CHAPTER 14

How to Tax Bitcoin?

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14.1 INTRODUCTION

Bitcoin, a decentralized cryptocurrency with no government or central bank, grabbed the public attention as its value skyrocketed in 2013. Interestingly, the rise in the Bitcoin value coincided with the economic collapse of Cyprus. People who lost faith in financial institutions started putting more trust in independent peer-to-peer payment systems. Between August and December 2013, Bitcoin usage increased by over 75% and the market value of bitcoins in circulation increased more than tenfold (from about USD 1 billion to USD 12 billion). Due to its global and decentralized nature, digital currency raises a number of difficult legal questions. The one especially interesting for tax practitioners and tax scholars is what the tax consequences of mining and trading in digital currencies are.

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The purposes of this chapter are to explain the most common taxation problems related to the use of digital currency and to examine how tax authorities of various countries are struggling to solve them. Section 14.2 briefly describes the characteristics and nature of Bitcoin. Sections 14.3 and 14.4 describe the basic features of individual income tax and consumption tax systems and examine how digital currency could fit within the existing legal framework. Since tax laws vary from country to country, the taxation of digital currency cannot be addressed in a one-fits-all manner. The section on income tax looks at the income tax rules in some exemplary countries, whereas consumption tax challenges are shown on the basis of the EU VAT system. Corporate income tax aspects are outside the scope of this chapter. This chapter is focused on individuals since it is individuals who began trading in digital currencies. Section 14.4 discusses approaches to taxation of digital currency taken by various countries, for example, the Netherlands, Singapore, the United Kingdom, and the United States. Section 14.5 summarizes the main challenges adding some conclusions.

14.2 CHARACTERISTIC AND NATURE OF BITCOIN

In 2009, a person (or persons) operating under the pseudonym Satoshi Nakamoto created Bitcoin—a digital currency traded online via a peer-to-peer network, allowing its users to interact with one another anonymously and without a third-party intervention (Nakamoto, 2009). Nakamoto's decentralized currency was a response to the financial crisis and governments' reactions to it and to the role of banks and other payment intermediaries in mediating financial transactions. Bitcoin is not the first example of decentralized digital money but undoubtedly the most prominent so far.

In simple terms, bitcoins are transferred from computer to computer via a system of cryptographic hashes and kept secure through public-private key cryptography. Users can store their currency in a "wallet," which takes the form of either software installed on their computer or a web-based account. Each payment transaction is broadcast to the network and included in the block chain, so that the used Bitcoins cannot be spent twice. New Bitcoins are generated in a distributed fashion at a predictable rate. Computers called "bitcoin miners" solve complicated algorithms to generate new Bitcoins. The mathematics of the Bitcoin system was set up so that it becomes progressively more difficult to "mine." The upper limit of Bitcoins cannot exceed 21 million.

Digital decentralized money offers some substantial advantages over traditional paper-based currencies. A remarkable property of Bitcoin is that it provides no support for identity management and authentication of parties who act as payers, payees, and miners. All parties preserve their anonymity in transactions (some think of Bitcoin as "personal offshore bank"). Another advantage of the Bitcoin system is lack of transaction fees associated with a fund transfer since transactions take place over a peer-to-peer network.

Bitcoin keeps middlemen away not only from profiting from transaction fees but also from "invading" transaction privacy.

Despite the potential advantages of decentralized currencies, their widespread adoption faces a number of obstacles. The main one is uncertainty surrounding their operation and growth. People can easily download the Bitcoin application and start using digital money although they do not fully understand how the system works and which risks they take. Cybersecurity is also a constant concern. A large-scale theft of bitcoins from many users could create a confidence crisis. Digital currencies also face the problem of network externalities. The benefit of using a digital currency depends on the number of other people using it. As Bitcoin is not pegged to any real currency and its exchange rate is determined solely by supply and demand in the market, the whole system could collapse if people try to get rid of their bitcoins and are not able to do so because of its illiquidity. As Bitcoin is susceptible to irrational bubbles, a loss of confidence may collapse demand relative to supply.

Before investigating tax implications of digital currency, it is necessary to determine its nature. Can digital money be regarded as "money"? Can it be treated in the same way as EUR or USD? To answer those questions, one must first have an idea of what constitutes money.

