



**THE SIGNIFICANCE OF REGULATING VIRTUAL  
CURRENCY SERVICE BUSINESSES IN THAILAND**

**BY**

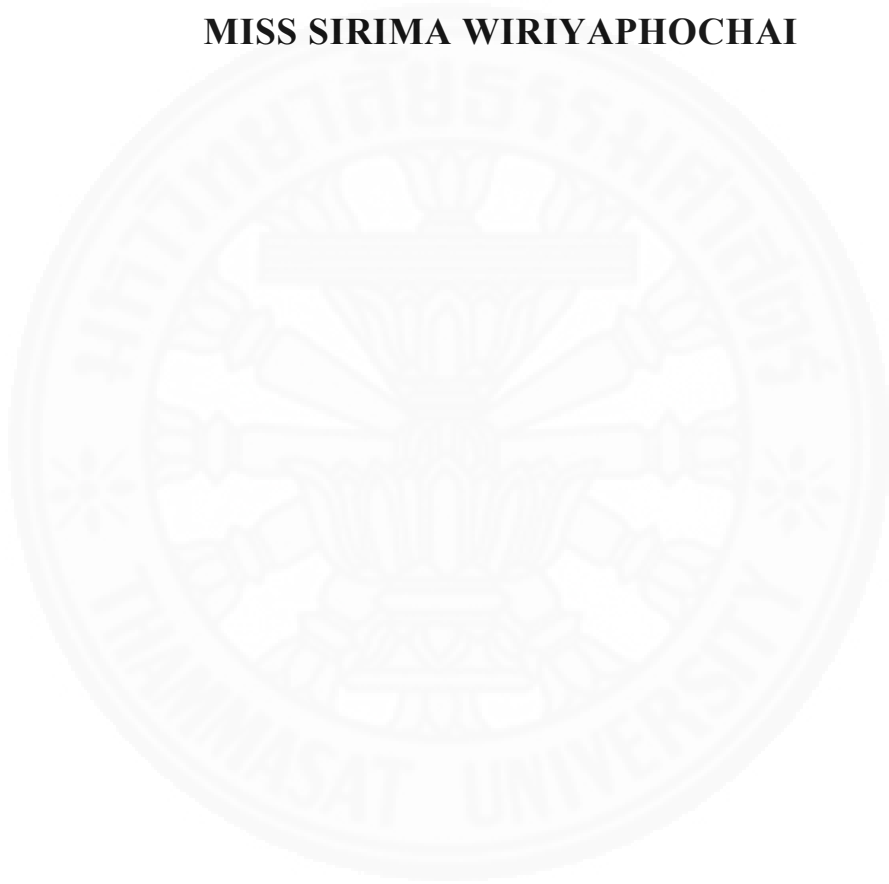
**MISS SIRIMA WIRIYAPHOCHAI**

**A THESIS SUBMITTED IN PARTIAL FULFILLMENT OF THE  
REQUIREMENTS FOR THE DEGREE OF MASTER OF LAWS  
IN BUSINESS LAWS (ENGLISH PROGRAM)  
FACULTY OF LAW THAMMASAT UNIVERSITY  
ACADEMIC YEAR 2015  
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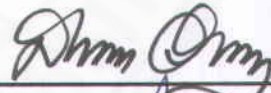
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THE SIGNIFICANCE OF REGULATING VIRTUAL CURRENCY SERVICE  
BUSINESSES IN THAILAND

was approved as partial fulfillment of the requirements for  
the degree of Master of Laws in Business Laws (English Program)

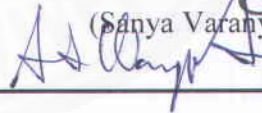
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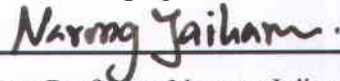
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## **ABSTRACT**

Traditional financial models and businesses are disrupted by the integration of finance and technology or financial technologies. Virtual currency is a product of financial technologies. It has been developed and increasingly used as alternative mean of payment. Bitcoin is the most popular decentralized virtual currency used as medium of exchange for goods and services and also exchanged for legal currencies including Thai Baht. The price value of Bitcoin is determined by demand and supply which can change easily. That is where people find an opportunity for investment or speculation similar to those stocks and other securities. The reasons behind Bitcoin popularity include a number of benefits. User's privacy remains undisclosed and transactions can be done without relying on third party like financial institutions. Additionally, Bitcoin transactions are quick, cheap and irreversible. Unfortunately, it has been taken advantages by criminals and money launderers. They sometimes use virtual currency to perform illicit activities such as illegal trading, dirty money launderings, fraud, cybercrimes and tax evasion. Likely, virtual currency service businesses which administering or exchanging virtual currencies for Baht or other virtual currencies are found with potential to facilitate those illicit activities.

It has been arguing what virtual currency like Bitcoin is under the existing laws in foreign countries and Thailand. The questions of legal currency, foreign currency, electronic money, securities, commodity and property have been discussed.

It is also a concern how virtual currency service businesses should properly be regulated in order to manage the potential risks while avoid the over-regulation. United States is a country which actively responds to those issues. Though regulators and courts find it is possible to apply the existing laws to virtual currency and the related businesses, they are aware of the significant difference between financial technologies and traditional financial businesses. United States regulators instead develop the new regulations to ensure putting in place guardrails that protect consumers and rooting out illicit activity without stifling beneficial innovation.

Accordingly, this thesis explores the approaches to regulate virtual currency and the related businesses properly. Fundamentally, the approaches are based on Thai existing laws. The regulatory developments in United States shall essentially be guidelines to provide the appropriate recommendations for Thailand's regulations. In conclusion, this thesis proposes that virtual currency and virtual currency services business should be, on a timely basis, regulated under the securities regulations. In order to do so, the Securities and Exchange Commission should issue the regulations to specify virtual currency as securities and to establish the licensing regime to regulate the conduct of virtual currency service businesses appropriately. The regulations are proposed to help reduce the incentive for criminals, money launderers and tax evaders using virtual currency services business to facilitate illegal purposes. This licensing regime will ensure that consumers are treated properly and will also mitigate cyber-attack risks of this business.

**Keywords:** Virtual currency, Digital currency, Bitcoin, Licensing, Securities

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Miss Sirima Wiriyaphochai

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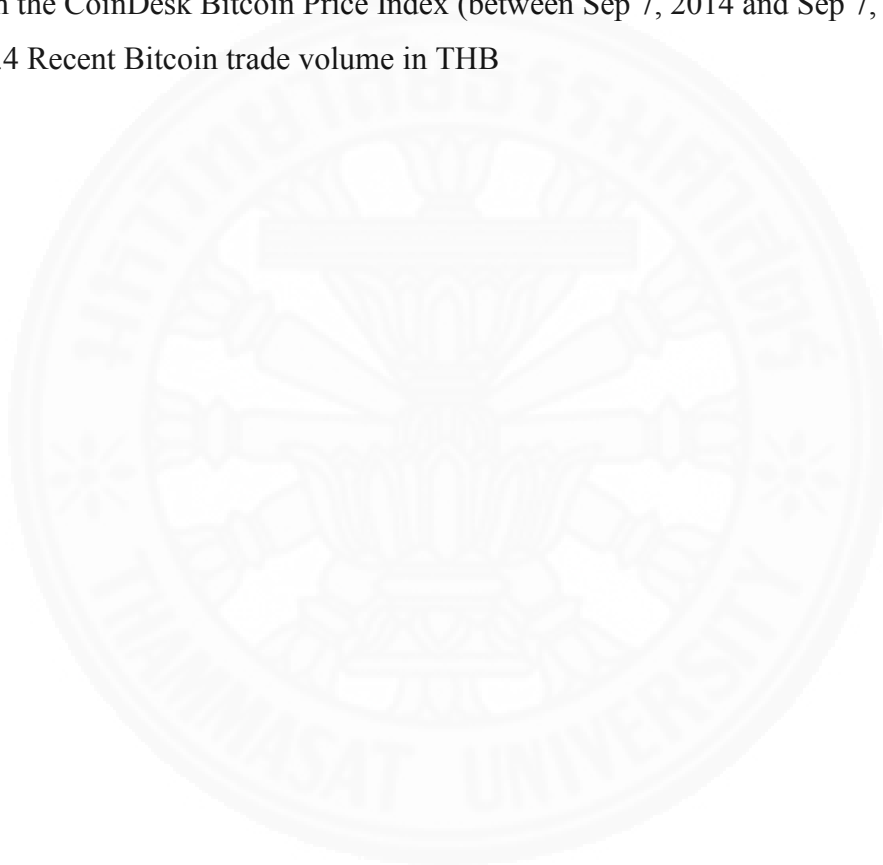
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## LIST OF ABBREVIATIONS

