



LAO PEOPLE'S DEMOCRATIC REPUBLIC
PEACE INDEPENDENCE DEMOCRACY UNITY PROSPERITY

Bank of Lao PDR
Research Committee on Management
Legislation on Cryptocurrencies Activities

Vientiane Capital, Date 20 June 2019

**Research Report on Cryptocurrency Management and Supervisory
Legislation**

Research Committee on Cryptocurrency Management and Supervisory Legislation (committee) is appointed to do a research on the management and supervisory legislation and propose direction in protect risk which may occur on such activities. Through the research can be summary as follows:

I. Introduction

Cryptocurrencies is a result from the financial technology development of group of people who intend to have independence currency from any country or organization in the world which the related person deem that a national currency begin to lack of liabilities such as utilizing policy to print a money to settlement debt of the United State of America and the European Union during the financial crisis year 2008 which unclear that the such additional production having known how to guarantee it just because only to base on the debtor to acknowledge the USD and Euro as the international instrumental. Also, the use of national currency still must pass the Intermediary weather the central bank or commercial banks which lead to subject to have capital in settlement. Therefore, building the independence currencies from the Intermediary will help saved capitals and not necessary to be based on the currency rate or economy of any country.

They see that a basic key principle in creating a currency as the instrument to pay such as: any currency shall be based on the acknowledgement of the receiver or in another way is the trust of the receiver that will be able to use the currency that they receive in paying as an exchange. Therefore, if build any system to approve such trust, weather any currency in any form then they will be able to use as instrument in payment and make all roles of money as the national currency which issued by the central bank of any country. The scope of use of such money is based on the number of Recipients and trusted. Therefore, the system must be advertising widely with various form to expand number of user or Recipients.

With thinking method principle above, group of people who is skillful in technology then have built various type Cryptocurrencies which initially and outstanding is Bitcoin where begin using since 2009 by a person name Satoshi Nakamoto and still unable to know who he is and which country he lived. Bitcoin is using computer technology to create database together (Block) between user and combine as chain or Block chain. Other than Bitcoin, the Cryptocurrencies consist of Ethereum, Cardano, Litecoin and others.

Recently in the Lao PDR there was a movement actively on a Cryptocurrencies occurred but the government still have no direction, mechanism in managing, follow up monitoring such activities resulting to may have risk to people who subject to scam or deceive to invest to such monies due to such monies is not a money and instrument that able to use in paying debt according to the law of Lao PDR. Therefore, this research is having the purpose to educate on the Cryptocurrencies for deep understanding and make understand on the technology Block chain to set direction in managing, protect the user and use such technology to develop in banking activities for optimal effective.

II. Basic Understanding of Cryptocurrencies

Through the study from various data resources especially through the internet, able to summary the basic understanding of Cryptocurrencies as follows:

1. Awareness on Cryptocurrencies

In the technology evolution era there is fast development resulting to form of payment instrument obtain development in variety and different from money that our society have use for a long time is in form of physical bank notes or coins, tangible then developed into form of digital or called: Digital Currency or Digital Money which mean a money inform of digital or electronic that intangible like bank notes such as bringing cash to exchange as a money contain in card, mobile phone or computer to pay for goods and services (1 kip = 1 e-money) called: electronic money (e-money). Also, in the electronic world or online world still have another form of digital money called: Virtual Currencies which created by group of people and accepted to use within group only without government approved or manage follow up like money which is approved to be able to use as a payment instrument according to the law like cash, check, money transfer, card and e-money.

Virtual Currencies can divided according to feature of use into 3 form such as (1) Virtual cash which unable to buy actual goods and cannot exchange to real money, such money is received from online world by doing activities such as: play online game then receive point or Virtual cash: (2) Real money exchange to Virtual Currencies but unable to exchange back to real money such as Facebook Credit which able to purchase goods and online services or Applications and (3) able to use real money and exchange to Virtual currency and able to exchange back to real money, able to purchase goods on both online world and real world such as Cryptocurrencies likes Bitcoin, Ethereum, Litecoin and others which is called: the “Cryptocurrency”

2. Type of Cryptocurrency

Cryptocurrency is one type of digital money which classified in Virtual currency categories. Crypto means Cryptography which means encoding and the term Currency is money currency or combined terms becoming a meaning “encoding currency”, technology of this encoding currency has designed for making transaction through digital world by encoding to set for transferring, the new born of currency unit, certification of transaction and orders related to transaction which occurred through technology encoding that we called a technology with Block chain. Recently a Cryptocurrency have estimated of more than 2,000 type which able to divided into 3 primary type such as: (1) Decentralized Cryptocurrency such as: Bitcoin, Ethereum and Litecoin, (2) Private-entity issued cryptocurrencies such as J-Coin, Utility Settlement Coin and Ripple (3) Central Bank

Digital Currency (CBDC) which the central bank in many countries is studying and conduct a research trail. Each type has details as follows:

(1) Decentralize Cryptocurrency: is a cryptocurrency which unable to identify issuer clearly but having mechanism for general people to have opportunity to be part of in approved authentication of transaction in the system which the system will issue a cryptocurrency as compensation which deem creating motivation to the public to participant in issuing a cryptocurrency by processing a Mining such as:

- **Bitcoin:** BTC is the first cryptocurrency of the market and recently is the most famous by having market capitalization in beginning of April 2019 at US\$90 thousand million, at selling price about US\$5,000/1 BTC (coinmarketcap.com April 2019). Bitcoin have purpose to conduct transaction by not through Intermediary or central bank or commercial bank (Nakamoto, 2008) which then is famous to use for goods and services payment (both legal and illegal) between any group of individuals that do not want to reveal identity, but due to there is some large technology company begin to accept payment for goods and services with Bitcoin to reflect to modern to them resulting to Bitcoin begin to be more well-known widely. Bitcoin creator have limited the amount of Bitcoin at 21 Million Bitcoin and recently such amount will automatically stop, recently there is 17 Million Bitcoin (coinmarketcap.com, April 2019).
- **Ethereum (ETH)** is a cryptocurrency with 2nd high market capitalization below Bitcoin in beginning April 2019 have value around \$US17 thousand million, selling price around \$US162/1 ETH (coinmarketcap.com, April 2019). Ethereum is developed to use on Ethereum Platform with purpose of open-source computer network to let general people able to make transaction between each other inform of Decentralized without Intermediary;
- **Litecoin (LTC)** is cryptocurrency that is continuously growing which developed by Block chain technology with similar features like Bitcoin but still keep continue develop to decrease limitation of speed in approved transaction by average of each block will take time around 2.5 minutes which is faster than Bitcoin which used time for 10 minutes, also the transfer fee is cheaper than Bitcoin. Recently Litecoin is a cryptocurrency with market capitalization at around US\$4.89 thousand million, selling price at \$US40/1 LTC (coinmarketcap.com, April 2019).

(2) Private-entity issued cryptocurrencies: is cryptocurrency issued by private sector with issuer identity which have collateral or nothing for issue such money which can be divided into 2 type as follows:

- **Payment tokens:** is cryptocurrency which have purpose to use in payment transaction as primary, with feature to be use to increase effective of financial sector or payment system to minimize expense and decrease time in transaction operating by using as reference value with money that officially use (fiat currencies) such as Utility Settlement Coin (USC) which have large bank group having plan to issue for payment between country and between banks in group, J-Coin is cryptocurrency which the commercial bank group in Japan is plan to issue to use as Intermediary in payment to meet the Olympic year 2020 at Tokyo which will link to real money in rate of 1 on 1 and Ripple (XRP) is a cryptocurrency which issued by Ripple company which having purpose to use platform in payment between country which able to make easily, quick

and low initial capital which the company is work with primary financial institution and currently there are many commercial banks have conduct testing such platform to conduct financial transaction by using the official currency as instrument in conduct transaction, recently XRP have market capitalization around US\$14 thousand million, at selling price of US\$0.34/1 XRP, as 3rd ranked below Bitcoin and Ethereum (coinmarketcap.com, April 2019);

- **Asset tokens or Crypto Asset:** is mobilization fund in form of Initial Coin Offering (ICO) which is issuing tokens as utility token which give rights to investor access to the use benefit from application or digital services in many forms which the company have mobilize fund that will created and security token with features asset such as: give rights to involved in the return from conduction of token issuer.

(3) Central Bank Digital Currency (CBDC): is cryptocurrency which the central bank is issued or assigned to the financial institution as co-issuer. Recently, central banks in many countries are ongoing study direction in issuing CBDC in form of Wholesale CBDC to make payment with high value between the financial institution (Bank of Thailand, Bank of Canada, Singapore and Hongkong) and Retail CBDC to payment for sub-transaction (Bank of China and Central Bank of Sweden).

Table 1: Sample of Cryptocurrency type

	Decentralize Cryptocurrencies	Private-entity Issued Cryptocurrencies	Central Bank Digital Currencies*
Issuer	Un-identified	Legal entities and financial institution	Central Banks
Sample	<ul style="list-style-type: none"> • Bitcoin • Ether • Litecoin 	<ul style="list-style-type: none"> • XRP • Utility Settlement Coin • J-Coin* 	<ul style="list-style-type: none"> • CADCoin (Project Jasper) Bank of Canada • E-Krona (Bank of Sweden) • Digital SGD on Ledger (Project Ubin) Bank of Singapore • Bank of China (CBDC Prototype)