Regardless of the form, money is traditionally associated with three different functions (Macintosh, 1998; European Central Bank, 2012). First, money is a medium of exchange used as an intermediary in trade to avoid the inconveniences of a barter system. Second, money provides a unit of account. It acts as a standard numerical unit for the measurement of value of goods and services to make different offerings on the market more comparable. However, to serve as an efficient unit of account, a currency must be more than decimal and readily divisible. It must provide a measure of relative worth that users can understand on a nearly intuitive level. Otherwise, users must expend time and effort to determine what the currency and its associated unit of account really mean. Moreover, a currency can serve as an effective unit of account only if users accept its legitimacy. Third, currency serves as a store of value of current earnings for future spending. Noncirculating money can circulate in the future and that potential for future circulation represents wealth or value that an individual participant can take advantage of.

Undoubtedly, Bitcoin can act as a medium of exchange. However, given the limited number of venues accepting digital currency, it is still a weak barter catalyst. It is questionable whether digital currencies can be considered intrinsically and intuitively valuable. To determine how much digital currencies are worth, users usually translate their value into value expressed in a familiar unit of account. By looking at the string of data, hardly anyone can identify its value. It is impossible to determine the value of particular goods in Bitcoin without knowing the bitcoin exchange rate at a particular time. The question arises as to whether Bitcoin fulfills the "store of value" function in terms of being reliable and safe. At any moment, regulators from various jurisdictions

may take action against Bitcoin and its participants. At any moment, the Bitcoin market may collapse due to changing sentiments among bitcoin users: a technically stronger decentralized currency may appear and degrade Bitcoin to a mere historic incident. And of course at any moment, technical problems may bring Bitcoin down without any advance warnings. Given the enormous volatility of bitcoin, possible technical problems, the lack of oversight, and legal uncertainty surrounding Bitcoin, it is questionable whether Bitcoin can be a reliable store of value. After all, storing wealth in any medium that is easily susceptible to collapse or price fluctuations is unwise.

To sum up, at present, Bitcoin cannot be regarded as money in the economic sense. It is still surrounded by significant legal and factual uncertainty, which questions its ability to store value. Due to its limited use and enormous volatility, it cannot serve as a unit of account (its value must be first translated into the value of a traditional currency). However, Bitcoin has the potential to become economic money in the future. Time will tell whether Bitcoin will be reliable and stable enough to achieve this aim.

It is important to mention that when law refers to the concept of money (e.g., when it requires to remit monetary amounts to settle tax liabilities), it does not use the economic definition. For legal purposes, money has three additional features: legal tender status, central management, and a physical carrier (coins and banknotes). Due to its decentralized nature and lack of physical carrier, Bitcoin does not meet the necessary criteria of money in the legal sense. Although it is designed to act as a traditional currency (and maybe even replace it in the future), it cannot be treated as such.

The owner of a bitcoin can use it in any way he sees fit. This is similar to what generally can be done with commodities: the owner of precious metals can either sell or keep them. Thus, a reasonable perspective on Bitcoin is to view it as a steadily evolving piece of software or an asset that can be held as a part of an investment portfolio, alongside traditional currencies and other commodities.

14.3 INCOME TAX

14.3.1 Concept of taxable income

Income tax is levied on persons who have earned taxable income for the relevant tax period. Whether an individual generating or trading in bitcoins can be regarded as having taxable income depends on the income definition of a particular country.

From a structural viewpoint, two basic types of income tax systems can be distinguished: schedular and global (Burns and Krever, 1998). In a schedular tax system, income tax is levied tax on selected income categories. If a benefit does not fit into any categories, it is not subject to tax. In contrast, in a global tax system, all receipts, irrespective of their source, are subject to tax. In practice, most existing income tax systems lie on the spectrum between global and schedular (mixed systems).

An example of a country with an income tax system of a global nature is the United States. Under the Internal Revenue Code (IRC), receipts from whatever source derived are subject to tax. In such a system, a receipt qualifies as taxable income without having to meet any additional criteria (such as periodicity, profit motive, and market participation). Thus, in the United States, the receipt of bitcoins gives rise to gross income.

An example of a country with a schedular income tax system is Germany. It imposes income tax on seven categories of receipts and there is no all-encompassing provision that would tax income from whatever source derived. If a taxpayer's income does not fall into any of the categories, it is not subject to income tax. Among benefits that are not covered by the income categories are gifts, bequests, lottery winnings, and prizes granted for personal achievements or a successful participation in an event. Thus, before tax can be imposed on income in the form of bitcoins derived from a particular transaction, it is necessary to examine whether such income meets the criteria of any of the income categories. In Germany, income generated from bitcoin transactions could fall within the business income or the miscellaneous income category.

There are some income categories that are common to many jurisdictions. Almost all countries distinguish between business activity (which gives rise to business income) and sales transactions performed in a private capacity (which may give rise to capital gains).

