THEME: BLOCKCHAIN REGULATION:

FROM MONETARY MONOCULTURE TO THE MONETARY ECOSYSTEM

ABSTRACT: The regulation of cryptocurrencies by central banks is at the heart of the challenges and battles relating to the development and expansion of blockchain technology. It is so true that their decentralized nature is in opposition to classical financial orthodoxy.

Confronted with their economic downgrading, many players have been interested in financial and technological innovation both through local currencies and cryptocurrencies.

However, it is the recourse to various methods including the hypothetico-deductive method which made it possible, in the light of the monetary system in force in France under the old regime, to highlight the possibility of existence and cohabitation of several decentralized monetary instruments.

The networks of cryptocurrency users, heirs to the dynamics of financial inclusion of social actors deploying at the margins of official systems, seem to pave the way for the transition from a system of monetary monoculture to that of a monetary ecosystem, example of that prevalent in French society at the time of the old regime.

This emerging new model must put political and social communities, as well as central banks, at the heart of the issuance of cryptocurrencies.

I.TITLE

BLOCKCHAIN REGULATION:

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II.INTRODUCTION : OBJECTIVE OF THE ARTICLE

The goal is to provide a conceptual framework for blockchain regulation by central banks . Indeed, central banks do not accept to give a regulatory framework to decentralized financial and monetary instruments, thus escaping their control.

Defined by the economist Bernard Lietaer the concept of monetary monoculture refers to the policies of economic centralization born with the appearance of capitalism, marked by the grabbing of economic resources as well by political decision-making centers as by financial institutions like central banks.

This centralization, in the light of the disappearance of biological diversity, has contributed to the disappearance of local production mechanisms, to the hoarding of wealth by an elite and to the impoverishment of the greatest number.

In fact, we are entitled to wonder if the regulation of cryptocurrencies can contribute to the emergence of a monetary ecosystem .

1. Context and problem : risk management associated with the development of cryptocurrencies

In December 2019, I was invited by the organizers of the Blockchain Africa Conference 2020 in Johannesburg (South Africa), to participate in the panel of the event " *The Regulatory Landscape of Blockchain, Digital Assets and AI: Opportunities for Countries* " . This conference was an opportunity to address the question of the perception of cryptocurrencies by central banks.

Indeed, the monetary monoculture represented by contemporary financial institutions through financial centralization of which central banks are the pillar organs offers no existential perspective to decentralized financial mechanisms such as cryptocurrencies and their networks.

2. Observations

In order to give an answer to the problem of the regulation of cryptocurrencies, its complexity must be recognized by appealing to the socio-economic foundations of the existence of decentralized monetary phenomena.

Long before studying finance, I was a historian ; indeed, I graduated in political science and history. Therefore, and in view of the economic downgrading that Africa is undergoing in the modern world, I became interested in all forms of alternative financial and economic models that could allow not only African economies to achieve their financial inclusion, but also national economic subsets to tie in with national economic policies.

Indeed, national economic policies within contemporary state communities in Africa have not often kept the pre-colonial institutional mechanisms which oriented them towards the production of goods and services intended for Western metropolises, but have failed to integrate the sub- economic complexes inherited from the colonial period, which contributed to concentrating national wealth in the hands of an elite extroverted to trade with the West, and to impoverishing the entire population whose social capital inherited from formations pre-colonial state or community was not enriched by the achievements of modernity.

This is how local techniques and knowledge which in pre-colonial times served as an ' industrial fabric', such as the production of cola among the Bamiléké, was degraded to the rank of crafts in the context of the Cameroonian national economy. colonial and postcolonial.

It is the observation of the phenomena of financial exclusion in Cameroonian society that led us to the study of the local currencies which are emerging in Europe since the financial crisis of 2008. However, if the use of autonomous monetary instruments seems s 'Being accelerated for a dozen years with the concomitant appearance of Blockchain technologies and cryptocurrencies, it seems that the use of decentralized monetary instruments existed within French society pre-existing at the revolution of 1789. This ground of observation can enrich our thinking.