- Under period of study and testing

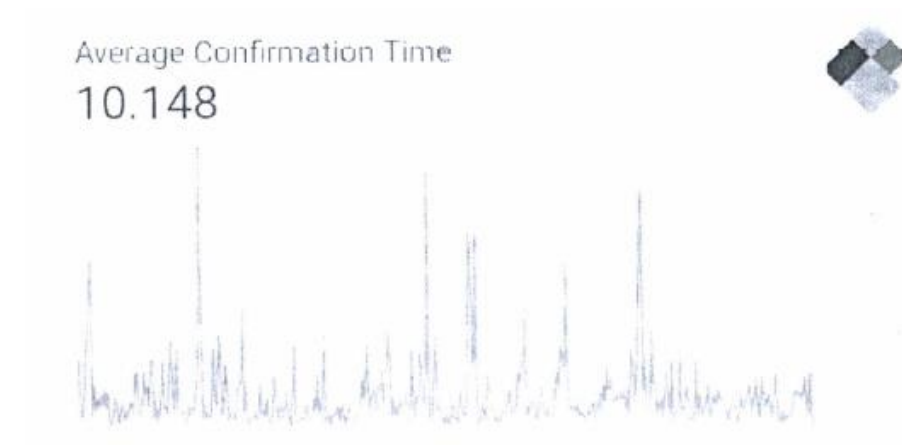
3. Cryptocurrencies is money or not.

Consideration that Cryptocurrency is money or not is depending on type of such cryptocurrency or may compare to features of money in economy which indicate key important in 3 things such as: act as Intermediary in buy-sell exchange which is the society is accepted as Intermediary in exchange, buy-sell goods and services; act as measurement unit on accounting which is use as measurement unit in value of goods and services (such as: Kip or US dollar) and act as value collector which money will act as reflection of value of goods or services and value of goods or services that collected in form of money shall be able to use accordingly.

Therefore, in case Decentralized Cryptocurrencies which unable to interpret as money according to definition of the economy clearly due to Decentralized Cryptocurrencies is not

yet the Intermediary in buy-sell exchange and a good collector of value even if the popularity of Decentralized Cryptocurrencies especially Bitcoin which increasing which reflect from price of Bitcoin that adjust higher quickly in the past but the use of Bitcoin in buy-sell exchange in daily life still not expanded due to inconvenience of the technology itself, have high cost in making transaction and not yet popular in wide range. For example: using Bitcoin to buy 1 cup of coffee may use time more than 10 minutes or many hours to confirm the order (figure 1) compare to using cash, debit card or credit card which confirm the transaction instantly. Moreover, exchange of cash to Bitcoin or exchange Bitcoin to cash having high cost due to price of Bitcoin is high fluctuation and accessing to Bitcoin is hard which make margin in buy-sell Bitcoin (bid-ask spread) still in high level (about 10%).

Figure 1: Average Confirmation Time



At the same time, recently the financial institution globally in majority still not accept payment in form of Decentralized Cryptocurrencies and in some country such as China is announced to prohibited the use of Decentralized Cryptocurrencies as instrument for buy-sell exchange clearly, a majority of person who hold Decentralized Cryptocurrencies is for speculation resulting to the price of Decentralized Cryptocurrencies fluctuation a lot and unable to use as a good value collector (we can see that the price of Bitcoin that used to have high value at US\$20.089/BTC in 17th December 2017 and present day price is at US\$5,000/BTC) when considering from such features, the Decentralized Cryptocurrencies such as Bitcoin still unable to hold as popularity currency in economy completely.

Table 2: Comparison of features of money of Cryptocurrency in many types according to popularity of economy money

	Decentralize Cryptocurrencies	Privately issued Cryptocurrencies	Central Bank Digital Cryptocurrencies
Medium of Exchange	?	✓	✓
Unit of Account	✓	✓	✓
Store of Value	?	✓	✓

For the Private-entity issued cryptocurrencies, if there is a money of the central bank guarantee in full amount and make credit risk low and able to exchange with money of the money of the central bank in fixed value (1 to 1 in case USC and J-Coin) have potential to be able to interpret as money according to popularity in economy clearer than Decentralized Cryptocurrencies. From the feature of being Intermediary in buy-sell exchange (even in case of USC may be accepted in specific payment of large transaction between the financial institution that join in the system but also able to exchange back as a money which issued by the central bank in fixed rate all the time) moreover, both USC and J-Coin are using the currency which issued by the central bank as measurement unit in accounting and able to re-exchange as money that issued by the central bank in fixed rate at any time resulting having feature in keep the value compare to money issued by the central bank.

In case of CBDC if the central bank identifies to have value equal to money that issued by the central bank, we can interpret that CBDC is a real money in economy due to it will receive acceptance as Intermediary in buy-sell exchange widely, act as measurement unit in accounting (such as: as Kip) and keep value equivalent to money issued by the central bank.

4. Business Operation associated with Cryptocurrencies

Business operation associated with Cryptocurrencies is expanding a lot in many countries which able to classify group of business related to Cryptocurrencies into 2 primary group as follows:

- Group 1: Cryptocurrency Producer or Supplier which some Cryptocurrency is increase from audit procedure and approved business or we called mining by using high speed computer in calculating mathematic to get what we call Cryptocurrencies, mining each Cryptocurrencies having different types which the miner can make business on mining such as: (1) invest on Hardware to build mining factory and (2) create website as Intermediary by having connection to the mine or large mining pool to use as exchange buy-sell mining energies to sub-miner;
- Group 2: conduct business as the Intermediary which is business operation on exchange, buy-sell between Cryptocurrencies or with official currencies which having form of service as follows: (1) exchange center service or Cryptocurrencies exchange. (2) services inform of dealer. (3) services on buy-sell counter of Cryptocurrencies with features like ATM. (4) services like P2P (Peer to Peer) or social website as the Intermediary in negotiation of group investor to exchange Cryptocurrencies between each other without Intermediary.