<b>Symbols/Abbreviations</b>	<b>Terms</b>
AB 1326	Assembly Bill No. 1326
AML	Anti-Money Laundering
AMLO	Anti-Money Laundering Office
BaFin	German Federal Financial Supervisory Authority (Bundesamt für Finanzdienstleistungen)
BOT	Bank of Thailand
BSA	Bank Secrecy Act
CCC	Civil and Commercial Code
CEA	Commodity Exchange Act
CFTC	Commodity Futures Trading Commission
Commissioner	Commissioner of Business Oversight
CPA B.E. 2522	Consumer Protection Act B.E. 2522
CSBS	Conference of State Bank Supervisors
EFTA	Electronic Fund Transfer Act
EFTs	Electronic Fund Transfers
FATF	Financial Action Task Force
FinCEN	Financial Crimes Enforcement Network
FinTech	Financial Technologies
GST	Goods and Services Tax
IRS	US Internal Revenue Service
KWG	German Banking Act (Kreditwesengesetz)
MAS	Monetary Authority of Singapore
MSB	Money Services Business
NYDFS	New York State Department of Financial Services
ONDCP	Office of National Drug Control Policy
SEA B.E. 2535	Securities and Exchange Act B.E. 2535
SEC	Securities and Exchange Commission of Thailand

**Symbols/Abbreviations**

**Terms**

SEC office

Office of the Securities and Exchange Commission

UK

United Kingdom

US

United States of America

US SEC

US Securities and Exchange Commission



# CHAPTER 1

## INTRODUCTION

### 1.1 Background and Issue

Money is, in usual and ordinary, accepted and used as circulating medium of exchange in the society.<sup>1</sup> In general, the main functions money serves including a medium of exchange, a unit of account, a store of value and, occasionally in the past, a standard of deferred payment.<sup>2</sup>

Virtual currency is one form of products of financial technologies (“FinTech”)<sup>3</sup> which has recently been developed and used as alternative to the government-issued currencies such as dollars.<sup>4</sup> Currently, virtual currency is found being used as a medium of exchange for goods and services, and also exchanged for legal currencies including Thai Baht. There is a number of virtual currencies. Bitcoin is the most widespread acceptance one to date. Bitcoin’s unique characteristic like the unidentifiable of users is probably the reason behind its popularity.

FinTech can be simply explained as the integration of finance and technology. Traditional financial models and businesses have gradually been disrupted by FinTech. Additionally, FinTech has been providing an array of new services to businesses and consumers.<sup>5</sup> FinTech products include digital currencies, mobile payment apps, alternative finance models such as P2P Lending and invoice trading.<sup>6</sup> FinTech services extend many financial sub-sectors, including banking,

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<sup>1</sup> Malone J. Anthony, **Bitcoin and Other Virtual Currencies for the 21st Century** (1 ed. 2014).

<sup>2</sup> N. Gregory Mankiw, **Macroeconomics** pp. 22–32 (6 ed. 2007); Thomas H. Greco Jr., **Money: Understanding and Creating Alternatives to Legal Tender** (2001).

<sup>3</sup> UK Government Chief Scientific Adviser, **FinTech Futures** (2015), [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/413095/gs-15-3-fintech-futures.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/413095/gs-15-3-fintech-futures.pdf) (last visited Oct 3, 2015).

<sup>4</sup> United States Government Accountability Office, **Report to the Committee on Finance, U.S. Senate : Virtual Economies and Currencies** (2013), <http://www.gao.gov/assets/660/654620.pdf> (last visited Dec 29, 2014).

<sup>5</sup> UK Government Chief Scientific Adviser, *supra* note 3.

<sup>6</sup> *Id.*

insurance, asset management and trading.<sup>7</sup> FinTech may also bring new risks that must be anticipated, prevented and managed.<sup>8</sup>

Apart from any other forms of risks, one of risks which FinTech product like Bitcoin brought is that the potential to facilitate money laundering and funding illicit activities. Bitcoin has sometimes been used to facilitate criminals and money launderers performing their illicit activities because of the abovementioned characteristic like the unidentifiable of Bitcoin users. Silk Road was a global online black marketplace providing illicit goods and services to over a hundred thousand buyers. It operated on the hidden network and accepted only bitcoins.<sup>9</sup> It was later shut down by the authorities and those men involved were charged with criminal offenses.

In recent years, Bitcoin was also many times found using in hacker's illegal activities in many countries including in Thailand. Hackers infected the government and business network with a form of Internet malware and encrypted the vital records. They threatened for money, an amount of bitcoins, to decrypt the files. Some desperately decided to pay the untraceable virtual currency rather than risked losing the data forever.<sup>10</sup> While some decided not to pay but instead bought a new computer and spent times restoring all the lost information.<sup>11</sup>

In law, the status of virtual currency is still hardly to be explicitly classified. Basically, it is not legal currency in any countries including in Thailand. Many foreign countries responded to this new technology differently. A few countries explicitly prohibited the use of virtual currency as a substitute of legal money. While many countries allowed it to continue developing as an alternative medium of payment. In Thailand, virtual currency is not legal tender but only an electronic data

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<sup>7</sup> *Id.*

<sup>8</sup> *Id.*

<sup>9</sup> Bitcoin with a capital "B" would be the name of the system software; bitcoin with a lowercase "b" would mean the units of currency.

<sup>10</sup> Mail Online, **Police department forced to pay hackers \$500 Bitcoin ransom** (2015), <http://www.dailymail.co.uk/news/article-3028318/Massachusetts-police-department-forced-pay-hackers-500-Bitcoin-ransom.html> (last visited May 5, 2015).

<sup>11</sup> Joe Fryer, **Security Experts: You Should Never Pay Ransomware Hackers NBC News** (2015), <http://www.nbcnews.com/nightly-news/security-experts-you-should-never-pay-ransomware-hackers-n299511> (last visited May 5, 2015).

unit. The financial regulator has publicly warned that virtual currency by itself is valueless and further suggested that conducting businesses with virtual currency is risky. Investors should be aware that dealing with it is not sufficiently efficient.

Though virtual currency itself is valueless, it is possible to find the daily price value. Generally, the price value of virtual currency is determined solely by trust, adoption and public perception<sup>12</sup> which is causing a great volatility. In 2013, the market price of a bitcoin fluctuated between \$13 and \$1,200 USD.<sup>13</sup> In 2014, it fluctuated between \$320 and \$1,000 USD.<sup>14</sup> On September 18, 2015, one bitcoin was valued at around \$233 USD.<sup>15</sup> The financial data including price and volume of bitcoin trading are publicly available on the websites of businesses providing the service of bitcoin exchange.

In Thailand, the businesses providing the exchange services for virtual currency and legal currency, Baht, or other virtual currencies can be found online operating. Such businesses are allowed to run freely under Thai laws. However, they are not categorized as any specific business under the laws. They are then only required to provide the very general information about their businesses for registration with the commercial registration office.

This kind of business variously exists in many countries around the world. However, it is undeniable that consumers are taking risk at a very high level from dealing with this business. Last year, a Japan-based virtual currency exchange namely Mt. Gox ceased its operation, shut down the website and accordingly filed for bankruptcy. It claimed that it was hacked, usernames and passwords of customers were stolen, and 750,000 investor's bitcoins or millions of dollars were lost. In February this year, a Hong Kong virtual currency exchange namely MyCoin also

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<sup>12</sup> Bitcoin.org, **FAQ - Bitcoin** (2015), <https://bitcoin.org/en/faq#why-do-bitcoins-have-value> (last visited May 5, 2015).

<sup>13</sup> Bitcoincharts.com, **Bitcoin Charts / Charts** (2015), <http://bitcoincharts.com/charts/bitstampUSD#rg60zczsg2013-01-01zeg2013-12-31ztgSzm1g10zm2g25zv> (last visited May 3, 2015).