2.1. Local currencies

So being in search of answers to this downgrading of African economies and / or economic subsets, I started by taking an interest in the possibility of structuring autonomous economic subsets but connected to national economies through existence of local or community currencies. This approach allowed me to study local community mechanisms in Europe, in particular with L'Eu sko basque (France), Epi Lorraine (Belgium), or Bristol Pounds (United Kingdom).

The purpose of a local currency is to strengthen the local economic fabric, to relocate the productive economy, and to orient trade in the direction you wish to give to your economy.

Eusko currency was put into circulation in 2013, and it quickly became the most used local currency in France, in terms of number of members and money supply in circulation. The organization of the Eusko circuit is completely representative of local French currencies : once you understand how it works in this specific case, you will be able to understand how any local currency works.

However, the use of these currencies has limits : they have no currency , therefore do not serve as a store of value, and are often limited to the payment of local taxes or access to goods and services produced locally. They are also limited by their geographic roots.

However, this ability to transcend territorial borders is the hallmark of cryptocurrencies.

2.2. The emergence of cryptocurrencies

Cryptocurrencies are an application of Blockchain technology.

A (or a) Blockchain, or blockchain, is a technology for storing and transmitting information without a control body. Technically, it is a distributed database whose information sent by users and internal links to the database are checked and grouped at regular time intervals in blocks, thus forming a chain. The whole is secured by cryptography . By extension, the Blockchain manages a list of records protected against falsification or modification by storage nodes ; it is therefore a distributed and secure register of all transactions made since the start of the distributed system.

Many virtual currencies and crypto currencies using chain blocks for their safety. Satoshi Nakamoto , the inventor of bitcoin , was the first to apply a decentralized blockchain.

A cryptocurrency, also known as cryptoactive, cryptocurrency, cryptographic currency or even cyber money , is a currency issued peer to peer , without the need for a

central bank , usable by means of a decentralized computer network . It uses the principles of cryptography and associates the user with the process of issuing and settling transactions. In France , cryptocurrencies do not have a legal definition : cryptocurrencies are unknown to the monetary and financial code . The Banque de France , which does not have legislative power, differentiates cryptocurrencies from IOUs and distinguishes them from one currency. It recognizes them under the definition of "any instrument containing in numerical form non-monetary value units which can be kept or transferred for the purpose of acquiring a good or service, but which does not represent a claim on the issuer ".

The G20 considers Bitcoin to be a " crypto-active " . This term "crypto-active" then refers to " virtual assets stored on an electronic medium allowing a community of users accepting them in payment to carry out transactions without having to resort to legal tender " .

No regulatory body, the price of Bitcoin is simply determined by the law of supply and demand, political decisions as well as the technical problems and hacking

This economic law simply applies to cryptocurrency: it is worth what people are willing to shell out to get it at some point. The value of Bitcoin is the result of negotiations between sellers and buyers. The National Bureau of Economic Research (NBER) has also observed that the more Bitcoin attracts attention, the more its price increases. The media effect indeed played a large part in the increase at the end of last year. Many people have taken an interest and invested in it, increasing the demand and therefore the price of Bitcoin.

The law of supply and demand is not the only one to influence its course. External factors can impact it, such as political decisions. For example, its price fell by 13% on December 28, 2,017 after the announcement of South Korea wishing to better manage virtual currencies.

The technical problems and hacking can also significantly impact the course of a cryptomonnaie like Bitcoin. On December 21, 2017, Youbit , a South Korean exchange platform, declared that it had been hacked, losing 17% of its managed assets in the process. Result: the price of Bitcoin fell in the following hours.

Although fulfilling the classic functions of currencies, namely measurement of value, intermediary in exchanges and store of value, cryptocurrencies have limits, in particular the absence of a central body which oversees their regulation, and because of their character dematerialized, do not have a fiduciary version like local currencies.

2.3. Monetary system under the old regime in France

Starting from my site of observation of financial phenomena throughout history, I realized that in French society pre-existing to the revolution of 1789, one of the expressions of the diversity of this class society was indeed the diversity of instruments financial.

On the system of currency account is the base of the medieval monetary system. It has completely fallen into disuse these days. The royal monetary system was bimetallic and articulated around the book-money pennies tournaments.