III. Blockchain Technology Background that Build Cryptocurrencies

1. Blockchain Technology

Is one of outstanding technology and innovation in the 4.0 Industrial Era which mean procedure of change from the old production method to the new form by using technology digital and internet into production procedure of goods and services for better efficient than before and truly meet according to social demand. Blockchain is computer technology which build database with Distributed Ledger Technology or DLT as Block between all users then combined as a Block connected like Chain or called connected data group system technology Blockchain. Similar like opening co-holder of one bank account with many holders which

each member able to see each transaction but unable to identify a person and who is doing a transaction, but they will see code of members, remaining balance and transaction number. Blockchain established in 2008 by user name Satoshi Nakamoto, Japanese nationality to serve the use of Bitcoin by using DLT technology. Such technology is popular to use in many regions weather to use for voting, exchange purchase of goods between countries, services that required trust between users to help confirm accuracy of data that have recorded in the network with transparency and have encoding of cryptography to increase safety in conducting transaction to prevent from falsify or resolve data. Blockchain will consist of three types such as: (1) Public Blockchain (everyone can access), (2) Consortium Blockchains (within any specific group organization), and (3) Private Blockchains (within any organization).

2. Utilize Blockchain Technology in Activities

Technology Blockchain has developed, by Blockchain industrial¹ into various divisions especially have used such technology in activities on the credit information, modern production-services, transfer of copyrighted, personal information as digital, technological evidence and others to enrich effective in implementation activities for convenience, quick and safe.

China is using technology Blockchain into the financial sector with high trust which able to change financial structures including financial property such as Share, Loan Share (Bonds/Debenture)². Debt confirmation instrument (Bill/Receipt)³. Warehouse Receipt, Fund Share and other which created as account to maintain in the Blockchain program, becoming digital property which data is stored, exchange, trade through Blockchain. Blockchain technology having key point in conducting directly without through the intermediation (DE intermediation) can save cost, increase convenience and safe in purchase goods and services. Using Blockchain technology into financial services to build the new form of transaction, business operation procedures and products, by using advancement of technology Blockchain with the financial technology, which have modified to meet the situation on financial divisions and build change in financial market, financial institution, financial services provider and financial businesses. Recently, China is using Blockchain into Supply Chain Finance or SCF, Trade Finance (Letter of Credit, Letter of Guarantee, Forfeiting⁴, Factoring⁵ Bill/Receipt), Credit Information Bureau or CIB, settlement, score collection, insurance, security purchase/exchange and other.

Using of Blockchain technology in China still used in many business sectors, due to outstanding point on distribution of data which able to follow up monitoring and unable to resolved, a research of Blockchain in business sector received success at beginning which constitute in upgrading the real business sector, form of use on Blockchain in sectors is having

¹ Blockchain industrial means business sector that related to the creator and program developer, hardware manufacturer, system supplier, system services, goods services supplies, after sale services and others.

² Share Load (Bonds/Debenture) a financial instrument with value which defined time and interest rate which the government, banks, financial institution and enterprise of China issue to mobilize form society.

³ According to the law on debt confirmation instrument (Bill/Receipt) of China. The debt confirmation instrument included Bill of Exchange Promissory Note and Cheque which shown rights of debt owner within set time, the holder or recipient can order issuing or person required to pay according to amount defined.

⁴ Forfeiting is a new instrument of Trade Finance which mean selling of agreement or debt confirmation instrument (Bill/Receipt) to investor or the third party which the purchase unable to claims rights (Without Resource) payment with seller but will claims with the issuer of debt confirmation instrument or money payer which defined.

⁵ Factoring is a financial services in which the business entity sell its bill receivables to a third party at a discount in order to raise funds.

fair form. Use of Blockchain in business sector such as 13 key activities such as Financial Management which included management of account, Receipt systems and accounting audit, collection of personal information as digital, protection and transfer of copyrighted, collecting of electronical data evidence, confirmation of goods origin (audit real or fake goods), modern marketing, purchase base on the analysis from mass information (Big data), industrial, energy (clean energy, energy trades, investment and mobilize fund on energy), medical, internet connection (Internet of Things: IoT). Social welfare, e-government and others.

