

Review Article

Legal and Economic Analysis of the Cryptocurrencies Impact on the Financial System Stability

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Abstract: Innovative Technologies and the emergence of Virtual communities create new types of transactions and the accounting methods that go beyond the current state of knowledge in Economics and existing Legal solutions. These Virtual communities create and distribute their own medium of payment for the exchange of goods and services, thereby providing a means of payment, in which emissions or circulation central monetary authorities are not involved. The reasons behind the emergence of cryptocurrencies are not only the shortcomings of the traditional currency system which was unable to face numerous crises, but also the development of the Internet for which cryptocurrencies can prove to be a better suited form of money. Unfortunately they stir much legal controversy with the effect that their users are exposed to significant legal and economic risk. Cryptocurrency, an encrypted, peer-to-peer network for facilitating digital barter, is a technology developed eight years ago. Bitcoin, the first and most popular Cryptocurrency, is paving the way as a disruptive technology to long standing and unchanged financial payment systems that have been in place for many decades. While cryptocurrencies are not likely to replace traditional currency, they could change the way Internet connected global markets interact with each other, clearing away barriers surrounding normative national currencies and exchange rates. Technology advances at a rapid rate, and the success of a given Technology is almost solely dictated by the market upon which it seeks to improve. Cryptocurrencies may revolutionize digital trade markets by creating a free flowing trading system without fees. A study of Bitcoin is presented, which illuminates some of the recent events and movements that could influence whether Bitcoin contributes to a shift in economic paradigms.

Keywords: Cryptocurrency, Bitcoin, Encrypted, Exchange Rates, Financial stability.

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INTRODUCTION:

Cryptocurrency, an encrypted, peer-to-peer network for facilitating digital barter, is a technology developed Ten years ago. Bitcoin, the first and most popular Cryptocurrency, is paving the way as a disruptive technology to long standing and unchanged financial payment systems that have been in place for many decades. While cryptocurrencies are not likely to replace traditional currency, they could change the way Internet connected global markets interact with each other, clearing away barriers surrounding normative national currencies and exchange rates. Technology advances at a rapid rate, and the success of a given Technology is almost solely dictated by the market upon which it seeks to improve. Cryptocurrencies may revolutionize digital trade markets by creating a free flowing trading system without fees. A study of Bitcoin is presented, which illuminates some of the recent events and movements that could influence whether Bitcoin contributes to a shift in economic paradigms.

Innovative Technologies and the emergence of Virtual communities create new types of transactions and the accounting methods that go beyond the current state of knowledge in Economics and existing Legal solutions. These Virtual communities create and distribute their own medium of payment for the exchange of goods and services, thereby providing a means of payment, in which emissions or circulation central monetary authorities are not involved. The reasons behind the emergence of cryptocurrencies are not only the shortcomings of the traditional currency system which was unable to face numerous crises, but also the development of the Internet for which cryptocurrencies can prove to be a better suited form of money. Unfortunately they stir much legal controversy with the effect that their users are exposed to significant legal and economic risk.

Bitcoin, the World's most common and well known Cryptocurrency, has been increasing in popularity. It has the same basic structure as it did when created in 2008, but repeat instances of the world market changing has created a new demand for cryptocurrencies much greater than its initial showing. By using a Cryptocurrency, users are able to exchange value digitally without third party oversight. Cryptocurrency works on the theory of solving encryption algorithms to create unique hashes that are finite in number. Combined with a network of computers verifying transactions, users are able to exchange hashes as if exchanging physical currency.

There is a finite number of Bitcoin that will ever be generated, preventing an overabundance and ensuring its rarity. Water, despite its requirement as a life giving material, is generally accepted as being free or of little cost because it is so abundant. If water was rare, it would be more valuable than diamonds. Value exists for Bitcoin because its users have trust that if they accept it as payment, they could use it elsewhere to purchase something they want or need. As long as the users maintain this faith, the valued object can be anything. Bitcoin's value exists in its ecosystem much in the same way that wampum, a seashell, was the currency of the land for Native Americans. Bitcoin does not have intrinsic value like gold in that it cannot be used to make physical objects like jewelry that have value. Nevertheless, value continues to exist due to trust and acceptance.

Current Legal and Financial structures are not designed with a Technology like this in mind. Financial institutions are built off of much older forms of currency. In some ways, it is comparative to the computing industry. The baseline of computing still relies on transmitting and processing 1's and 0's, providing only two dimensions of input. Yet all of our current Technology uses this technologically archaic system due to adoption, cultivation, and lack of need for newer systems. If cryptocurrencies became the global norm for transactions, long standing systems for trade would need to be completely reformed to deal with this type of competition. For this reason, cryptocurrencies could possibly be the single most disruptive technology to global financial and economic systems.

BitPay, the largest Bitcoin processor in the world, has recently seen transaction rate grow 110% in the past couple of years. Transaction increase is an indicator of user acceptance growing. The conditions for Bitcoin's widespread adoption could be described as a "fire triangle". Where fire needs fuel, oxygen, and heat to exist; Bitcoin needs user acceptance, vendor acceptance, and innovation to ignite. Without all three aspects, Bitcoin may not truly become a legitimized mainstream currency. Bitcoin is currently experiencing an increase in user acceptance and use, which is driving the other two aspects of the "fire triangle".