<sup>14</sup> Bitcoincharts.com, **Bitcoin Charts / Charts** (2015), <http://bitcoincharts.com/charts/bitstampUSD#rg60zczsg2014-01-01zeg2014-12-31ztgSzm1g10zm2g25zv> (last visited May 3, 2015).

<sup>15</sup> Bitcoincharts.com, **Bitcoin Charts / Charts** (2015), <http://bitcoincharts.com/charts/bitstampUSD#rg60zigDailyzczsg2015-09-18zeg2015-09-18ztgCzm1g10zm2g25zv> (last visited September 20, 2015).



recently closed. This closure had a potential combined value of three billion Hong Kong Dollars, which was equivalent to about \$387 Million USD.<sup>16</sup> However, MyCoin losses appeared to be a pyramid-style Ponzi scheme rather than the victim of a hack attack.<sup>17</sup>

This sort of service businesses are found with potential to be places facilitating illegitimate activities not only fraud or cybercrime, but also the black market trade and money laundering as well.

In spite of such risks, it should not be an option to ban or prohibit the use of virtual currency or related businesses in Thailand. Benjamin M. Lawsky, the Superintendent of the New York State Department of Financial Services (“NYDFS”), observed in the speech announcing the final virtual currency rules on June 3, 2015 that banning Bitcoin is like banning computer code which is unable to do so.<sup>18</sup> Lawsky recognized that “the genie is already out of the bottle” when it comes to virtual currencies and other FinTech innovations.<sup>19</sup>

This is very agreeable. The face of technology development is changing every day. The golden rule for electronics industry known as Moore’s Law stated that “overall processing power for computers will double every two years.”<sup>20</sup> Computing power would massively increase while relative cost would decrease at an exponential pace.<sup>21</sup> This means that technology will never stop developing. Outright banning FinTech product like Bitcoin would only take Thailand many steps backward from other developed countries.

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<sup>16</sup> South China Morning Post, **Investors fear HK\$3b losses in closure of bitcoin trading company** (2015), <http://www.scmp.com/news/hong-kong/article/1707565/investors-fear-hk3b-losses-closure-bitcoin-trading-company> (last visited May 3, 2015).

<sup>17</sup> *Id.*

<sup>18</sup> Dfs.ny.gov, **Speech - June 3, 2015: NYDFS Announces Final Bitlicense Framework for Regulating Digital Currency Firms** (2015), <http://www.dfs.ny.gov/about/speeches/sp1506031.htm> (last visited Oct 3, 2015).

<sup>19</sup> *Id.*

<sup>20</sup> Mooreslaw.org, **Moore's Law** (2015), <http://www.mooreslaw.org/> (last visited Oct 3, 2015).

<sup>21</sup> Intel, **50 Years of Moore's Law** (2015), <http://www.intel.com/content/www/us/en/silicon-innovations/moores-law-technology.html> (last visited Oct 3, 2015).

Though FinTech unquestionably benefits from Moore's Law, it also has to contend with Murphy's Law as well as its technology-specific corollary. "Whatever can go wrong will go wrong" is known as Murphy's Law. When Moore's Law versus Murphy's Law, Andrei A. Kirilenko<sup>22</sup> and Andrew W. Lo<sup>23</sup> stated that "whatever can go wrong will go wrong faster and bigger when computers are involved."<sup>24</sup>

Therefore, it would be better for Thai regulators to allow virtual currency technology to continue developing while also monitor it closely. At the meantime, the regulations should readily be slowly adopted to prepare for those potential risks. But the issue is they should avoid the over-regulation. Excessive regulations can be obstacle for technology and innovation development in Thailand.

## 1.2 Hypothesis

Virtual currency service businesses administering or exchanging virtual currencies for legal currency, Baht, or other virtual currencies, are allowed to operate businesses under the laws. They are alternative businesses which are uncategorized as any specific business under the laws. They are only required to provide the very general information about their businesses for registration with the commercial registration office. The absence of law regulating this specific business is raising a prominent concern of its potentiality to facilitate illegitimate activities like black market trade, money laundering, fraud and cybercrime. Law regulating virtual currency service businesses is required to provide at least a minimum standard of business system and to help mitigate the probability of such problems.

---

<sup>22</sup> Andrei A. Kirilenko was the Professor of the Practice of Finance, Sloan School of Management, Massachusetts Institute of Technology, Cambridge, Massachusetts, during 2010 - 2012.

<sup>23</sup> Andrew W. Lo is the Charles E. and Susan T. Harris Professor, Director of the Laboratory for Financial Engineering at Sloan School of Management, and a Principal Investigator at the Computer Science and Artificial Intelligence Laboratory, all at the Massachusetts Institute of Technology, Cambridge, Massachusetts.

<sup>24</sup> Andrei A. Kirilenko & Andrew W. Lo, *Moore's Law versus Murphy's Law: Algorithmic Trading and Its Discontents*, **27 Journal of Economic Perspectives** 2 (2013), available at [http://www.argentumlux.org/documents/Moores\\_Law\\_vs\\_Murphys\\_Law\\_Spring\\_2013\\_JEP.pdf](http://www.argentumlux.org/documents/Moores_Law_vs_Murphys_Law_Spring_2013_JEP.pdf).

### **1.3 Objectives of Study**

(a) To learn the innovation of virtual currency; a new kind of financial technology, focusing on a case study of Bitcoin.

(b) To find the legal aspects of virtual currency in foreign countries and Thailand.

(c) To study the development of alternative service businesses conducting with virtual currency and their risks in facilitating illegitimate activities.

(d) To explore the existing laws and regulatory framework development concerning virtual currency service businesses in the US.

(e) To explore the applicability of Thai existing laws to virtual currency service businesses and to analyze on the possibility of regulatory developments concerning virtual currency service businesses in Thailand.

(f) To propose the proper regulatory framework as well as other fundamental requirements for supporting virtual currency service businesses regulations in Thailand.

### **1.4 Scope of Study**

This thesis will study on the concept of virtual currency and focus on Bitcoin, the most popular decentralized virtual currency to date, as a sample in many places in this thesis. The legal status of virtual currency under US and Thai laws will be particularly studied. The stances of authorities toward virtual currency in other foreign countries will be broadly studied.

The way businesses conducting related to virtual currency and their existences in Thailand will be taken into account. Existing laws regulating the conduct of businesses under Thai jurisdiction will include the Business Registration Act B.E. 2499, the Exchange Control Act B.E. 2485, the Financial Institution Business Act B.E. 2551, the Electronic Transaction Act B.E. 2544 and the Securities and Exchange Act B.E. 2535. This thesis will cover the matter of general principle of contract law under Thai Civil and Commercial Code also. In addition, a few other relevant laws which are the Consumer Protection Act B.E. 2522, the Anti-Money Laundering Act B.E. 2542 and the Computer Crime Act B.E. 2550 will be further studied. Regardless of the fact that virtual currency is used and traded borderless,

virtual currency service businesses in Thailand in this thesis cover any person conducting business in Thailand and any juristic person registered under Thai laws.

This thesis will relevantly study the existing money regulations and securities regulations under US jurisdiction. Also, US regulatory developments related to the conduct of virtual currency service businesses under US jurisdiction will be thoroughly studied.

### **1.5 Methodology**

The thesis methodology is based on secondary research involving publicly available data from the internet, including industry websites, regulator of foreign countries and Thailand websites, and international organization websites. It also involves the use of texts and documents as source materials, including books, electronic books, domestic and foreign laws, journals, articles, periodicals and non-periodicals and scholar's opinions.

### **1.6 Anticipated Advantages**

- (a) To realize the innovation and legal challenges of virtual currency.
- (b) To learn the development of alternative service businesses conducting with virtual currency and their risks in facilitating illegitimate activities.
- (c) To comprehend the existing laws and regulatory framework development concerning virtual currency service businesses in US.
- (d) To understand the applicability of Thai existing laws to virtual currency service businesses and the possibility of regulatory developments concerning these businesses in Thailand.
- (e) To provide the proper regulatory framework as well as other fundamental requirements for supporting virtual currency service businesses regulations in Thailand.