The monetary system of the Old Regime is characterized by its duodecimal base , the distinction it made between account money and settlement money, the complexity that ensued and, against all expectations, its longevity. Can we not therefore perceive in retrospect a call for more diversity for our contemporary financial systems whose monolithism mediates the financial crises in a global way to all the actors ?

In the early Middle Ages , the territories that formed part of the Carolingian empire inherited the monetary reform of Charlemagne . This consists of using a pound divided into 20 sous as the currency of account , each penny being itself divided into 12 denarii 1 . The pound is therefore worth 240 denarii. One pound really corresponded to a pound of silver (about 409 grams) with which one struck 240 denarii. So originally, 240 denarii were exactly the weight of a pound of money. In addition, only the deniers, and the obols (of the deniers sub-units) actually circulated , thus leading to large purchases being made in large quantities of cash. Objects (land, horses, cows, precious objects, etc.) are often valued in account money (in pennies, for example), and the exchange results in more complex barter . The small peasantry and the small aristocracy do not use, thus, scriptural money . It has been demonstrated by archaeological excavations that entire areas, such as the city of Rome and its surroundings, were almost completely devoid of money between the 8th and 11th centuries, despite a life of real exchange and probably quite intense. "

The system gradually became more complex, with the feudal breakup and the creation of new circulation currencies. Thus, the system has evolved to be based on two series of units:

- The three units called account, abstract, which were used to express a value and to count : book , penny , denier .
- The so - called concrete settlement units were used to name the coins struck by authorized workshops and used for trade : the louis , the ecu , the bill , etc.

If we add up indiscriminately the variety of monetary instruments circulating under the Old French Regime, the monetary system takes on the appearance of a real disorder. On closer inspection, the suspicion of disorder weighing on these monetary instruments is also that weighing on cryptocurrencies. Because, behind the anonymity of the game players in the Blockchain, can we not perceive there a risk of fraud and embezzlement?

In fact, the monetary system under the Old Regime lasted five centuries in a long context of economic development. We must therefore return to the observation of disorder in the light of the social structure of the Old Regime and assume that the monetary complexity which takes shape with the appearance of cryptocurrencies can produce economic compensation mechanisms in the event of financial crises.

A strong and decisive social order then appears, the structuring of which allows each social group to deal with a complexity that is both reduced and specific, which various adapted processing techniques allow to use at best. ***The specific social group of money changers is also responsible for managing all of these monetary instruments and acts as an interface for all the others.*** Currency is therefore not the same for everyone because each social group has appropriate monetary instruments whose use is facilitated by the possession of specific techniques.

However, as in the Old Regime, the monetary institution can manifest the social bond. Indeed, the society of the Old Regime is highly structured and hierarchical, so that a multitude of barriers hinders its evolution. Consequently, the use and circulation of money reproduce this social structure. The monetary practices of the Old Regime therefore seem to embrace social differences and take a plural form. For this plurality, the complexity of the system monetary e proves highly attenuated in daily currency practices. In fact, the emergence of cryptocurrencies currently marries national and even transnational “economic circuits” aroused by the emergence of international firms, which,

while seeming to perpetuate consumption habits, favors the emergence of consumer communities to the origin of cryptocurrencies.

In short, in the Old Regime, each social group corresponds to a specific series of monetary instruments which it uses or simply recognizes. The risks inherent in their complexity are mitigated both by their geographic roots and by their media coverage around social networks.

III.LITERATURE REVIEW

1. Monetary complexity in France under the Old Regime: scope and management methods, Jérôme Blanc , Université Lumière Lyon-2, LEFI (Laboratory of economics of firms and institutions) , Lyon, France

2. Lachaud Jean Pierre. Labor market and social exclusion in the capitals of French- speaking Africa : some elements of analysis. In: Tiers-Monde, tome 36, n ° 142, 1995. Pauvretés. pp. 279-302

3. Rethinking Money: How New Currencies Turn Scarcity into Prosperity , De Bernard Lietaer and Jacqui Dunne , Berrett -Koehler Publishers, Inc.Jan 4, 2013

4. Cryptocurrencies and Blockchains , Quinn DuPont , Polity Press, 2019

5. Cryptocurrencies: A Primer On Digital Money , Grabowski, Mark, Routledge Focus On Economics And Finance, Routledge, 2019