Cryptocurrency's adoption will be an important subject to watch in the future, as it could be a truly transformative technology that alters the way money is exchanged worldwide. Bitcoin's increased adoption has been integrally tied to global market shifts. The current Internet- fueled global market is very much entangled. If one regional market begins to plummet, it can easily drag the others with it. Bitcoin, like the Euro, can freely move across many national borders, creating an environment that promotes global trade, mutual prosperity, and even peace.

LEGAL ASPECTS OF CRYPTO-CURRENCIES:

Cryptocurrencies must be classified as private money, and within this group as the so called community currency. In most countries it is legal to make payments in cryptocurrencies (or broadly speaking, to use them), i.e. it is not prohibited by law to make such payments². Obviously, crypto-currencies are not recognized as legal tender and cannot be qualified as electronic money within the meaning of Directive 2009/110/EC³. Crypto-currency cannot be seen as a type of virtual currency, because they are too different from each other, in particular, in the case of Cryptocurrency, as opposed to virtual money, there is no issuer. Despite this, in practice and in doctrine, the concept of virtual currency generally also includes crypto-currencies, first of all Bitcoin, and sometimes a distinction between centralized and decentralized virtual currencies is made.

Unfortunately, cryptocurrencies raise numerous legal issues with the effect that their users are exposed to a significant legal risk. The first and basic issue is to establish the legal nature of Cryptocurrency (generally three methods of legal regulation can be distinguished – civil law, administrative law, and criminal law). In the first place one should discuss and determine whether Cryptocurrency should be perceived uniformly within the framework of each of the methods of the legal regulation. Such uniform understanding may not be straightforward because of the specific interpretation of certain provisions where linguistic interpretation is preferred, as is the case, for example, for tax law or criminal law.

The essence of the Cryptocurrency system is a unique ledger of transactions. This is called a Blockchain. In the Bitcoin system, there is nothing which would correspond to legal tender currency, which is specific to cash. The "wallets" of the users of Cryptocurrency system store only the information (links) indicating where, in the individual blocks, the transaction confirmation can be found. There is no "movement" between the wallet of one Bitcoin "holder" (or a holder of any other Cryptocurrency) to the so-called wallet of the next Bitcoin "holder" the only thing that changes are the links (indicators of the place in the blocks). Thus the cryptocurrencies (e.g. Bitcoin's or Litecoins), defined individually (e.g. 1 BTC), and not as

a system, are only records in the ledger, i.e. the blockchain.

These records represent a subjective value. For convenience, the concept of monetary unit understood as an abstract measure of value can be applied to these records. From the point of view of civil law, the cryptocurrencies can be seen as a “measure of value other than money”, unless the parties to the agreement have stipulated that the amount of the benefit will be determined according to the agreed measure of value, i.e. a specific cryptocurrency.⁴ This approach corresponds to the perception of Cryptocurrency as an abstract measure of value, that is the monetary unit. In addition, the Cryptocurrency (when considered individually) should be recognized as a property right and a type of property. This property right is represented by a record in the ledger, i.e. the blockchain. Provision of loans in Cryptocurrency may raise some controversy. A separate, yet important in social terms, is the issue of consumer protection, which becomes obvious even with a perfunctory examination of the operational practices of the entrepreneurs operating in the Cryptocurrency system. We should consider whether to subject cryptocurrencies to legal regulation governing payment services. Whereas in the case of payments using a payment account there is a relatively clear division of responsibilities between the payment service user and provider, as set out in the provisions of the PSD Directive⁵ and the provisions of national law of the EU Member States, for transactions using Cryptocurrency, since there is no entity running the Cryptocurrency system, such division does not exist at all and the users bear the entire responsibility for correctly conducting transactions on the basis of general rules of civil law. Under the current state of law, while making Cryptocurrency transactions, it is not possible to apply the PSD Directive (and, as a result, no Member States provisions implementing the Directive) because this type of transactions falls outside both material and personal scope of the Directive. What is more, it appears that the application, even if only partial or “corresponding to”, of the PSD Directive (or actually a new PSD2 Directive⁶) may present big problems difficult to overcome, if only because there is no entity in the Cryptocurrency system equivalent to the payment services provider.

The similarity of the blockchain to a payment account (and also to a bank account used for payment transactions) is not accidental, as it is the consequence of the deeply set ideological assumptions embedded in Cryptocurrency schemes (the creation of a payment system that would be an alternative to official systems based on accounts held by the banks). Doubtless the main objective of the Cryptocurrency system is to enable one to make payments for goods and services; however, the blockchain also serves to “collect” abstract value, that is monetary units of a particular crypto-currency. Within the value of a particular

Cryptocurrency, the system also has a depositary function. And perhaps this, and not merely making payments, represents a truly revolutionary aspect the crypto-currency brings to modern times it “turns on its head” our understanding of the deposit-taking activity, which is after all the very nature of banking. Banks have a monopoly on this activity (another issue is to what extent this monopoly can currently be justified and maintained), which is demonstrated by the fact that only an entity capable of meeting the requirements prescribed by law can run deposit-taking activity, otherwise it is punishable under Criminal Law.