## CHAPTER 2

### VIRTUAL CURRENCY AND VIRTUAL CURRENCY SERVICE BUSINESSES

#### 2.1 Virtual Currency

##### 2.1.1 Introduction to Virtual Currency

Virtual currency can be described as a digital representation of value which illustrated in the form of digital data.<sup>25</sup> It can be digitally traded and functioned as (1) a mean of exchange; and/or (2) a unit of account; and/or (3) a store of value.<sup>26</sup> However, it is not legal tender of any country. It is neither issued nor guaranteed by any jurisdiction. The above functions can be fulfilled only by agreement among the community of virtual currency's users.

Virtual currency is different from fiat currency (or otherwise called “real currency,” “real money” or “national currency”). Fiat currency in general is the coin and paper money of a country that accepts it as legal tender. Fiat currency is customarily circulated, accepted and used as a mean of exchange in the issuing country.<sup>27</sup>

Virtual currency can be differently classified. According to the report presented by the Financial Action Task Force (“FATF”) which is an inter-governmental body established by the Ministers of 34 member jurisdictions and 2 regional organizations,<sup>28</sup> there are two basic types of virtual currency: convertible and non-convertible virtual currency.<sup>29</sup> Convertible (or open) virtual currency can be simply explained that it is capable of exchanging to-and-fro for fiat currency.<sup>30</sup> This means that its value can be equivalent to real currency.

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<sup>25</sup> The Financial Action Task Force, **FATF REPORT Virtual Currencies Key Definitions and Potential AML/CFT Risks** (2014), <http://www.fatf-gafi.org/media/fatf/documents/reports/virtual-currency-key-definitions-and-potential-aml-cft-risks.pdf> (last visited May 5, 2015).

<sup>26</sup> *Id.*

<sup>27</sup> *Id.*

<sup>28</sup> [Fatf-gafi.org, Members and Observers - Financial Action Task Force \(FATF\), http://www.fatf-gafi.org/about/membersandobservers/#d.en.3147](http://www.fatf-gafi.org/about/membersandobservers/#d.en.3147) (last visited Oct 6, 2015).

<sup>29</sup> The Financial Action Task Force, *supra* note 25.

<sup>30</sup> *Id.*

Non-convertible (or closed) virtual currency is, in contrast to convertible virtual currency, cannot be exchanged for real currency. It is designed to use in a particular virtual world under its own governing rules.<sup>31</sup> Virtual currency that used within the virtual community like online computer gaming environments and social networks are characterized as non-convertible virtual currency.

In this writer's opinion, non-convertible virtual currency includes the credit card reward points, mileage redemption and coupon redemption as well. Basically, those reward points and redemptions presented in the form of electronic data. When the rewarding or redemptive requirements are met, they are potentially capable of serving functions as a mean of exchange, a unit of account and a store of value. Possibly, they are categorized as virtual currency mentioned above.

Nevertheless, they can be used as medium of exchange for only specific things upon the conditions prescribed by the administrators. In other words, they cannot be exchanged for real currency as long as the system operators do not set otherwise. Mostly, credit card reward points are used in exchange for gifts or goods and service discounts. Mileage awards can be redeemed for additional airplane tickets or other services provided by the airlines including flight upgrading, airline lounge accessing and car renting. Similarly, coupon redemption can be used in exchange for goods and services particularly set out by the operators. In conclusion, those reward points and redemptions are designed to utilize in certain conditions under the business operator governing rules. Even the owner believes that reward points and redemptions are his or hers, that owner is unable to independently give or transfer them to other person. This sort of virtual currency cannot be converted or exchanged for real currency, it is a non-convertible virtual currency which is not the objective for this thesis study.

In this thesis, convertible virtual currency is in significant focus. It can be further divided into of two sub-types based on its system controller: centralized and decentralized virtual currency.<sup>32</sup>

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<sup>31</sup> *Id.*

<sup>32</sup> *Id.*

### 2.1.1.1 Centralized Virtual Currency

Centralized virtual currency relies on a central administrator who controls overall virtual currency system. In other words, an administrator issues virtual currency, sets up the governing rules for the use, maintains a central payment system and has authority to redeem or withdraw the currency from circulation.<sup>33</sup> Liberty Reserve and Perfect Money are examples of centralized virtual currencies.

### 2.1.1.2 Decentralized Virtual Currency

Decentralized virtual currency, in contrast to centralized virtual currency, has neither central administrator nor central monitoring. It is generally known as open-source, peer-to-peer, distributed and math-based virtual currency.<sup>34</sup> People may obtain the currency by their own manufacturing or computing efforts<sup>35</sup> while also maintain the currency system at the same time. Bitcoin, Litecoin, Dogecoin and Ripple are examples of decentralized virtual currencies.

Bitcoin is probably the most well-known and successful decentralized virtual currency widespread accepted at this time.<sup>36</sup> There is no any physical item or commodity backs the currency.<sup>37</sup> The value of a bitcoin is determined by demand and supply. Therefore, trust and public perception are key factors effecting Bitcoin price and causing the great volatility.<sup>38</sup> This thesis shall further study about Bitcoin hereafter.

## 2.1.2 Bitcoin

### 2.1.2.1 Background

Bitcoin is a system designed and implemented in 2008 by Satoshi Nakamoto, the pseudonym of a computer programmer. It has been proposed for electronic transactions without relying on any trusted third party like financial

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<sup>33</sup> *Id.*

<sup>34</sup> *Id.*

<sup>35</sup> The Financial Crimes Enforcement Network, **FIN-2013-G001: Application of FinCEN's Regulations to Persons Administering, Exchanging, or Using Virtual Currencies** (2013), [http://www.fincen.gov/statutes\\_regs/guidance/html/FIN-2013-G001.html](http://www.fincen.gov/statutes_regs/guidance/html/FIN-2013-G001.html) (last visited May 5, 2015).

<sup>36</sup> European Central Bank, **Virtual Currency Schemes 1** (2012).

<sup>37</sup> Bitcoin.org, *supra* note 12.

<sup>38</sup> *Id.*



institutions to process electronic payments.<sup>39</sup> Instead of trust, Satoshi stated that electronic payment system needs to be based on cryptographic proof. Two willing parties should be allowed to transact directly with each other without depending on any trusted third party. Satoshi further identified that sellers would be protected from fraud in transactions which are computationally impractical to reverse. While buyers could be protected by implementing routine escrow mechanisms.<sup>40</sup> To solve the double-spending problem, a peer-to-peer distributed timestamp server like Bitcoin is proposed to generate computational proof of the chronological order of transactions.<sup>41</sup> Bitcoin with a capital “B” would be the name of the system software; bitcoin with a lowercase “b” or BTC<sup>42</sup> would mean the units of currency.<sup>43</sup> Satoshi maintained the software base communicating with others online, but by April 2011 had transferred responsibility for the code base and disappeared. Even today, Satoshi's identity is still a mystery and the subject of rampant speculation.<sup>44</sup> Exponentially, the community has since grown with many developers working on Bitcoin.<sup>45</sup>

### 2.1.2.2 Bitcoin System

#### (1) Creations of Coins

Bitcoin creations are based on a mathematical proof by a process called “mining.” Computer network participants who provide their computing power called “miners.” Software programs that follow a mathematical formula must be used in order to mine or produce bitcoins. Comfortably, anyone can access to such software and formula at no charge. Miners use such programs to verify and record transactions into a public ledger for transaction fees and newly minted bitcoins.<sup>46</sup>

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<sup>39</sup> Satoshi Nakamoto, **Bitcoin: A Peer-To-Peer Electronic Cash System** 1 (1 ed. 2008), <http://bitcoin.org/bitcoin.pdf> (last visited May 5, 2015).

<sup>40</sup> *Id.*

<sup>41</sup> *Id.*

<sup>42</sup> The Goldman Sachs Group, Inc., **All About Bitcoin** (2014), <http://www.paymentlawadvisor.com/files/2014/01/GoldmanSachs-Bit-Coin.pdf> (last visited May 5, 2015).

<sup>43</sup> Jose Pagliery, **Bitcoin and the Future of Money** (1 ed. 2014).