The starting point in determining whether an item of income is business income is to determine whether the underlying activity is properly characterized as a business. In the absence of a definition in the income tax law, the term "business" has its ordinary meaning. In broad terms, a business is a commercial or industrial activity of an independent nature undertaken for profit (Burns and Krever, 1998).

The rules on taxation of gains from transactions performed in a private capacity vary from country to country. In the United Kingdom, there is a separate capital gains tax on disposal of assets (which also include intangibles and currency other than sterling). In Germany, casual sales of assets give rise to taxable miscellaneous income provided that the asset is sold within a year from its purchase and the total profit from disposal of private assets has exceeded the threshold of EUR 600 in a calendar year.

The fact that Bitcoin does not constitute money (either in the economic or in the legal sense) does not prevent profits expressed in bitcoins from taxation. Sales of goods and services for bitcoins constitute barter transactions, which are subject to the general income tax rules. In transactions where the consideration does not involve monetary amounts but benefits in kind, the determination of value of the exchanged objects becomes a pivotal issue. The basic valuation standard in many countries is market value, defined as the amount for which an asset could be exchanged between knowledgeable individuals in an arm's length transition. Market value is based on a hypothetical transaction (ordinary) and hypothetical participants (knowledgeable and willing) and assumes informational symmetry and profit maximization. Under perfect competition, there would be only one market price in a long-term equilibrium. However, as most markets

are characterized by informational asymmetry, uncertainty, and imperfect competition, an asset can have more than one market value.

14.3.2 Challenges to income tax compliance

Income in the form of bitcoins is generally taxable. However, the fact that income is taxable does not mean that it is *actually* taxed. People who have "virtual" income do not pay tax on that income for two reasons: They are not aware that such income is taxable and they deliberately avoid paying tax knowing that this noncompliance is unlikely to be detected and punished.

The first issue (unawareness of tax liability) results from lack of clear guidance on the tax treatment of digital currency. If taxpayers turn to the Internet for tax help, they may find a lot of misinformation there. There are a number of websites, wikis, and blogs that provide differing opinions on the tax treatment of digital currency, including some that could lead taxpayers to believe that transacting in digital currencies relieves them of their responsibilities to report and pay taxes. For example, after the Danish tax authorities ruled that profits from casual bitcoin trading are not subject to tax, but taxpayers who trade in bitcoins in the ordinary course of business are subject to the general tax rules, one website posted the following statement:

> Trading Bitcoins in Denmark is exempt from taxes in Denmark. "Skatterådet", the Danish commission for taxes, decided that virtual currencies are not "real" money, so they will not charge taxes.

The second issue (deliberate noncompliance) stems from the characteristics of digital currencies: transactions take place anonymously usually in a multijurisdictional setting. A seller that accepts payments in bitcoins is not required to identify himself when establishing his online Bitcoin wallet. Although the entire history of bitcoin transactions is publicly available, it is extremely difficult to trace the earnings accumulated in a particular wallet back to a particular taxpayer. Thus, it is unlikely that tax authorities will know about the income, unless the taxpayer voluntarily reports it.

Some scholars claim that decentralized currencies possess the traditional characteristics of tax havens: earnings are not subject to taxation and taxpayers' anonymity is maintained. They assume that tax evaders who use bank accounts in tax-haven jurisdictions opt out of traditional tax havens in favor of cryptocurrencies (Marian, 2013). Traditional anti-tax-evasion mechanisms cannot successfully address Bitcoin-based tax evasion since Bitcoin's operation is not dependent on the existence of a sovereign jurisdiction that could provide information. Given the growing popularity of decentralized currencies, tax evasion associated with them may become more common in the future. The Federal Bureau of Investigation (FBI) issued a report on Bitcoin, in which it expressed its concerns about Bitcoin's popularity with criminals engaged in money laundering and other illicit activities (FBI, 2012). This report was probably motivated by the fact that Bitcoin became

associated with the website Silk Road, a "digital black market" accessible only through the anonymized browsing service. However, the unfortunate fact that Bitcoin has been used for illegal transactions should not create a general pattern of discrimination against those who want to use Bitcoin for legitimate trade: there is hardly any financial system that would not have been used for illegal purposes.

14.4 CONSUMPTION TAX

14.4.1 Initial comments

The objective of consumption tax is to tax expenditures made by persons for their private purposes. It is the final consumer who should bear the tax burden. The most widespread consumption tax is the value-added tax (VAT), also called goods and services tax (GST). Limited to fewer than ten countries in the late 1960s, it has now been implemented by over 150 jurisdictions, where it often accounts for a large part of the total tax revenue (OECD, 2012).