It is interesting that although payment accounts and blockchain have similar functions and application, only the activity run on the basis of payment accounts is subject to state supervision. It seems that the decentralization of Cryptocurrency system makes it impossible for such a supervision to be conducted over the entire system – simply because there is no single entity “running” the system. However, some entities which are important for the system such as professional users of Cryptocurrency first of all the so called Cryptocurrency exchanges could be subject to this kind of supervision. Experience shows that the exchanges generate the highest risk of property loss by other Cryptocurrency users.

It is commonly agreed in literature that money, being legal tender, fulfills four basic functions: measure of value, medium of circulation, means of payment and store of value. From the point of view of economics, a thing capable of fulfilling all these four functions would be regarded as money, no matter what its legal nature. Nevertheless, a means of payment that is “commonly accepted” would still be an important issue⁷. From the social (or even psychological) perspective money is what people recognize as money. In other words, this is something which they view (an entirely subjective belief) as serving as the measure of value, fulfilling the function of circulation and that of the store of value. This has important economic relevance and ultimately legal relevance constituting the primary reason for the state to build a special institutional and legal structure in which central bank plays a dominant role in order to convince the state’s population that the legal tender issued by its central bank is trustworthy.

Public confidence in legal tender enables it to fulfill the above functions; still, the obligation itself to accept legal tender by creditors is not enough to build such confidence. However, the public (society) can hardly have greater confidence in private money (e.g. crypto-currency) than in legal tender (unless Cryptocurrency is recognized as legal tender by the state). This comes as a consequence of the fact that one of the elements of the state’s sovereignty is its monopoly on making decisions as to what is “the commonly accepted” money on its territory in the already mentioned functional and economic terms.

From this point of view two kinds of private money systems can be distinguished the systems limited at their very outset and those seeking to become commonly recognized. The first ones are characterized in that their very nature does not allow them to become wide-spread for they are either limited territorially (e.g. local (currency) money) or only to one game or web portal (e.g. virtual money), or they are restricted legally and functionally (e.g. regulated electronic money). In addition, they have low or hardly any capitalization compared to the currency which is legal tender (e.g. in 2013 in the UK the value of local currency (local money), Bristol Pound was only GBP 250.000 and was used by one million people, and for Brixton Pound the values were respectively GBP 100.000 and GBP 300.000)⁸.

The second kind of systems, on the other hand, aspire by definition to become widespread and their creators declare, within the framework of a particular ideology, to replace or eliminate the means of payment issued by central banks (as is the case for cryptocurrencies, and for Bitcoin in particular). In their very nature, the private money systems which are limited by definition, such as local money or virtual currency are very unlikely to become a threat to the monopoly of central banks. In particular, they can neither affect the monetary stability, first of all owing to its low capitalization, nor the financial market stability⁹. Cryptocurrencies, on the other hand, present a wholly different matter. The cryptocurrency system is by definition of global nature (trans-territorial or trans-national) with everyone being able to use it to purchase any goods and services (including the virtual ones as well as the illegal ones). Although presently (in 2015) the cryptocurrencies have not yet become of a “common” nature, owing to their relatively low capitalization, and nobody knows whether they ever will (the already mentioned issue of trust is crucial here), it seems that now is the time to launch expansive studies in the field of legal regulations on the central bank’s monopoly over money issuance in the context of the development of cryptocurrencies.

A separate issue, at the borderlines of the methods of legal regulations, mainly administrative and criminal law, is the prevention of using cryptocurrencies for money laundering and financing terrorism. It appears that cryptocurrencies are better suited for this objective than cash. Cryptocurrencies are being used for money laundering because they provide considerable anonymity (yet not full anonymity), especially when used together with the TOR system. Further to that, they are global, easy to store and at the same time very difficult to be accessed to by unauthorized persons (e.g. law enforcement agency), since it is possible to use sophisticated encryption methods, the so called “wallets”. Bitcoins are a favorable means of payment for hackers. On the black

market (more precisely Deep Web or Darknet) they are used to pay for drugs, pornography, counterfeited documents as well as weapons and ammunition¹⁰.

A natural leaning of tax law to literal interpretation and the prohibition of a broader and unfavorable to taxpayer’s interpretation along with the innovative and unprecedented technological structure of cryptocurrencies bring about a set of issues *de lege lata* difficult to be solved as regards the application of tax law. In the main, this involves the application of provisions pertaining to value added tax (VAT as well as income taxes). For instance, it concerns the fundamental issue which is the qualification under the VAT rules of transferring Cryptocurrency to another party. Such action can be considered either as the provision of services or simply as the payments made with use of means of payment other than legal tender. While the first approach is undoubtedly more convenient for tax authorities because it is closer to linguistic interpretation, the second one reflects better the function of crypto-currencies and the purpose of their use, in general. That is why it should be assumed that the “payment” made in Cryptocurrency leads to debt relief, provided that it is agreed by the parties in the contract. Undoubtedly, the judicial decisions will play here an important role, and in particular, the decisions of the Court of Justice of the European Union.

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