6. Cryptocurrencies and anti-money laundering regulation in the G20 , Gustavo Rodrigues; Lahis Kurtz , Institute for Research on Int ernet and Society - IRIS, 2019

IV.PRESENTATION OF DATA

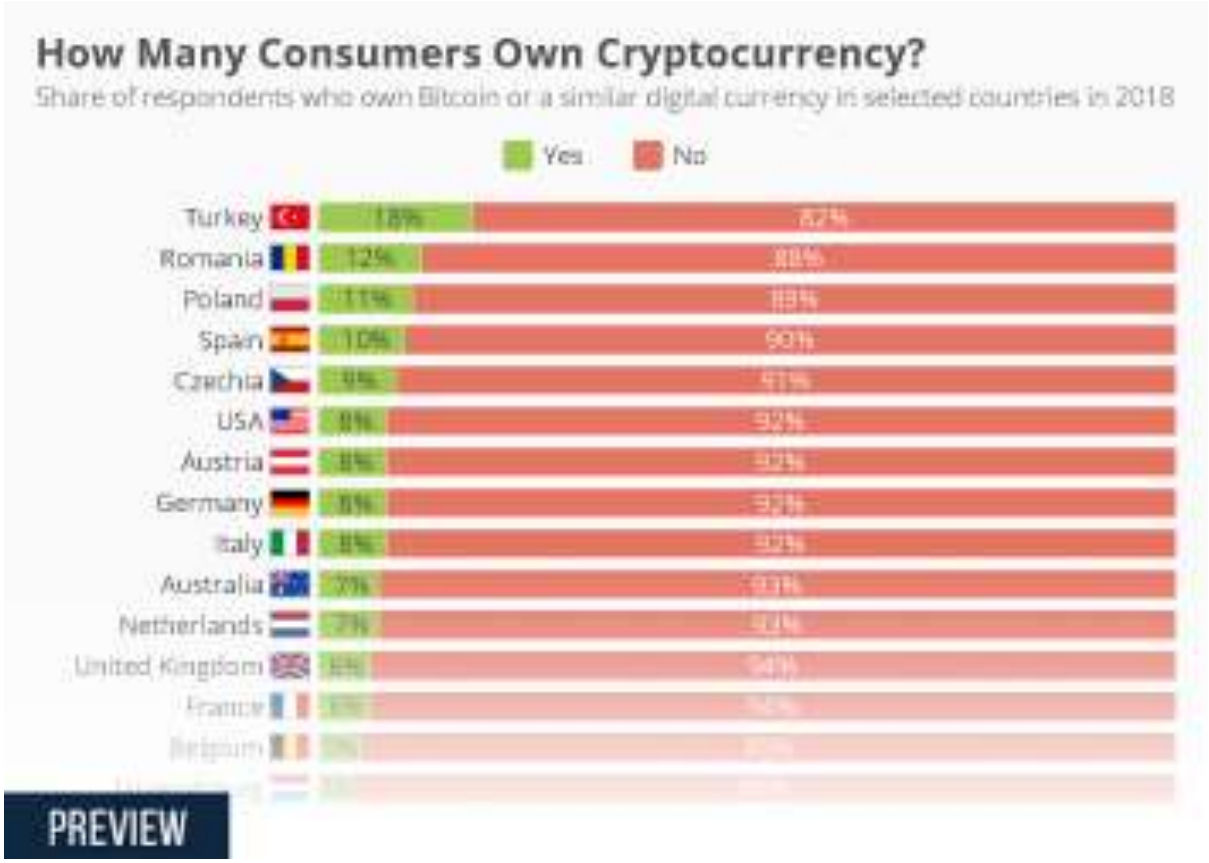
1. On local currencies

Table 2. Some examples of CCS

Name of currency	Zone of activity	Date of introduction of the currency	Number of providers	Number of individual users
Time Banking Network	UK	1986	–	300 Time Banking 35 000 users (in 2014)
Accorderie Network	France	2011	–	34 accorderies 11 000 users (in 2017)
Palmas	Conjunto Palmeira (Fortaleza, Brazil)	2002	270 (in 2013)	Not recorded
Chiemgauer	Chiemgau (Germany)	2003	510 (end 2017)	3451 (end 2017)
Brixton Pound	Brixton (London, UK)	2009	200 (paper money); 100 (payment by SMS) (October. 2013)	3000 used it at least once (by 2012)
Bristol Pound	Bristol (UK)	2012	900 (in 2015)	A few thousand, 1 277 of whom held accounts with the Bristol Credit Union (in 2015)
Béki	Canton of Redange (Luxemburg)	2012	71 (January 2014)	Not recorded
Eusko	Basque country (France)	2013	650 (end 2017)	3 000 (end 2017)
NU Spaarpass incentive card	Netherlands	May 2002 - March 2003	Approx one hundred	10 000
SOL Alpine	Grenoble (France)	2007	23 (in 2012)	147 active users (in 2011) out of 1360 holders of cards distributed since 2007
Eco iris	Brussels	2012	90 (in 2014)	1360 (in 2014)

Source: The authors, using documents published by the host organisations.

2. On cryptocurrencies



3. On the monetary system under the Old Regime

	TYPES MONETAIRES	MOTIFS DES CHANGEMENTS DU TYPE MONETAIRE	TEXTES JURIDIQUES	EQUIVALENCE EN OR DE LA LIVRE (1 CARRE = 0,1 g d'or pur)
1640-1643	LOUIS A L'EFFIGIE DE LOUIS XIII	Réforme monétaire (changement du système de règlement)	Edit du Roy du 31 mars 1640	
1643-1662	LOUIS A LA MECHE COURTE / LONGUE	Changement de règne		
1658-1679	LOUIS AU BUSTE JUVENILE ET A LA TETE LAUREE	Changement de physionomie		
1668-1684	LOUIS A LA TETE NUE	Changement de physionomie		
1679-1688	LOUIS A LA TETE VIRILE	Changement de physionomie		