This section discusses VAT aspects of transactions in digital currencies based on the EU VAT system. In simple terms, the functioning of the EU VAT system can be described as follows. All supplies of goods and services carried out for consideration by a taxable person in the EU territory are subject to VAT, unless a specific exemption applies. VAT charged by the supplier to his customers is known as "output VAT." The supplier is generally responsible for the remittance of output VAT to the tax authorities. VAT paid by the supplier to other businesses on goods and services that he receives is known as "input VAT." A taxable person is generally able to recover input VAT attributable to his taxable transactions by setting it off against the output VAT in his VAT return, provided that all the requirements for an input VAT deduction are met. The main source of the EU VAT legislation is the VAT Directive (2006/112). The provisions of the VAT Directive (2006/112) are clarified in the VAT Implementing Regulation (1042/2013).

14.4.2 Taxable person

In order to determine the personal scope of VAT, it is necessary to establish who may be regarded as a taxable person. "Taxable person" is an autonomous VAT concept. It does not exist in civil or trade law. Under Article 9 of the VAT Directive, a taxable person is anyone who independently carries out in any place any economic activity, whatever the purpose or result of that activity. The definition of the taxable person is very broad: it is not limited to EU residents ("any person in any place") or to persons acting for profit motives ("whatever the purpose"). This is in line with the objective of VAT as a general consumption tax. The argument that no profits are or will be made cannot be used to deny the status of a "taxable person." However, the statement "whatever purpose or

result" cannot be interpreted as that a hobby purpose is sufficient. According to the settled ECJ case law, the economic nature of the activities is decisive.

Bitcoin mining and trading may start as a hobby. Once successful, it can be turned into a business activity. The problem is to determine when leisure activity ceases and a taxable venture begins. In most countries, registration thresholds are used to relieve taxpayers with low turnover ("small enterprises") from levying and collecting tax. The registration thresholds vary significantly among member states. They can be as low as EUR 1450 (the Netherlands) or reach EUR 93,300 (the United Kingdom). However, it is important to keep in mind that small enterprises have to register irrespective their turnover if they render services to taxable persons established in other member states and those services are deemed to be supplied in the customer's country or if they receive services from abroad that are subject to VAT under Article 44 of the VAT Directive. No monetary threshold applies to supplies of those cross-border services. Since digital currency qualifies as a service under the EU VAT (see Section 14.4.3), the small enterprise exemption is not likely to exclude VAT liability of Bitcoin traders.

It is not possible to give a clear answer to the question when a person trading in digital currency becomes a taxable person. If an activity has a hobby component, a case-by-case analysis that has to weigh many different circumstances against each other is necessary. Although some indicators can be found, it is not possible to consider their existence to be an unequivocal sign that taxable activities are likely to occur. Giving the wrong answer to the question of whether or not a person acts as a taxable person for VAT purposes may have dramatic financial consequences because the tax authorities normally check a person's VAT liability retrospectively over a period of several years and, if it exists, the VAT liability is a substantial percentage of the person's total gross proceeds. If a person does not register for VAT under the assumption that he is not engaged in economic activities but the tax authorities take a different position, that person will be liable for payment of the VAT that he has not declared and remitted on the output transactions, especially where the initial input tax claim is nil or relatively low. On top of having to pay the unpaid tax, without having the possibility to recharge the tax to his customers, the person may incur a penalty for having committed tax fraud.

14.4.3 Taxable transaction

Transactions are usually stated to be within the scope of VAT if they are "supplies of goods or services." A supply of goods is defined as the transfer of the right to dispose of tangible property as owner. The supply of services is defined residually as any transaction that is not a supply of goods. Due to their intangible nature, digital currencies are considered services for EU VAT purposes. They fall within the category of electronically supplied services, which are defined as services delivered over the Internet or an

electronic network, the nature of which renders their supply essentially automated, involving minimum human intervention and impossible in the absence of information technology.

A supply of services will only occur if the taxable person receives payment (consideration) for the effects of a transaction. There must be a direct link between the service provided and the consideration received. A supply is taxable only if there is a legal relationship between the service provider and the recipient (a reciprocal performance). However, VAT liability does not depend on the existence of an enforceable and binding obligation according to domestic law of a member state. This would be contrary to the principle of VAT neutrality. Decisive is the mutual agreement, that is, that the parties agree to exchange some items and not a valid legal relationship between them.