For the Lao PDR, the development of Blockchain in recently is being interested from the state and private sector which other than baking division, there also Ministry of Post, Telecommunication and Communication and Ministry of Technology Science also conduct technical research on Blockchain and using in real life, which in the year 2018 the Digital Department, Ministry of Technology Science has host the Blockchain meeting in the Lao PDR of 2018 which in such event there is a signing an agreement of Memorandum of Understanding between the ministry and Lina Network company of Vietnam together development a confirmation of personal data (Digital Identity) which the such company will provide fund in amount of US\$500,000 to build a research center and develop the Blockchain within 5 years to be used in Human Resource management to step into the development of E-Government in future. The such center will use Technology Platform and Solutions from Lina Network company as well as private sector within the Lao PDR such as Fa Vatana Company, Derun (Laos) Investment Trade Limited Corporation (Derun Laos) and others are having a research and develop program that use technology Blockchain to be used in financial sector, International Digital Asset Management (IDA) by having concept to proposal to the Settlement Management Department (SMD) considering research on digital money for the Lao PDR and other aspects.

IV. Potential using Cryptocurrencies

1. Situation and Potential using Cryptocurrencies globally

Recently the use of Cryptocurrencies is increasing globally, based on Reuters and education system of Cambridge of English deem that Bitcoin user globally is 5.8 million of individual and legal entities, with value of 70 thousand US dollars, it is a digital money with encoding form which most used globally recently. A research has survey a potential of those countries globally deem that there are three opinions such as: (1) Acknowledgement; (2) Prohibitions and (3) Defined condition.

- (1) For the country that acknowledge the most is Japan, which issued a law to acknowledge any type of Cryptocurrencies to be able to settlement and the government also allowed a private sector to establish exchange center, buy-sell Cryptocurrencies legally by submitting proposal for license and under the management of the government; later in USA which have the most user in the world, many states acknowledge and have ATM for Cryptocurrencies (Bitcoin); also, there are Australia and Philippines;
- (2) Countries that still prohibited such as Bangladesh issued the law if anyone using Cryptocurrencies including Bitcoin shall subject to jail time according to the law on Anti-Money Laundering.
- (3) Countries that set condition: there is warning to people to be aware of possess or invest in Cryptocurrencies by publishing to people to understand to risk of such money and be aware to scam or fraudster in many forms that related to Cryptocurrencies such as: Thailand, Malaysia; some country is acknowledge as asset to be able to collect income tax from

selling such as England, Vietnam and Singapore. Many countries still have nothing with Bitcoin but using in a country such as: India. Other than that Thailand has set a condition to the business operator on Cryptocurrencies by allow to mobilize fund in form of Initial Coin Offering (ICO) under the law on digital and under the management of the Securities and Exchange Commission (SEC) which the SEC have policy to promote the access to financial resource of business especially tech startup company which mobilize fund in such form for the business operator who is dishonest able to use this channel to find benefit from people, therefore, the SEC has issued the law and regulations related to follow up monitoring and managing to ensure the mobilize of such fund is transparency and not deceive the people.

For China: The Bank of China People, internet office and information center, Ministry of Industry and Information, Enterprise and Commerce Management Department, Commercial Bank Management Committee, Security Management Committee, Insurance Management Committee has participant issue notice on the risk protection from issuing and investing in Cryptocurrencies in September 2017 with brief content as follows: it is prohibited for individual, legal entities, business unit and financial institution conduct activities related to issuing ICO, buy-sell, invest, provide payment services, open an account, guarantee and other weather direct or indirect that related to the Cryptocurrencies shall be illegal; the officer and relevant state sector shall cooperate in following up, protect, prevent and resolve the phenomenon of discouragement which resulting from issuing, buy sell, invest and others that related to Cryptocurrencies by performing according to the law and regulation strictly, which in the past they have created an untidiness to the economy and financial of China; conduction business on issuing, buy-sell and invest to Cryptocurrencies must stop form the date of issue this notice, if individual or any organization who issuing or provide investment services in the past shall return all the money to customer. The government must increase the management of the Platform and APP that provide a financial service such as: investment and buy-sell of Cryptocurrencies shall be stopped; websites shall be closed for services and APP to provide related services shall be deleted from all APP Store.

2. Situation and Potential the use of Cryptocurrencies in the Lao PDR

In the past in the Lao PDR, there was activities related to Cryptocurrencies such as: a legal entities propose to do this business on Cryptocurrencies, having advertising to persuade people to invest buy-sell of Cryptocurrencies, having advertising for Cryptocurrencies exchange, having an exchange shop that advertise to provide the exchange booth for Cryptocurrencies, there is foreigner to install number of computers to mine Cryptocurrencies and there is one who created a website as a Platform in buy-sell, exchange of Cryptocurrencies. Also, based on the information of the AMLIO that participant in the regional meeting that there are 38 Cryptocurrencies trader in Lao PDR but actually someone has reported to the AMLIO only one person. Therefore, from mid-year of 2018, the BOL has issue 2 notices with purpose of 1) notice to people, self-employed and employee, soldier, police throughout the country to not getting involved with buy-sell, exchange or possess the Cryptocurrencies due to such money is not money and not instrument that able to use for paying debt according to the law of Lao PDR; 2) notices to commercial banks and financial institution throughout the country where under the supervision of the BOL to prohibited invest or buy-sell of the Cryptocurrencies for

the benefit of the financial institution themselves or benefits of customers, it is prohibited to provide service on exchange of the Cryptocurrencies through many means of its services, it is prohibited to create exchange buy-sell intermediary (Platform) or act as the intermediary to customer to do a transaction on the Cryptocurrencies between each other, it is prohibited to let customers use all type of card such as Credit Card in the name of Cryptocurrencies, it is prohibited to support or provide consultant to customer on investment or exchange of Cryptocurrencies.