<sup>44</sup> Michael Bedford Taylor, **Bitcoin and the Age of Bespoke Silicon** (1 ed. 2013), [http://cseweb.ucsd.edu/~mbtaylor/papers/bitcoin\\_taylor\\_cases\\_2013.pdf](http://cseweb.ucsd.edu/~mbtaylor/papers/bitcoin_taylor_cases_2013.pdf) (last visited May 5, 2015).

<sup>45</sup> Bitcoin.org, *supra* note 12.

<sup>46</sup> Jerry Brito & Andrea Castillo, **Bitcoin: A Primer for Policymakers** 5 (2013).



There is a certain amount of bitcoins that can be produced. The more bitcoins are created, the mathematical computations become more increasingly difficult.<sup>47</sup>

The system was designed to produce 21 million bitcoins total. At the time in 2009, mining for new bitcoins was the easiest it would ever be. The average personal computer could solve the solution in only a couple of hours. But as people joined the system, the solution would get more difficult and production would decrease over time. A "block", as it called, created when a new solution is found.<sup>48</sup> The block reward was in the first place 50 bitcoins. It halved in November 2012. A blocks creates 25 new bitcoins at present. By its creator's calculations, the amount would be cut in half every four years. There were 10.5 million tokens generated by 2013. Another 5.25 million will be generated by 2018, then 2.625 million by 2023, and so on.<sup>49</sup> If there is a spiteful user try to create any block that does not follow the rule, such block will be rejected by everyone else. At last, bitcoins will be exist no more than 21 million.

As over the long term, the block reward will be decreased; someday, miners may collect transaction fees for their hardware and electricity cost. Possibly, there could be some Bitcoin participants voluntarily willing to pay a small transaction fee if that would encourage the miners to verify and record their transactions in the block quicker.

## **(2) Sending Payments**

Not only mining, but users may also obtain bitcoins through peer-to-peer transfers, by purchasing them on various online exchanges, or by exchanging bitcoins for products and services.<sup>50</sup> After obtaining bitcoins, such currency place in a person's digital wallet similar to coin and paper money place in a physical wallet. At this point, bitcoins are very like cash in digital form which able to be used in purchasing goods and services.<sup>51</sup>

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<sup>47</sup> The Goldman Sachs, *supra* note 42.

<sup>48</sup> *Id.*

<sup>49</sup> Pagliery, *supra* note 43.

<sup>50</sup> Bitcoin.org, *supra* note 12.

<sup>51</sup> *Id.*

Each wallet has its own address - a sequence of different numbers and letter.<sup>52</sup> It is made up of a unique pair of a public address; serves as an account number, and a private key; serves as an impossibly hard-to-crack password which cannot be changed or recovered.<sup>53</sup> Two main types of wallets can be identified as software wallet and web wallet or hosted wallet.<sup>54</sup> A software wallet is required to be installed in a computer or mobile device which the owner is in complete control over the security of his coins such as a software wallet called Electrum.<sup>55</sup> The latter considered easier to use is a web wallet or hosted wallet which hosted by a third party who provides and maintains the security of other person's coins,<sup>56</sup> such as Coinbase.com<sup>57</sup> which claiming itself the world's most popular bitcoin wallet and Blockchain.info.<sup>58</sup> The cost of owning addresses and identification or registration process are not required.<sup>59</sup> Therefore, one person can have as many addresses as he wishes. There is no limitation to the number of Bitcoin addresses a person can have. Each address is with its own balance, this makes it very difficult to know exactly how much a person owns bitcoins. The anonymity characteristic makes Bitcoin unique and creates both benefits and risks of using it which shall be studied later in this chapter.

Bitcoin wallet can be compared to the traditional bank account in order to make it simpler to understand that a person may own a bank account number which is like a public address of Bitcoin wallet, and a personal identification number (or PIN) which is like a private key.<sup>60</sup> This is an example of a

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<sup>52</sup> Dominic Frisby, **BITCOIN: The Future of Money?** (1 ed. 2014).

<sup>53</sup> Ben Isgur, **Bitcoin In Brief** (2 ed. 2014).

<sup>54</sup> Bitcoin simplified., **How To Set Up a Wallet** (2015), <http://bitcoinsimplified.org/get-started/how-to-set-up-a-wallet/> (last visited May 5, 2015).

<sup>55</sup> Electrum.org, **Electrum Bitcoin Client** (2015), <https://electrum.org/download.html> (last visited May 5, 2015).

<sup>56</sup> Bitcoin simplified, *supra* note 54.

<sup>57</sup> Coinbase.com, **I just signed up for a free bitcoin wallet on Coinbase - try it!** (2015), <https://www.coinbase.com/home> (last visited May 5, 2015).

<sup>58</sup> Blockchain.info, **Bitcoin Wallet - Be Your Own Bank - Blockchain.info** (2015), <https://blockchain.info/wallet> (last visited May 5, 2015).

<sup>59</sup> David R. Sterry, **You Can Learn Bitcoin : A Step-by-Step Introduction to the Online Currency** (1 ed. 2012).

<sup>60</sup> Zennon Kapron, **Chomping at the Bitcoin: The History and Future of Bitcoin in China** (1 ed. 2014).

Bitcoin address - 123rf1XwnAfLgfv7LEYXhLRg5Jyi3Hw23. It begins with a 1 followed by lots of random letters and numbers. The address is case-sensitive meaning that the lower-case r is different than the upper-case R.<sup>61</sup> When a person wants to send bitcoins to someone, he is not required to show his identity or know the personal identity of the receiver at all. In contrast, he is only required to know the public address of the receiver and uses his private key to sign and verify such transaction.

For example, Mr. A wants to send bitcoins to Ms. B, firstly, Ms. B sends her address to Mr. A. Secondly, Mr. A adds Ms. B's address as well as the amount of bitcoins to transfer. Then, Mr. A signs the transaction with his private key and announces his public key for signature verification. Finally, Mr. A broadcasts the transaction on Bitcoin network for other users to see.

### (3) Transaction Processing

There is no any central authority oversees Bitcoin transaction processing. "Blockchain" is where the whole Bitcoin transactions recorded. This enormous and transparent record of each and every bitcoin transaction sustains by the miners.<sup>62</sup>

Blockchain is the primary innovation that helps prevent Bitcoin double-spending. It is the network based on the peer-to-peer basis. Firstly, the processing starts when the details about the transaction are broadcast to all nodes (computer connected to Bitcoin network utilizing a client that performs the task of verifying and broadcasting transactions),<sup>63</sup> included into a block and found a proof of work. To be accepted in the chain and broadcasted by nodes, transaction blocks must be valid and not already spent. In case different versions of the next block concurrently broadcasted by the two nodes, only the longest and correct chain will be kept working on extending by nodes.<sup>64</sup>

According to the previous example, when Ms. B sees that a block collects her transaction and creates the sole longest and fastest-growing

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<sup>61</sup> Sterry, *supra* note 59.

<sup>62</sup> *Id.*

<sup>63</sup> Prableen Bajpai, **Blockchain Definition | Investopedia Investopedia** (2015), <http://www.investopedia.com/terms/b/blockchain.asp> (last visited May 5, 2015).

<sup>64</sup> Nakamoto, *supra* note 39.

blockchain, she can be sure that Mr. A makes a transaction which accepted by the nodes and is firmly recorded. This process prevents Mr. A from generating a second transaction with the same coin. If Mr. A wants to frustrate this system and double-spends his coins, the computing power needs to be mustered much more than all other nodes combined.

Presently, this technology behind Bitcoin or “Blockchain” is gradually gaining attention of many big banks and financial institutions including Seagate, Nasdaq, Overstock, IBM, Samsung, UBS, Barclays, Banco Santander, Intel and Citi.<sup>65</sup> Blockchain has been mentioned by Blythe Masters, CEO of Digital Asset Holdings, that “it is the financial challenge of our time.” Masters further stated that “it is going to change the way that our financial world operates.”<sup>66</sup>

In July 2015, Citigroup Incorporation or well-known as just “Citi” which is the major global bank revealed that it had developed its own “Citicoin” in order to explore distributed ledger technology like blockchain for the last few years.<sup>67</sup> In its pre-production level, Citi constructed three blockchains and a test currency to run across them.<sup>68</sup> Mostly, Citi’s development is focusing on payments in a cross border capacity in order to make them faster and become more transparent across its own network.<sup>69</sup>

In this writer’s opinion, Citi probably does not develop Citicoin as another alternative virtual currency to compete with Bitcoin. Though Citicoin may eventually be developed and backed by blockchain technology as well as the one behind Bitcoin in accordance with Citi’s announcement, they are definitely different by their basic nature. Citicoin transactions between users may publicly and transparently be recorded on the blockchain as designed by Citi. However, if every

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<sup>65</sup> View Jenn, **Financial Institutions Show Interest in Bitcoin Technology - NEWSBTC NEWSBTC** (2015), <http://www.newsbtc.com/2015/06/03/financial-institutions-show-interest-in-bitcoin-technology/> (last visited Dec 6, 2015).