It cannot be disputed that a bilateral legal relationship exists between the parties who trade in digital currencies. The transaction is performed in order to obtain consideration from the other party. However, a link between services provided and consideration received cannot be assumed in the case of bitcoin mining. Although it may appear that bitcoin miners perform a service (solving cryptographic algorithms to verify bitcoin transactions) for which they get paid in Bitcoin, not every miner is rewarded with new bitcoins. As more and more miners compete for a limited supply of blocks to verify, fewer receive reward for their mining efforts. Thus, mining activities are outside the scope of VAT.

14.4.4 Place of supply

Since VAT is an indirect tax focusing on the transaction rather than on the person performing it, the primary determination of the territorial scope of the charge to VAT is by reference to the location of a transaction. There are two principles on which the territorial scope of a VAT can be based: the destination principle and the origin principle. Under the former, the total tax paid in relation to a supply is determined by the rules applicable in the jurisdiction of consumption (exports are zero-rated and imports are taxed on the same basis and at the same rates as local production), whereas under the latter, each jurisdiction where a value is added collects the tax on this value at the local rate. The origin-based approach is said to distort competition in favor of business activity in low-tax countries, whereas the destination principle is regarded as the conceptually ideal approach to taxing consumption. For this reason, as of January 1, 2015, all supplies of electronic services follow the destination principle, that is, they will be taxed at the place where the customer is established or resident.

To determine who has to account for VAT on the supply, it is necessary to distinguish between business-to-business (B2B) and business-to-consumer (B2C) supplies. Cross-border B2B supplies are subject to the reverse-charge mechanism. This means that the VAT liability is shifted to the customer, that is, the supplier issues an invoice without

VAT and the customer accounts for VAT on the supply in his VAT return. If the recipient of a service is a private individual, it is not possible to shift the VAT liability to him since private individuals are not registered for VAT purposes and do not submit VAT returns. Thus, the supplier must account for VAT and remit it to the tax authorities in the customer's country. To prevent that suppliers have to register for VAT in all countries where their nontaxable customers are located (the transaction is deemed to take place in the customer's country, so it should be properly accounted for there), suppliers of cross-border B2C supplies can benefit from a simplified electronic registration, declaration, and payment system (the one-stop-shop scheme). This means that they can be registered and submit VAT returns only in one country. Until December 31, 2014, the one-stop-shop scheme is available only to non-EU suppliers. As of January 1, 2015, it also applies to EU businesses supplying electronic services to private individuals in other EU member states.

However, the one-stop-shop regime does not relieve suppliers of electronic services from the burden of locating their customers on a transaction-by-transaction basis. Such suppliers must comply with VAT legislation of the member states where their nontaxable customers are resident. Unlike supplies of goods under the distance selling regime, there is no turnover threshold for supplies of cross-border electronic services: even if the volume of such services supplied in a particular member state is insignificant, the service provider must be aware of the local VAT legislation. Finally, enforcing the one-stop-shop regime is difficult in a digital context where multiple transactions are carried out anonymously. Tax authorities have limited possibilities to sanction suppliers who fail to register and report their supplies to EU customers. According to statistics provided by the UK Treasury in March 2012, 453 non-EU providers of electronic services had registered under the one-stop-shop scheme at the end of 2011 (207 in the United Kingdom, 83 in the Netherlands, 65 in Luxembourg, 36 in Germany, 25 in Ireland, 14 in Italy, and 23 in nine other member states) (Lamensch, 2012). It is questionable whether the fact that VAT collection is reliant on voluntary compliance is acceptable from a neutrality and competition perspective in the long term. Without effective supervision and enforcement, there is a risk of nontaxation that threatens to distort competition. If tax rules are not linked to a real possibility of enforcement, taxpayers are unlikely to comply.

The VAT law provides that the location of the customer can be determined on the basis of two of noncontradictory evidence items, such as the customer's billing address, the customer's Internet protocol (IP) address or any method of geolocation, the customer's bank details, and other commercially relevant data obtained by the supplier. The items of evidence used to identify the location of the customer must be different and should not duplicate each other. For example, the fact that the customer gives his bank details and those details are confirmed by a payment service provider is considered one piece of evidence. If each piece of evidence points to a different country, the supplier must decide which item of evidence is more reliable in determining the customer's

location. Priority should be given to the country that best ensures taxation at the place of actual consumption.