Even recently, the use of Cryptocurrencies still not able to use officially that able to use for paying debt according to the law of Lao PDR, however the research of using this technology system of Blockchain still be a key challenge to be used into purpose of development of the basic instrument of the payment system in the future to approve the collection of variety financial data (Big data) and facilitate to the service user of financial system to do settlements instantly, Anytime, Anywhere and Any Payment Channel.

V. Advantage and Disadvantage of Cryptocurrencies

1. Advantage

Even if currently, there is no any country that accept the Cryptocurrencies as the money to pay for debt according to the law (Legal Tender) and activities that related to the Cryptocurrencies in majority are only for speculation and have not so small activities that related to illegal activities, however the birth of Cryptocurrencies shall deem benefits to society and economic overall at least as follows;

- 1) The birth of innovation: Blockchain technology which begin from Bitcoin and DLT with potential able to bring to apply to help increase effective of the work procedures in conducting businesses which the DLT have potential to help minimize steps in works due to this is a distribution of database which have a series of single data between user resulting to see the data together and able to conduct business faster to decrease cost in audit data with each other;
- 2) Increase effective and competition: the birth of Cryptocurrencies, Blockchain technology and DLT has activate to be awaken to improve the procedure in work in all economy division especially in the financial divisions which those financial institutions and company that provide money transfer between country must adapt quickly by increase effective in money transfer between the country easier, quicker, saver and more safety.

2. Disadvantage

Even if there is a claim that Cryptocurrencies is safe from adjustment of data in each Block. Staying in the internet and computer system still have risk that the system will collapse or electronic equipment that save data and account user will damage or stolen. Base on Bloomberg, Russia Today, the leading company on Cryptocurrencies commerce has Cryptocurrencies stolen in large amount and subjected to bankruptcy. Also, there are critics on the Cryptocurrencies as the Ponzi Schemes or Pyramid Schemes and as Bubbles Economic which is lie. Also, there is no mechanism to protect the user clearly, no administration and lack of guarantee. However, the development and popularity that people have to the Cryptocurrencies and business related is happening quickly and variety which state and organization between country still follow up to the development and risk related closely by

having consideration related to risk that may occur from Cryptocurrencies in each aspect as follows:

- 1) **Money Laundering and Combating the Financing of Terrorism:** the use of Cryptocurrencies in majority able to do so by hiding identity when transferring between each other which make difficulty to the administrator to follow up and monitoring pathway in sending the Cryptocurrencies which taken number of money that received from making illegal activities to laundering which exchanging buy-sell in the Cryptocurrencies may doing by exchange that is legal, an exchange between other people and others. In creating a undisclosed level to make a transaction in Cryptocurrencies between E-money will try to do anything to undisclosed traces of making transaction by using Cryptocurrencies that able to hide the important data and address of the Receiver – Transferor such as Verge, Dash and Monero in the last step is the exchange of Cryptocurrencies to become the official currencies to use in paying anything and bring into the economic system. Therefore, Cryptocurrencies is used in channel that make terrorism and illegal business easily.
- 2) **Cryptocurrencies speculation and risk of investor (Investor Protection):** Cryptocurrencies have high fluctuation and unable to find the real value like Share or Bonds. Therefore, investors who do speculation with Cryptocurrencies required understanding to risk occur prior making decision to invest;
- 3) **Using in Ponzi Scheme:** due to the price of Cryptocurrencies increase resulting to a lot of advertising to mobilize money from people to frequently invest in Cryptocurrencies as a Ponzi Scheme;
- 4) **Avoiding the Exchange Control:** the exchange control is having to maintain the stability of currencies of the country which anyone who want to bring to-take out the country shall perform according to the regulation of every official, the use of Cryptocurrencies in making payment or transfer may subjected to use as a channel to avoiding following up and difficult in following and monitoring;
- 5) **Avoid Taxation:** transfer of Cryptocurrencies between electronic wallet of general individual resulting the state face difficulty in following up the transaction then may be another channel to avoid taxation;
- 6) **Effect to the stability on financial and currency that related to services by the financial institution (Financial Stability):** due to the Cryptocurrencies price is fluctuation, cancelling not holding the Cryptocurrencies is frequently happened resulting huge damage with high value and risk that will occur when using Cryptocurrencies in money laundry and purchase illegal goods, the financial institution is not invest on this or speculation in Cryptocurrencies due to the issue occurred will make an effect to the trust of the financial institution and overall financial system.