<sup>66</sup> *Id.*

<sup>67</sup> International Business Times UK, **Codename Citicoin: Banking giant built three internal blockchains to test Bitcoin technology** (2015), <http://www.ibtimes.co.uk/codename-citicoin-banking-giant-built-three-internal-blockchains-test-bitcoin-technology-1508759> (last visited Dec 6, 2015).

<sup>68</sup> *Id.*

<sup>69</sup> *Id.*

transaction sustains by Citi, this coin is considered as centralized virtual currency in contrast to decentralized virtual currency like Bitcoin. Furthermore, the purpose of issuing Citicoin is still unclear. It may only be produced for use among Citi's customers in order to facilitate cross border transactions, while Bitcoin is in contrast widely accepted and used as a mean of payment in many areas today.

Citi further showed more interests in blockchain technology a few months later. In September 2015, Citi with other industry investors became the major investor in a \$30 million USD equity funding round<sup>70</sup> for Chain.com, a blockchain developer platform that primarily serves an enterprise market.<sup>71</sup> The investment's main purpose was to push the startup to bring the more transparent, more secure, lower-cost technology behind Bitcoin to financial services.<sup>72</sup> In the same month, Citi with other 21 world's leading banks further jointed with R3, the financial innovation firm, in order to design and apply distributed ledger technologies to global financial markets for security, reliability, performance, scalability and audit.<sup>73</sup>

This writer finds that this is a very important progress showing that financial technologies are playing significant roles in financial sector. This writer accordingly believes that Bitcoin and blockchain technology will be closely monitored and variously seen in many financial developments.

### 2.1.2.3 Benefits of Bitcoin<sup>74</sup>

#### (1) Quick and Cheap Transactions

Bitcoin transactions are processed without any third-party intermediaries, therefore, the fees for their role to validate electronic transactions are

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<sup>70</sup> Luke Parker, **Bitcoin Bank Acceptance Spotlight: Citi - Bitcoin News Bitcoin News** (2015), <https://news.bitcoin.com/bitcoin-bank-acceptance-spotlight-citi/> (last visited Dec 6, 2015).

<sup>71</sup> Forbes.com, **Forbes Welcome** (2015), <http://www.forbes.com/sites/laurashin/2015/09/09/visa-citi-nasdaq-invest-30-million-in-blockchain-startup-chain-com/> (last visited Dec 6, 2015).

<sup>72</sup> *Id.*

<sup>73</sup> R3CEV LLC, **R3's distributed ledger initiative adds 13 additional bank members** (2015), <http://static1.squarespace.com/static/55f73743e4b051cfcc0b02cf/t/560a9988e4b0fd75c4407a3c/1443535240611/R3+Press+Release+-+09292015.pdf> (last visited Dec 6, 2015).

<sup>74</sup> Bitcoin.co.th, **Benefits of Bitcoin / Bitcoin** (2015), <https://bitcoin.co.th/benefits-of-bitcoin/> (last visited May 4, 2015).

not required. This makes Bitcoin transaction cheaper than those customary payment systems. Moreover, Bitcoin transactions are generally confirmed within an hour which are faster than the international wire transfers that may take from a couple of days to over a week.

### **(2) Irreversible Transactions**

Bitcoin transactions are definitely irreversible and cannot be charged back. This could solve the problem found in businesses, for example, when the products are delivered but the sellers later find out that the payments like credit card accepting or even bank payment have been reversed or charged back and they have just been cheated. However, this characteristic of Bitcoin is at the same time considered as a risk which shall be hereafter studied in this chapter.

### **(3) No Paperwork**

This chapter has earlier mentioned that the identification or registration process to participate in Bitcoin transactions is not required, neither are the ID card, census or passport which the traditional banks required for opening an account. Anybody can participate in this sort of thing from anywhere.

### **(4) Increased Privacy**

The identification or registration process is not required as discussed above which helps the participants gain their privacy when using bitcoins for the commercial and financial transactions. However, Bitcoin transactions are not truly anonymous.<sup>75</sup> There is still a public record with potential to be traceable. The public ledger maintaining the full transaction record of every Bitcoin as well as Bitcoin user's encrypted identity is known as block chain. For this reason, it may be considered pseudonymous, not anonymous.<sup>76</sup>

### **(5) Low Inflation Risk**

Inflation is the problem legal currencies of many countries around the world are facing today. One of factors those currencies lose purchasing

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<sup>75</sup> Joshua Brustein, **Bitcoin May Not Be So Anonymous, After All** **Businessweek.com** (2013), <http://www.businessweek.com/articles/2013-08-27/bitcoin-may-not-be-so-anonymous-after-all> (last visited May 3, 2015).

<sup>76</sup> Craig K. Elwell, M. Maureen Murphy & Michael V. Seitzinger, **Bitcoin: Questions, Answers, and Analysis of Legal Issues** (2014), <https://www.fas.org/sgp/crs/misc/R43339.pdf> (last visited Dec 26, 2014).



power at a rate of a couple percents per year is that money has been kept printing by the governments. In contrast to Bitcoin, it is designed to be finite at a certain number while the supply of Bitcoin is not generated or controlled by any central bank or government.

#### **2.1.2.4 Problems and Risks of Using Bitcoin<sup>77</sup>**

##### **(1) Risk of Non-Legal Tender**

Virtual currency like Bitcoin is not legal tender of any country including Thailand which shall be further studied in more detail in this chapter. It is not backed by any physical item or supported by any issuer. The nature and characteristics of Bitcoin are totally different from legal tender.

##### **(2) Risk of Losing Money**

Bitcoin wallet is made up of a unique pair of a public address and a private key as discussed above, if the private key is lost, bitcoins holding may be lost forever. In addition, various Bitcoin exchange platforms tend to be set up and managed by private enterprises and unspecifically regulated. Those exchange platforms are neither banks nor financial institutions. If they fail, cease operation, collapse or are hacked, consumers may possibly suffer from losing money preserved by these exchanges. Unfortunately, it is the fact that there is no particular measure in place to protect consumer's deposits. A notable example is the market-leading and the most widely used exchange platform named Mt. Gox which shall be studied further in this chapter.

##### **(3) Irreversible Transactions**

Previously, the irreversibility of Bitcoin transaction is found as one of Bitcoin benefits. In the meantime, it is also one of the risks participants need to concern and carefully consider the people or any organization they are doing business with because those transactions definitely cannot be reversed. The only hope in case things go wrong is that the receiver will voluntarily refund bitcoins himself.

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<sup>77</sup> Investor Education Centre, **IEC - Hot Topics - Understanding the risks of virtual commodities** (2014), <http://www.hkiec.hk/web/en/hottopics/virtual-currencies.html> (last visited Dec 26, 2014).

#### (4) High Volatility

The price of virtual currency like Bitcoin is subject to significant fluctuations. According to the young economy and novel nature, the price can increase or decrease erratically over a short period of time. Though there are some merchants accepting bitcoins for products and services, Bitcoin is not yet legal currency of any country. Those merchants are willing to accept bitcoins on the basis of expected appreciation rather than solid economical consideration and benefits. If its value drops sharply, merchants who currently accept it could stop accepting it at any time at their discretion. It is the fact that the price volatility of Bitcoin could affect its stability in value.

#### (5) Uncertain Acceptance

Virtual currency like Bitcoin is not recognized as legal tender of any country. The acceptance of Bitcoin remains uncertain. Any person who is accepting Bitcoin as a mean of payment may stop doing so at any time.