To establish the location of the customer is undoubtedly the biggest challenge for suppliers of electronic services. Since such services can be provided at a distance, the supplier may not obtain enough information to identify where the customer is resident or established. Given the multitude of low-value transactions in the electronic services sector, the determination of the customer's location on a transaction-by-transaction basis may result in a large compliance burden for suppliers. Consider the following example. Seller S (who is registered for VAT purposes in an EU member state) supplies two bitcoins (i.e., provides electronically supplied services) to buyer B in exchange for cash (EUR 200). B has received the bank details of the supplier to transfer EUR 200. After the payment is received, the seller sends the bitcoins to B's digital wallet. The only information he needs for that purpose is the buyer's bitcoin address: for example, 31uEbMgunupShBVTewXjtqbBv5MndwfXhb. He has no indication where B is located.

14.4.5 Exemptions

There is an extensive use of VAT exemptions across the European Union. Member states exempt some categories of goods and services considered as essential for social reasons: healthcare, education, and supplies by charities. In addition, they also use exemptions for practical reasons (e.g., in the case of financial and insurance services due to the difficulties in assessing the taxable amount).

Under Article 135(1)(d) and (e) of the VAT Directive, transactions involving currency (used as legal tender), accounts, debts, payments, and other negotiable instruments must be exempt from VAT. As shown in Section 14.2, digital currencies cannot be regarded as money in the legal sense. Neither can they be regarded as "accounts," "debts," or "negotiable instruments." Although the word "payment" may have a wide connotation and include all transfers of goods or services in exchange for another form of goods or services, this broad meaning may be limited by the statutory context. As the term "payment" is used in article 135 of the VAT Directive, it seems logical that "payment" or "transfer" must be made by way of one of the instruments listed there. Thus, the exemption of Article 135(1)(d) and (e) of the VAT Directive cannot be applied.

14.5 NATIONAL APPROACHES

Although digital currency is ignored by the tax authorities in the majority of countries where no guidance is provided on the tax consequences of mining and trading in bitcoins, recently, some countries have published their views on the status and taxation of Bitcoin. This section summarizes their approaches.

The Dutch Finance Ministry (*Ministerie van Financiën*) presented its opinion on Bitcoin in a April 10, 2013 letter. According to its view, Bitcoin cannot be regarded as a

currency (legal tender) since it lacks central supervision and stability. Neither can it be treated as electronic money or financial product. The letter also mentioned that taxpayers earning their profits in bitcoins are subject to the general income tax rules and bitcoin transactions are governed by the general VAT rules.

In April 2013, the Canada Revenue Agency (CRA) reportedly announced that bitcoin users have to pay tax on transactions in this digital currency. According to the CRA, different rules apply depending on whether bitcoins are used as money to purchase goods and services or whether they are bought and sold for speculative purposes. Rules on barter transaction apply in the former case, while the latter is governed by provisions on trade in securities.

On December 3, 2013, the Central Bank of China and four other central government ministries and commissions jointly issued the Notice on Precautions against the Risks of Bitcoins. Defining it as a special "virtual commodity," the notice said that Bitcoin is not a currency and should not be circulated and used in the market as a currency. Banks and payment institutions in China are prohibited from dealing with bitcoins and from using it to price goods and services. The notice also required strengthening the oversight of websites providing bitcoin registration, trading, and other services and warned about the risks of using the bitcoin system for money laundering purposes.

The Finnish Tax Authority (*Vero Skatt*) clarified the treatment of Bitcoin for income tax purposes in its notice issued on August 28, 2013. This notice is quite comprehensive and provides several numerical examples showing how to calculate taxable income in bitcoin transactions. In the view of the *Vero Skatt*, profits from sales of bitcoins for traditional currency may be taxed as capital gains. The value of bitcoins generated through mining is also subject to income tax. The *Vero Skatt* regards Bitcoin neither as a traditional currency nor as a security.

In November 2013, the Norwegian Directorate of Taxation (*Skatteetaten*) published a statement explaining that Bitcoin is an asset (not a currency) and income tax can be charged on gains from its sale. For VAT purposes, supplies of bitcoins constitute taxable supplies of electronic services. Since Bitcoin does not have the status of a legal tender, the exemption for financial services cannot apply.

On December 13, 2013, the Slovenian Ministry of Finance (*Davčna uprava Republike Slovenije*) issued a formal opinion about the status of Bitcoin and other digital currencies. The opinion states that Bitcoin is neither a currency under Slovenian law nor a financial instrument. Profits from both sales of bitcoins and bitcoin mining are subject to tax. According to the Ministry of Finance, the existing legislative framework does not contain provisions applicable to businesses involved in bitcoin trading.

