ruling Commission held that the gains made from the sale of Bitcoins through a developed software application 'should not be considered as professional income within the meaning of Article 23 Belgian Income Tax Code but, in view of their speculative nature, are taxable as miscellaneous income within the meaning of Article 90(1) Belgian Income Tax Code'.¹¹³ The Ruling Commission recently shed additional light on the tax treatment of cryptocurrency gains. It published a virtual currency questionnaire to be filled in by a taxpayer when he or she applies for a pre-filing request in relation to transfers of virtual currencies. The list contains 17 detailed and diverse questions, from the sum invested in virtual currencies to the frequency of the transactions and the current professional occupation of the taxpayer, as well as the reporting on social media of his or her activity on virtual currency groups.¹¹⁴ From the answers provided by a taxpayer, the Ruling Commission will assess whether a cryptocurrency investment can be considered to have been made in the scope of the normal management of his or her private estate.

At this time, considering that the information on virtual currency acquisitions and trading activities can only be found online on a user's cryptocurrency exchange account or cryptocurrency wallet (instead of a bank account), the tax administration will most certainly encounter some practical difficulties in obtaining this information or assessing whether a taxpayer fully disclosed all the relevant information.

ii VAT

On 22 October 2015, the Court of Justice of the European Union (CJEU) rendered a judgment in response to a request from the Swedish Supreme Administrative Court seeking clarification on the question of whether transactions on an online virtual currency exchange platform to exchange a traditional currency for a Bitcoin virtual currency, or vice versa, were subject to VAT.

The CJEU first clarified that the exchange of different means of payments constitutes a supply of services (Article 24 VAT Directive).¹¹⁵ Secondly, it stated that an

113 Anticipated decision by Ruling Commission No. 2017.852, 15/12/2017, news DVB 2018, p. 3, No. 1.3, available in Dutch, see https://www.ruling.be/sites/default/files/content/download/files/nieuwsbrief_dvb_3_nl.pdf.

114 https://www.ruling.be/sites/default/files/content/download/files/liste_de_questions_crypto-monnaies_0.pdf.

115 The CJEU first clarified that the exchange of different means of payments constitutes a supply of services within the meaning of Article 24 VAT Directive, since Bitcoins cannot be characterised as tangible property as referred to in Article 14 VAT Directive. The CJEU went on to recall that the supply of services is affected for consideration only if there is a direct link between the services supplied and the consideration received.

exchange transaction involving a Bitcoin constitutes a supply of services for consideration (Article 2(1)(c) VAT Directive).¹¹⁶ Subsequently, it focused on the question of whether this supply of services for consideration could fall under one of the VAT exemptions. It held that the exemption in Article 135(1)(e) of the VAT Directive applied. According to the Court, this exemption for transactions involving currency, bank notes and coins used as legal tender also applies to non-traditional currencies. The Court emphasised that to interpret this provision as including only transactions involving traditional currencies would go against the context and aims of Article 135(1)(e) of the VAT Directive, because transactions involving non-traditional currencies that have been accepted by the parties to a transaction are also financial transactions. Applying this judgment to this case, the Bitcoin transaction has no other purpose than to be used as a means of payment.

In this decision, the CJEU paved the way for a positive future for Bitcoin purchases at Bitcoin exchanges in the European Union. Following this decision, Europeans can continue to buy Bitcoins using traditional currency without paying any VAT on these transactions.¹¹⁷ Considering that VAT is an EU form of tax, any transactions involving virtual currencies should be treated in line with the CJEU's decision, including transactions carried out in Belgium. We hope that this approach will become adopted by countries outside the European Union, thereby further harmonising the taxation approach towards virtual currency transactions.

X OTHER ISSUES

Since the General Data Protection Regulation (GDPR)¹¹⁸ entered into force, certain academics and commentators have emphasised the fundamental paradox between GDPR and blockchain technology. Whereas GDPR aims to protect EU citizens from privacy and data breaches, blockchain technology was designed so that data could be stored on a distributed ledger in an incorruptible way, and accessible for the public to see. The articulation of GDPR and blockchain technology raises several compatibility questions.