VI. Opinion on technical toward Cryptocurrencies

Currently, due to the use of internet network system having development widely resulting to popularity of use as a channel in communicate with each other, including the use of financial transactions due to convenience, quick. However, this also along with positive aspect, there still be more weak points that required attention, especially there is a group of people who misuse it such as used as fraud, fake to let's we lost property, used as buy-sell channel for illegal goods (addicted substance, weapons and others which will

make a mess in society. Therefore, the Bank of Lao PDR will be chief in mass management in financial-currency which will have the study research on the such issues in detail and in all aspect, aim to maintain the financial-currencies stability and protect the user, to follow like those concepts, the BOL shall continue pay attention to issue as follows:

1. Defines pathway in managing Cryptocurrencies

Currently, the state work unit of many countries is considering to pathway in managing, follow up monitoring Cryptocurrencies to be suitable by focusing mitigate risk that may occur from using Cryptocurrencies but will not obstacle the modern innovation development which help increase effective to economic in overall. As mentioned above that Cryptocurrencies is Decentralized Cryptocurrencies such as Bitcoin, Ethereum and Litecoin which unable to identify issuer clearly, including issuing and use of other Cryptocurrencies is able to conduct transaction cross border with ease, therefore, pathway in managing Cryptocurrencies at the country that is not prohibited on transaction of Cryptocurrencies will focus on the managing monitoring activities that related to Cryptocurrencies (Activities-base Regulations) especially through the management of the Intermediary within its country such as Crypto Exchange or dealer by focusing to KYC: Know Your Customer and CDD: Customer Due Diligence) and report the information to the relevant government to help mitigate risk on money laundering and other risk and have measurement in managing business that is Intermediary in exchange of Cryptocurrencies as to be managed investor not to be scam or hack information or Cryptocurrencies with ease.

Therefore, the Bank of Lao PDR must build mechanism to work together between relevant departments within the BOL such as: Commercial Bank Management Department, Financial Institution Management Department, Payment system Management Department and Anti-Money Laundering Intelligence Office to build management mechanism, follow up monitoring of such work systematically which may divide into 2 phases as follows:

Phase 1: but currently until 2020, the Bank of Lao PDR will base on Notice of the 2 BOL notices which released as reference in managing, follow up monitoring and publish such works by using the same mechanism in implementing measurement to offender of the financial institution at the Commercial Management Department and Financial Institution Management Department to use in currently is: the decision on measurement to offender of the commercial bank, issue no. 811/BOL, dated 18 October 2010, the additional decision on the measurement to offenders of the commercial bank, issue no. 847/BOL, dated 30 September 2012 and the decision on measurement to offenders of the non-banking financial institution, issue no. 845/BOL, dated 20 September 2018 as well as the BOL must study widely and improve legislation to implement such works to be effortless and suitable with actual situation from time to time.

Phase 2: from 2021 after the Bank of Lao PDR completed the study of Cryptocurrencies with relevant ministries such as Ministry of Post, Telecommunication and Communication, Ministry of Technology Science, Ministry of Public Security, Ministry of Industry and Commerce and other ministries. The BOL must define pathway

of policies in managing, follow up monitoring and perform measurement to offenders that suitable to protect user and promote the development of innovation at the same time.

On legislation, we able to issue legislation to prohibited but on technical mechanism, how to manage, follow up monitoring of behavior, collect digital data, proof of evidence in digitalize of the Lao PDR still have no lesson on such works, which must take a long time in study such work. Therefore, the Lao PDR should provide knowledge to the people by giving notice thoroughly and regularly. Therefore, the Lao PDR will exchange lesson from China such as prohibited individual, legal entities and financial institution to issue ICO, Mining and act as Intermediary in exchange Cryptocurrencies in China.

2. Legislation

Base on the research and study lesson of many countries deem that the use of Cryptocurrencies still has risks which in many counties still concern to the creation of legislation to manage due to from creating the legislation to manage in the past can only manage tangible asset, touchable and have clear scope. For Cryptocurrencies is intangible, no limitation clearly so there is a challenge to create legislation in managing such money. Due to on legislation of the Lao PDR can study issuing legislation to prohibited such activities but the technical mechanism, method in managing follow up monitoring the wrongdoing, collecting of digital data, proof of evidence on digitalize are having complicated mechanism and have high cost, another things the Lao PDR still have no knowledge and experience toward such works which must take a long time in studying research such works to be comprehensive. Therefore, the Lao PDR which is the BOL must act as host in additional research creating legislation clearly to such works by coordinate with relevant ministries domestic and exchange lesson from those neighboring countries especially China, Vietnam, and Thailand.

3. Cooperation with domestic and foreign government

We can see a lesson from many countries that the use of Cryptocurrencies is having risks by using in illegal business and having potential to be used in money laundering and financing of terrorism. Therefore, in managing such work, it is require to have cooperation between relevant work unit within the BOL and cooperation with relevant ministries such as Ministry of Public Security, Ministry of Post, Telecommunication and Communication, Ministry of Technology Science must cooperated in studying such works, as well as with international cooperation due to Laos still have no experience to the study, analysis and recovery digital evidence, improving VDO and recovery of CCTV, storage of evidence, research, analysis and propose digital evidence that was in the computer and mobile phone, to use as evidence in proceeding case toward business operation related to such Cryptocurrencies.