On December 19, 2013, the German Federal Financial Supervisory Authority (*Bundesanstalt für Finanzdienstleistungsaufsicht*, BaFin) issued a statement explaining the status of Bitcoin for the purposes of the German Banking Act (*Gesetz über das Kreditwesen*) and the risks of using this digital currency. The BaFin recognizes bitcoins as financial

instruments that fall into the category "unit of account" and are comparable to foreign exchange accounting units. Although Bitcoin does not have legal tender status, it is similar to private or regional money (i.e., it can be used in transactions on the basis of legal agreements of private law). The BaFin statement does not say anything about tax consequences of transactions involving digital currencies.

The UK tax authorities (Her Majesty's Revenue and Customs, HMRC) set out their position on the tax treatment of income received from activities involving bitcoins and other similar cryptocurrencies in Revenue and Customs Brief 09/14 of March 3, 2014. The brief states that such income is subject to the general rules of income tax and capital gains tax. The question whether any profit on bitcoin transactions is chargeable must be answered on the basis of the individual facts of each case, taking into account the relevant legislation and case law. For VAT purposes, the HMRC is of the opinion that mining is outside the VAT scope, exchanges of bitcoins into traditional currencies are exempt, and supplies of goods and services for bitcoins are subject to VAT under the general rules. The HMRC observed that, given the evolutionary nature of cryptocurrencies, the position outlined in Revenue and Customs Brief 09/14 is provisional and pending further developments, especially in respect to EU VAT.

On March 25, 2014, the Danish tax authorities (SKAT) published a ruling on the tax treatment of Bitcoin. The ruling was issued in response to a taxpayer's request on whether he could use the exchange rates posted on the then-operating website Mt. Gox for the purposes of calculating his income tax and whether changes in the value of accumulated bitcoins due to exchange rate fluctuations have tax consequences. The SKAT observed that Bitcoin cannot be regarded as a currency (legal tender) since it is not subject to regulation by a central bank and cannot be withdrawn from circulation. Consequently, neither the Danish tax return nor invoices can use values expressed in Bitcoin. The SKAT ruled that profits from casual bitcoin trading are not subject to tax and the corresponding losses cannot be deducted. Taxpayers who trade in bitcoins in the ordinary course of business are subject to the general rules (profits are taxable and losses are deductible). However, changes in the value of accumulated bitcoins due to exchange rate fluctuations should not have any tax consequences.

In March 2014, the Estonian Tax and Customs Board (*Maksu- ja Tolliamet*) presented its views on taxation of Bitcoin. In its opinion, Bitcoin is neither electronic currency nor a security but property, the alienation and exchange of which give rise to capital gains. Income from trading in bitcoins is taxed as business income that, in addition to individual income tax, is also subject to social security contributions. Bitcoin transactions are subject to the standard VAT rate. They cannot benefit from the exemption for financial services since such exemption does not apply to the provision of services of alternative means of payment.

The Inland Revenue Authority of Singapore (IRAS) explained its position on the treatment of bitcoin transactions for GST purposes. In its view, digital currencies do

not constitute money, currency, or goods but services and do not qualify for GST exemption. GST-registered businesses selling bitcoins need to charge GST on those sales, except for sales to a customer outside Singapore. If digital currencies are used to pay for goods or services, the transaction will be regarded as a barter trade. As a concession, if taxpayers use digital currencies to buy digital goods or services within the gaming world, they need not charge GST until those virtual goods and services are exchanged for real moneys, goods, or services.

The Brazilian tax authority (*Receita Federal*) reportedly does not consider Bitcoin a currency. According to various news sources, the *Receita Federal* has announced that taxpayers who sell bitcoins with a value of over BRL 35,000 will have to pay a 15% capital gains tax and those who possess than BRL 1000 in digital currency holdings must file annual account declarations. Neither the Brazilian government nor the Brazilian Central Bank is planning to issue special regulations on digital currencies unless the currency becomes frequently used in transactions.

The Unites States is the country that paid most attention to tax issues of digital currency. In its 2013 Annual Report to Congress, the United States Taxpayer Advocate considered need to issue guidance addressing the tax treatment of digital currencies to be one of the most serious problems facing the IRS. This report noted that the use of digital currencies is growing and that it is the government's responsibility to inform the public about the rules they are required to follow. The National Taxpayer Advocate recommended that the IRS answer, inter alia, the following questions: When will receiving or using digital currency trigger gains or losses, will these gains be taxed as ordinary income or as capital gains, and what information reporting, withholding, and record-keeping requirements apply to digital currency transactions?