#### (6) Misuse for Criminal Activities

One of Bitcoin primary benefits is the privacy or non-required identification. However, this benefit definitely drives a lot of concerns involve Bitcoin.<sup>78</sup> There is a number of articles discussing about virtual currencies, particularly Bitcoin, being powerfully used as tools to facilitate illicit activities such as illegal drugs and weapons trading and money laundering.<sup>79</sup> The Silk Road online marketplace and Liberty Reserve are two major cases that this thesis shall study in more detail in this chapter.

#### (7) Government Taxes and Regulations

It is the fact that Bitcoin is not legal currency of any country yet. Generally, most countries require users to pay tax on anything that can be worth.

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<sup>78</sup> Forbes.com, **Forbes Welcome** (2013), <http://www.forbes.com/sites/kashmirhill/2013/08/15/congress-is-nervous-about-bitcoin/> (last visited Dec 6, 2015).

<sup>79</sup> See, e.g., Forbes.com, **Forbes Welcome** (2013), <http://www.forbes.com/sites/kashmirhill/2013/10/04/fbi-silk-road-bitcoin-seizure> (last visited Dec 6, 2015); MARC SANTORA, WILLIAM RASHBAUM & NICOLE PERLROTH, **Liberty Reserve Operators Accused of Money Laundering** **Nytimes.com** (2013), [http://www.nytimes.com/2013/05/29/nyregion/liberty-reserve-operators-accused-of-money-laundering.html?pagewanted=all&\\_r=0](http://www.nytimes.com/2013/05/29/nyregion/liberty-reserve-operators-accused-of-money-laundering.html?pagewanted=all&_r=0) (last visited Dec 6, 2015).



Virtual currency like Bitcoin is found being valuable. At this point, it is user's obligation to ensure the adherence to tax as well as other regulations issued by the government.


### (8) Ongoing Development

Bitcoin is an experimental novel currency in an active development. There are still many incomplete developing features in Bitcoin software. To make Bitcoin more secure and accessible to the masses, new tools, features and services are being continually improved. In addition, most Bitcoin related businesses have only started and operated in a few years earlier. In other words, they are still in the process of maturing.<sup>80</sup>

#### 2.1.3 Virtual Currency Market

Presently, Bitcoin is found the most popular virtual currency to date. Since the first bitcoin was mined on January 3, 2009, until September 7, 2015, bitcoins have been reached 14,585,375 BTC in total. Bitcoin market capitalization, in circulation the market price in USD, has been over \$3,506 Million USD.<sup>81</sup> The Bitcoin network data is illustrated in the figure below.

Figure 2.1 Bitcoin network data (Data correct as of 2015-09-07 12:04:07 UTC)

Total blocks	373,419	
Total bitcoins	14,585,375	
Current reward per block*	25 XBT (\$6,011)	
Network difficulty	56,957,648,896	
Market cap*	\$3,506,678,574.61	
First block mined	2009-01-03	

Source: [www.coindesk.com](http://www.coindesk.com)<sup>82</sup>

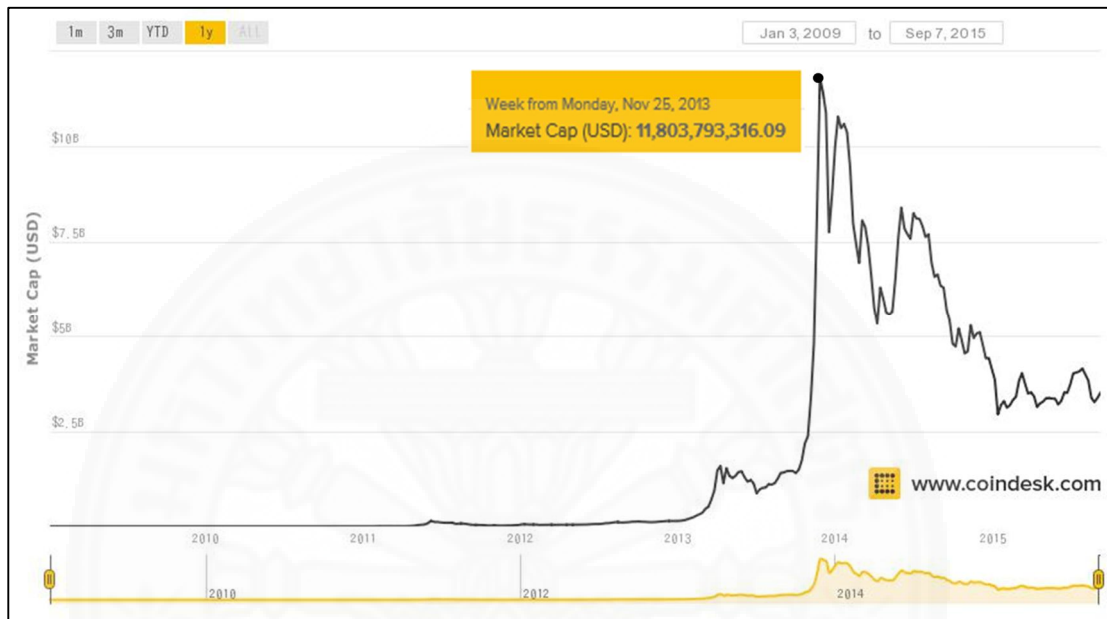
<sup>80</sup> Bitcoin.org, *supra* note 12.

<sup>81</sup> CoinDesk, **Bitcoin Network Data on CoinDesk** (2015), <http://www.coindesk.com/data/bitcoin/> (last visited Sep 7, 2015).

<sup>82</sup> *Id.*

The highest Bitcoin market capitalization was on November 25, 2013, it was over \$11,803 Million USD. It was lower later and became variable.<sup>83</sup>

Figure 2.2 Chart illustrating Bitcoin market capitalization using USD price data from the CoinDesk Bitcoin Price Index (between Jan 3, 2009 and Sep 7, 2015)



Source: [www.coindesk.com](http://www.coindesk.com)<sup>84</sup>

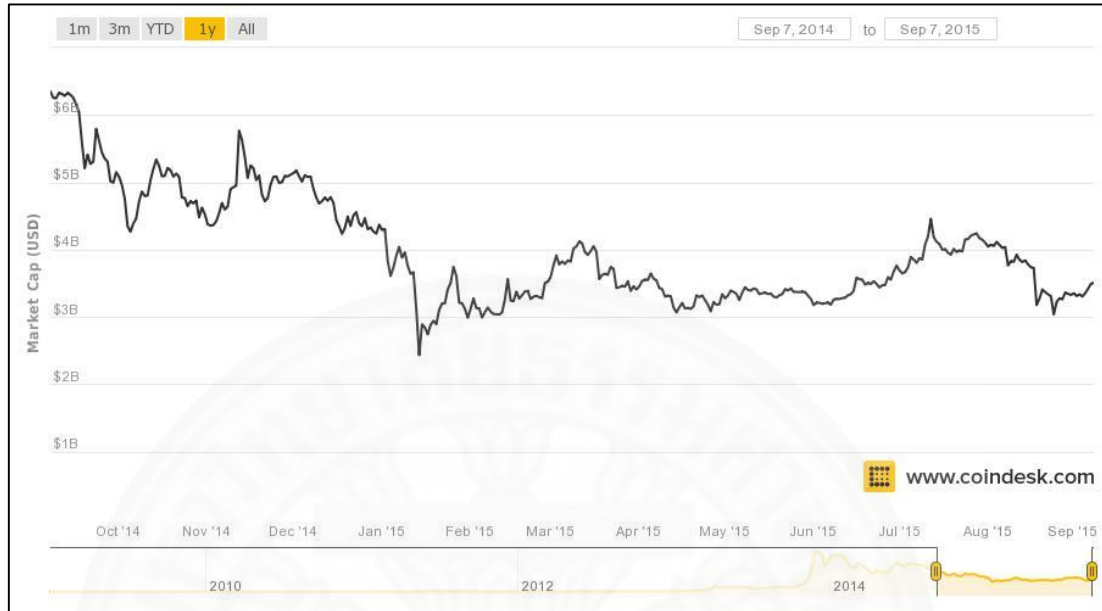
Over the last year, Bitcoin market capitalization has been moving around \$3,000 - \$5,000 Million USD.<sup>85</sup> It is quite stable and possibly continues to grow so.