1683-1689	LOUIS A LA PERRUQUE	Réforme monétaire (dévaluation)	Edits des 29/07/1686 et 27/10/1687	
1690-1693	LOUIS A L'ECU	Réforme monétaire (dévaluation) dite "1ère réformation"	Edit du Roy du 15 décembre 1689	
1693-1700	LOUIS AUX 4 L	Réforme monétaire (dévaluation) dite "2ème réformation"	Déclaration du Roy du 11 octobre 1693	
1700-1704	LOUIS AUX 8 L ET AUX INSIGNES	Réforme monétaire dite "3ème réformation"	Déclaration du Roy du 27 septembre 1701	
1704-1709	LOUIS AUX INSIGNES	Réforme monétaire (dévaluation) dite "4ème réformation"	Edit du Roy de mai 1704	
1709-1715	LOUIS AU SOLEIL A L'EFFIGIE DE LOUIS XIV	Réforme monétaire (dévaluation)	Edits du Roy des 22 avril et 14 mai 1709	
1715-1715	LOUIS AU SOLEIL A L'EFFIGIE DE LOUIS XV	Changement de règne	Edit du roy du 15 novembre 1715	
1715-1716	LOUIS AUX INSIGNES ET A L'ECU OVALE	Réforme monétaire dite "1ère réformation"	Edit du Roy du 23 décembre 1715	
1716-1718	LOUIS DE NOAILLES	Réforme monétaire avec refonte du type précédent	Edit du Roy du 18 novembre 1716	
1718-1719	LOUIS A LA CROIX DU SAINT-ESPRIT	Réforme monétaire (dévaluation)	Edit du Roy de mai 1718	
1720-1723	LOUIS AUX 2 L	Réforme monétaire (dévaluation) dite "2ème réformation"	Edit du roy du 30 septembre 1720	
1723-1725	LOUIS MIRLITON	Réforme monétaire (Réévaluation)	Edits du Roy des 20/08/1723 et 26/09/1724	
1726-1740	LOUIS AUX LUNETTES	Réforme monétaire (Réévaluation)	Edit du Roy de janvier 1726	
1740-1774	LOUIS AU BANDEAU	Changement de physionomie		
1770-1774	LOUIS A LA VIEILLE TETE	Changement de physionomie	Edit du Roy d'Août 1768	
1774-1774	LOUIS AUX PALMES	Changement de règne	Déclaration du roy du 23 mai 1174	
1774-1785	LOUIS AU BUSTE HABILLE	Changement de règne	Déclaration du roy du 18 septembre 1774	
1785-1792	LOUIS AU BUSTE NU	Réforme monétaire (dévaluation)	Edit du Roy du 30 octobre 1785	
1792-1793	LOUIS CONSTITUTIONNEL	Changement de régime	Décret du 9 avril 1791	
1793-1793	LOUIS CONVENTIONNEL	Changement de régime	Décret du 5 février 1793	