4. On financial public study

Form of financial services is about to change from old form to new form by using the financial technology (FinTech) to be used in the financial service more and more. Therefore, the activities on publishing knowledge on digital financial must do regularly and continuously, deeply and widely thoroughly by through many channel both on

newspaper, radio television, social online, also animation cartoon and create an important lesson in the education institution to let study learn, people who have knowledge, understand clearly and able to separate which services is approved by the government and have work unit in managing and anything that group of bad people created for purpose of scam, deceive people resulting loss of property with high value as a lesson in many countries. Which increasing knowledge on financial will help the financial service is effective and sustainable in the future.

5. Study deeply on Blockchain Technology

Purpose of financial technology development within the country, especially the study deeply in development to issue Central Bank Digital Currencies (CBDC) which currently the central bank of many countries are under the study, diagnosis pathway to issue CBDC inform of Retail CBDC for payment of sub-transaction (the Bank of China and Bank of Sweden) and Wholesale CBDC for payment with high value between financial institution (Central Bank of Thailand, Canada, Singapore and Hongkong), which the Lao PDR which is BOL will continue follow up situation of those countries that under studying on CBDC as well as to continue study deeply on the analysis, diagnosis in detail on issuance the CBDC completely to see advantage and weakness to the economic system of the Lao PDR.

VII. Suggestion

Pursuant to the research and study on lesson of many countries to the Cryptocurrencies and technical opinion of the BOL which mentioned above, the Bank of Lao PDR have suggestion as follows:

1. Opinion of the Lao PDR toward Cryptocurrencies

The BOL deem that in this period, the Lao PDR should define condition strictly in managing follow up monitoring the Cryptocurrencies especially the Decentralized Cryptocurrencies (Bitcoin, Ethereum, Litecoin and others) in the Lao PDR, due to such money having risk in many aspects that will make chaos in society and to economic system. As well as the Lao PDR is not yet ready to such work such as readiness on the technology, readiness on legislation, readiness of the people and handling of risks that will occur. For legislation and implementation mechanism, the BOL has propose to exchange lesson with China (additional detail in Attachment 3).

2. Management Pathway

❖ BOL domestic mechanism:

- 1) BOL will continue publish content of the two notices to let the people acknowledge and understand such money deeply and thoroughly, to know the risk prior the investment. By publish through channel that the BOL already have such as radio program “Bank Friends”, on television program “Pathway to Lao Capital Market”, on social network Facebook “Mr. Kib”, through website BOL and through the newspaper, if the there is an outstanding situation on Cryptocurrencies. Therefore, the CMC shall act as host in studying content to publish by cooperate with relevant department within the BOL;
- 2) For the commercial banks that violate to notice shall propose to the Commercial Bank Management Department act as host in follow up monitoring and perform

measurement by base on the decision on measurement to offenders of commercial bank, issue no. 811/BOL, dated 18 October 2010 and the additional decision on measurement to offenders of the commercial banks, issue no. 847/BOL, dated 30 September 2013.

- 3) For the non-banking financial institution that violent to notice shall propose to the Financial Institution Management Department act as host in follow up monitoring and perform measurement by base on the decision on measurement to offenders of the non-banking financial institution, issue no. 845/BOL, dated 20 September 2018;
- 4) For individual and legal entities who operate business related to dealer or Intermediary in exchange, buy-sell of Cryptocurrencies, the CMC have mechanism in cooperate with Ministry of Industry and Commerce to audit the business registration in each level to order temporary suspend or withdraw the business license of such business;
- 5) BOL will issue letter to commercial banks and non-banking financial institution in the name of the Commercial Bank Management Department and Financial Institution Management Department to let such sector assign responsible person to cooperate with Cryptocurrencies activities then report to the Payment System Management Department for easy in perform works;
- 6) Technical department within the BOL such as: The Payment System Management Department and Intelligence Technology Department will act as host in continuing study deeply on Blockchain technology to be used in develop the financial divisions especially to study on issuing the Central Bank Digital Currency (CBDC) to be analysis, diagnosis in detail complete clear vision and weakness to economic system of the Lao PDR. By additional lesson exchange from China, Thailand that have plan to issue the use of such money in coming soon.

❖ **Mechanism in cooperate with outside**

- 1) It is proposed to have signed the memorandum of understanding (MOU) between BOL with relevant ministries in exchange information, cooperate in implementation works related to Cryptocurrencies such as Ministry of Technology Science, Ministry of Post, Telecommunication and Communication, Ministry of Industry and Commerce, Ministry of Public Security, People's Court, Prosecutor Organization, Ministry of Education and Sport and other relevant ministries according to roles of each ministry;
- 2) Financial Public Education: other than publishing the financial activities through radio programs, television and social network on Facebook or Website of the BOL. It is proposed to the Ministry of Education and Sport facilitate to BOL in publishing financial works to educational institutions for short term, for long term may have create as academic to teach systematically which start from primary level to let study acknowledge, understand and have discipline in spending money since they are young.

Deputy Head of Committee

[signed by Soulisack Thamnouvong]