In March 2013, another department of the US Treasury, the Financial Crimes Enforcement Network (FinCEN), issued interpretive guidance clarifying some obligations of persons creating, obtaining, distributing, exchanging, accepting, or transmitting digital currencies. Such persons must be registered as "money transmitters" with the FinCEN under the regulations relating to money-services businesses. The FinCEN guidance does not discuss the tax treatment of digital currency transactions.

In May 2013, the Government Accountability Office (GAO) published a report exploring potential tax compliance risks associated with digital currencies. The GAO recommends that IRS find relatively low-cost ways to provide information to taxpayers on various matters regarding digital currencies. In commenting on a draft of this report, the IRS agreed to implement this recommendation.

Finally, on March 25, 2014, the IRS issued a notice containing 16 questions and answers on various aspects of convertible digital currencies. According to this notice, digital currency is treated as property (and not as a currency) for US federal tax purposes. General tax principles that apply to property transactions apply to transactions using digital currency. A taxpayer who mines or receives digital currency as payment for goods or

services must include the fair market value of the digital currency in computing gross income. A person who settles payments made in digital currency on behalf of merchants that accept digital currency from their customers may be subject to the reporting requirements for third-party settlement organizations.

The provision of guidance by tax authorities is a positive development. It promotes compliance among taxpayers who want to report their transactions in digital currency properly and reduces the risk that users of digital currency will be confronted with tax consequences that they did not anticipate. It also demonstrates that tax authorities are able and willing to respond to innovations in the digital marketplace. However, the guidance should not be limited to the statement that the general rules apply. Such a statement is insufficient as it presupposes that individuals know precisely what those general rules are. An individual who is only familiar with, for example, tax on employment income may not know what rules apply to entrepreneurs. Moreover, the general rules apply be default, so there is no need to state that fact explicitly.

14.6 CONCLUSIONS

This chapter reviewed some of the tax implications of mining and trading in bitcoins. Based on the analysis in the previous sections, it can be concluded that, whereas the current law is generally able to capture transactions in digital currencies, taxpayers need more practical guidance on how the rules apply to their particular situation.

As regards income tax, tax authorities should provide information on the income characterization, allowable deductions, ways of income calculation, and records to be kept. As the range of potential income-generating situations is broad (there are bitcoin miners who treat their currency as stock in trade, users who cultivated their hobby into a business venture, and professional entrepreneurs who accept virtual currency as a means of payment), taxpayers need be able to determine when their activity can be categorized as trade or business, a for-profit activity, or a hobby. Assistance could be provided by means of examples, in a way similar to that used by the HMRC to educate its taxpayers about the tax consequences of online sales.

Comprehensive guidance can help taxpayers but it does not solve all their problems. Given the variety of digital currency schemes and different personal situations of taxpayers, advice on the individual circumstances would be greatly appreciated. Taxpayers would like to have certainty that the chosen income characterization and the method of income calculation will not be challenged by the tax administration. For those reasons, taxpayers should have the possibility to request advice and tax authorities should handle those requests in a timely manner.

The main practical problems faced by trade in digital currencies under the EU VAT system are as follows. First, the concept of taxable person lacks clarity. The definition contained in the VAT Directive is very broad. The CJEU gives general guidelines

and recommends a case-by-case analysis. The VAT registration thresholds help prevent unexpected assessments, but they do not solve all the problems as small businesses are required to register irrespective of their turnover if they perform certain cross-border services.

Second, the location of the customer in B2C scenarios is difficult to establish. The VAT Implementing Regulation recommends determining it on the basis of two noncontradictory evidence items (such as bank details and IP address). It is unclear what should be done if two noncontradictory pieces of evidence cannot be found. The Explanatory Notes issued by the European Commission simply recommend the suppliers to "continue to seek" them.

The one-stop-shop arrangement was introduced to avoid multiple registration and reporting obligations. While it clearly reduces the compliance burden, its operation is not free from flaws. The use of the one-stop-shop arrangement by non-EU suppliers depends on their willingness toward voluntary compliance. In the absence of effective enforcement mechanisms and sanctions, many non-EU suppliers will not register, which will lead to distortion of competition and violation of the principle of legal neutrality (since digital products offered by nonresidents will be tax-free).

The study from the European Central Bank (2012) suggests that the use of digital currencies is expected to grow in the future. If the future of electronic commerce entails an increasing use of digital currencies, it is critical that our economic, political, and legal institutions are prepared to deal with them and to incorporate them into the existing legal framework.

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