V.METHOD

The method that we used to carry out this study is the hypothetico-deductive method. The hypothetico-deductive method is a scientific method which consists in formulating a hypothesis in order to deduce from it observable future consequences (prediction), but also past ones (retroduction), making it possible to determine its validity. The hypothesis that we formulated is that if in the past decentralized monetary systems existed in France, it is possible to update them through the emergence of cryptocurrencies. The question of verifying this hypothesis refers in particular to the problem of induction , at the heart of the philosophy of empirical science .

In philosophy , induction is an intellectual process which consists in proceeding by probable inference , that is to say in deducing laws by generalization of observations. Thus, in the obvious absence of a monetary policy decision relating to the regulation of cryptocurrencies, we had inferred that they can fully integrate into the economic environment and even be the engine of a new monetary architecture . In the scientific context , and provided that the limits are properly measured, induction can find its place. For example, the accumulation of monographic studies can lead, by generalization, to formulate propositions relating to economic change . But this is not a question of inductivism , because the researchers are guided in their monographic observations by a theoretical problem which guides their construction of the facts.

In addition, this hypothetico-deductive method could be exploited thanks to the use of the comparative method. Indeed, the latter allowed us to identify the socio-economic trends common to contemporary societies and to French society of the old regime, namely the need to use monetary instruments not only as a means of expression of economic particularisms, but also as a means of solidarity.

VI.RESULTS

Contemporary societies, like French society before the 1789 revolution, present similarities which allow the former to claim the existence of decentralized monetary systems integrated into the political and economic order.

In addition, as in French society under the old regime, the banker-changers played an essential role in the interfacing of different financial instruments, it is possible to attribute such a role to contemporary central banks.

Thus, by creating a junction between technological innovation, sociological economic and financial regulation, it is possible to migrate our monetary system from its current status characterized by a monoculture, to a real monetary ecosystem within which monetary diversity is source of solidity and wealth for the global economy.

VII.RESULTS INTERPRETATION

The social and economic complexity in Cameroon, like that found in countries that have paved the way for the existence of complementary currencies, in the light of contemporary developments in payment instruments, and in the light of the monetary system under the Old Regime, seems to be conducive to the implementation of cryptocurrencies.

Therefore, the result of this study is simple. The only way to absorb the risks linked to the use of cryptocurrencies is, like the monetary instruments of the Old Regime in France

- To back up their use to their detention by communities:
    - Or state dismemberments
    - Either socio-cultural communities like tribes.

Indeed, as in the phenomena of sovereign risk management, in a traditional way the latter is often considered less risky than that of private actors. Consequently, attaching the issuance of cryptocurrencies to state or socio-cultural communities may seem less risky, insofar as the latter, as in the case of States, have tangible and lasting heritage.

As a result, central banks will be able to interface with the different cryptocurrencies, just as banker-changers did in the Old Regime. Indeed, if the incidents observed so far in terms of hacking and scams could have been carried out, they took place at the interfaces between the digital platforms and the centralized systems. Thus, the crucial role of central banks as a platform for interfacing between cryptocurrencies from a central digital currency environment may well resolve the question.

VIII.CONCLUSION

The regulation of cryptocurrencies by central banks is at the heart of the challenges and battles relating to the development and expansion of blockchain technology.

The networks of cryptocurrency users, heirs to the dynamics of financial inclusion of social actors deploying at the margins of official systems, seem to pave the way for the transition from a system of monetary monoculture to that of a monetary ecosystem, example of that prevalent in French society at the time of the old regime.

This emerging new model must put political and social communities, as well as central banks, at the heart of the issuance of cryptocurrencies.