One question centres around certain data subject access rights. Pertaining to the right to be forgotten, the GDPR reads that 'the data subject shall have the right to obtain from the controller the erasure of personal data concerning him or her',¹¹⁹ and the right to rectification, which reads that 'the data subject shall have the right to obtain from the controller without undue delay the rectification of inaccurate personal data concerning him or her'.¹²⁰ The question in this context is how can a person exercise these rights if his or her personal data is stored on a blockchain, since it is designed to be immutable? It is thus possible that personal data contained in smart contracts or virtual currency transactions cannot be erased or rectified, thereby violating the data subject's rights under the GDPR.

116 According to the CJEU, it is clear that the exchange of traditional currency for units of Bitcoin, in return for payment of a sum equal to the difference between the price paid by the operator to purchase the currency and the price at which he or she sells the currency to his or her clients, constituted a supply of services for consideration within the meaning of Article 2(1)(c) VAT Directive.

117 M Van Roey, C Bihain, 'European Court of Justice considers the exchange of traditional currencies for Bitcoins exempt from VAT', *Stibbe ICT Newsletter*, December 2015, No. 52, see <https://www.stibbe.com>.

118 Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC.

119 Article 17 GDPR.

120 Article 16 GDPR.

A second question relates to personal data transfers to a place outside the European Economic Area (EEA). Article 44 of the GDPR states that personal data can only be transferred to a country outside the EEA if the rights under GDPR are safeguarded in that country. How can this obligation be complied with if virtual currency transactions using distributed ledger technology are to be verified by other users (nodes) that could be located outside the EEA, and the information on the blockchain can be accessed by anyone with an internet connection from anywhere in the world?¹²¹

Although both GDPR and blockchain technology are promising initiatives, certain obligations under GDPR could pose some challenges to companies deploying blockchain technology or to virtual currency companies. However, we are hopeful that the necessary (technical) solutions will be adopted in time to resolve these challenges.

XI LOOKING AHEAD

Whenever legal uncertainty hinders the development and adoption of legislation on virtual currencies, authorities and market regulators should provide the necessary clarification, or adopt new regulations that balance the rights and interests of all virtual currency market participants. As discussed throughout this chapter, the Belgian authorities have not (yet) implemented specific legislation on virtual currencies; nor did the FSMA provide clear guidance on how virtual currencies fit within existing legislation.¹²²

It could be argued that this legislative inertia is attributable to the very limited interest that Belgian investors have shown regarding Bitcoin and other virtual currencies compared to investors in other fintech-friendly jurisdictions such as Switzerland and Germany. Nevertheless, this position is gradually changing considering the increasing number of parliamentary questions relating to virtual currencies that have been filed in recent years and that have been discussed in more detail throughout this chapter.¹²³

Given the transnational nature of virtual currencies as a global phenomenon, we believe that virtual currencies are best regulated by transnational or international instruments. While the EU, through AMLD5, has already taken actions with regard to AML, initiatives on a broader scale are required. Virtual currencies were discussed in March 2018 by G20 members, and several reports have been commissioned. Some G20 countries even identified virtual currencies regulation as a priority for 2018, and this position was reaffirmed at the 2019 G20 summit in Japan.¹²⁴ Future regulatory actions regarding virtual currencies are thus to be expected and desired.¹²⁵

121 See <https://cryptobriefing.com/gdpr-vs-blockchain-technology-against-the-law/>.

122 However, the FSMA issued a regulation prohibiting the sale of derivatives on virtual currencies. See Section II.iii or the following link: http://www.etaamb.be/fr/arrete-royal-du-24-avril-2014_n2014011323.html.

123 Those questions relate to, inter alia, taxation systems, the regulation of exchangers or criminal activities related to Bitcoins. See parliamentary questions No. 1856 (Bulletin No. B134); No. 2016 (Bulletin No. B145); No. 2531 (Bulletin No. B152); No. 2576 (Bulletin No. B154), see <http://www.dekamer.be/>.

124 <https://cointelegraph.com/news/g20-leaders-reaffirm-position-on-cryptocurrencies-in-statement>.

125 See <https://www.independent.co.uk/life-style/gadgets-and-tech/news/Bitcoin-regulation-latest-south-korea-trading-ban-how-happen-price-what-happen-rise-drop-a8183136.html>.

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