<sup>83</sup> *Id.*

<sup>84</sup> *Id.*

<sup>85</sup> *Id.*

Figure 2.3 Chart illustrating Bitcoin market capitalization using USD price data from the CoinDesk Bitcoin Price Index (between Sep 7, 2014 and Sep 7, 2015)



Source: [www.coindesk.com](http://www.coindesk.com)<sup>86</sup>

It is very hard to exactly specify how many bitcoins have been spent or traded in Thai market due to its pseudonymous. This writer only finds Bitcoin trade volume in THB on LocalBitcoins,<sup>87</sup> a Bitcoin trading site, showing that bitcoins have been traded in total more than 126 Million THB over the past year.<sup>88</sup> Anyway, this writer believes that the number does not include the data from other resources or Bitcoin trading sites in Thailand yet. Bitcoin trade volume in THB is illustrated in the figure below.

<sup>86</sup> *Id.*

<sup>87</sup> Localbitcoins.com, **About LocalBitcoins.com** (2015), <https://localbitcoins.com/about> (last visited Sep 7, 2015).

<sup>88</sup> Bitcoincharts.com, **Bitcoin Charts / Markets / localbtcTHB** (2015), [http://bitcoincharts.com/markets/localbtcTHB\\_trades.html](http://bitcoincharts.com/markets/localbtcTHB_trades.html) (last visited Sep 7, 2015).

Figure 2.4 Recent Bitcoin trade volume in THB

Recent Trade Volume			
Interval	Volume (BTC)	Volume (THB)	Weighted Price
15min	—	—	—
1h	—	—	—
4h	0.64	5,680.00	8844.5968
12h	58.19	484,444.16	8325.2990
1d	60.43	503,624.15	8334.5192
2d	80.26	669,559.08	8342.8020
7d	275.79	2,234,968.58	8103.8871
30d	1,203.96	10,095,949.10	8385.6316
6m	7,621.83	63,561,081.23	8339.3476
1y	13,773.84	126,615,951.83	9192.4962

Source: Bitcoincharts<sup>89</sup>

### 2.1.4 Legal Aspects of Virtual Currency

Virtual currency is a new kind of technological development increasingly used to facilitate online or other electronic transactions. In recent years, the questions of its legal status have been arguing whether it could be currency, securities, property or commodity. This chapter shall study the legal interpretations and concrete stances of government authorities in Thailand and in foreign countries.

#### 2.1.4.1 Thailand

This writer studies the existing laws of Thailand in order to find what virtual currency is under the laws. It appears that virtual currency is neither legal currency, nor foreign currency, nor electronic money, nor securities, nor commodity nor goods under the applicable law at all. However, virtual currency could be property under the civil law.

#### (1) Virtual Currency vs. Legal Currency

Law regulates legal currency of Thailand is the Currency Act B.E. 2501. The Act stipulates rules concerning Thai currency and units of currency, value of Baht maintenance, the currency reserve and the penalties for violations of

<sup>89</sup> *Id.*

this statute provisions. The Minister of Finance is in charge and control of the execution of this Act.<sup>90</sup>

According to this Act, Thai currency consists of coins and notes<sup>91</sup> and the unit of currency is “Baht”.<sup>92</sup> Any person is prohibited to make, issue, use or put into circulation any material or token for money without authorized exception by the Minister of Finance.<sup>93</sup> Therefore, virtual currency like Bitcoin is apparently neither the unit of currency nor recognized by this Act as Thai currency.

It is notable that the authority to make an exception belongs to the Minister of Finance stipulated by section 9 of the Currency Act B.E. 2501.

However, on March 8, 2014,<sup>94</sup> the Bank of Thailand (“BOT”); the financial regulator of Thailand, officially announced that Bitcoin; the most popular decentralized virtual currency, is by itself valueless and not legal tender in Thailand. The BOT further warned and suggested that conducting businesses with Bitcoin is risky. Investors should be aware that dealing with it is not sufficiently efficient.

## (2) Virtual Currency vs. Foreign Currency

The meaning of foreign currency is identified by the Exchange Control Act B.E. 2485. Basically, the Act sets out the principles to control, restrict, or prohibit the execution of all exchange or other operations in connection to foreign currency in any form. It empowers the Minister of Finance to issue ministerial regulations to set rules for those operations and various issues related to the exchange control.<sup>95</sup> It also imposes a fine or years imprisonment to any person who violates or fails to comply with such rules and regulations.<sup>96</sup>

<sup>90</sup> The Currency Act B.E. 2501 sec.5 [hereinafter *The Currency Act*].

<sup>91</sup> The Currency Act, *supra* note 90, sec. 6.

<sup>92</sup> The Currency Act, *supra* note 90, sec. 7.

<sup>93</sup> The Currency Act, *supra* note 90, sec. 9.

<sup>94</sup> ธนาคารแห่งประเทศไทย, ข้อมูลเกี่ยวกับ Bitcoin และหน่วยข้อมูลทางอิเล็กทรอนิกส์อื่นๆ ที่ลักษณะ

ใกล้เคียง (2014). (The Bank of Thailand, **Information on Bitcoin and other similar**

**electronic data** (2014)). [http://www.bot.or.th/Thai/PressAndSpeeches/](http://www.bot.or.th/Thai/PressAndSpeeches/Press/News2557/n0857t.pdf)

[Press/News2557/n0857t.pdf](http://www.bot.or.th/Thai/PressAndSpeeches/Press/News2557/n0857t.pdf) (last visited Dec 26, 2014).

<sup>95</sup> The Exchange Control Act B.E. 2485 sec. 4 [hereinafter *The Exchange Control Act*].

<sup>96</sup> The Exchange Control Act, *supra* note 95, sec. 8.

Foreign currency under this Act means “legal tender in any country other than Thailand including foreign exchange under the Act.”<sup>97</sup> The definition of foreign currency is restricted to the legal tender of another country. According to the study, this writer finds that virtual currency like Bitcoin is currently not legal tender in any country. Even some countries react quite friendly toward Bitcoin and acknowledge its value and potential of currency, Bitcoin has never officially been their legal currency. Consequently, Bitcoin is not foreign currency under this Act which means it cannot be regulated under such law.

### (3) Virtual Currency vs. Electronic Money

Electronic money or E-money is described in the Royal Decree Regulating Electronic Payment Service Business B.E. 2551. Basically, this rule is found to preserve stability of financial and commercial, to promote credibility and acceptance of electronic data system, to protect public interests and to enhance electronic payment usage.

Electronic money prescribed by this Royal Decree means “electronic card issued by the service provider for the service user.”<sup>98</sup> The definition of electronic card is required to be further analyzed in accordance with the Penal Code.<sup>99</sup> Nonetheless, after such definition has been taken into account, virtual currency; in particular Bitcoin, is not falling within the scope of electronic card at all. Firstly, it is not a document or other material in any form that issuer issued for the person entitled to use.<sup>100</sup> The first part of this definition shows that electronic card is a

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<sup>97</sup> The Exchange Control Act, *supra* note 95, sec. 3.

<sup>98</sup> The Royal Decree Regulating Electronic Payment Service Business B.E. 2551 sec. 3 [hereinafter *The Royal Decree*]

“ ‘e-Money’ means electronic card issued by the service provider for the service user, whose name may be specified or not specified. The service user shall pay money in advance to the service provider and use such e-Money in the payment of goods, services, expenses or others payment instead of payment in cash and money paid to the service provider shall be recorded in advance ”

<sup>99</sup> The Royal Decree, *supra* note 98, sec. 3

“ ‘Electronic Card’ means Electronic Card in accordance with the Penal Code ”

<sup>100</sup> The Penal Code sec. 1(14)

“ ‘Electronics Card’ means

(A) any documents or any other materials in any description, that issuer having issued to the person entitled to use, whether the name specified or not the data or cipher noted by applying the ways or electron electricity, electromagnet wave or any

tangible material in any form, while Bitcoin in contrast is intangible and the issuer has not been found. Secondly, though Bitcoin, by its nature, may be found closely to the meaning of data, cipher, account number, any of set numbers of electron or figures,<sup>101</sup> it is not one of those which issuer issued for the person entitled to use. In contrast, Bitcoin is created and circulated through a mining process where members of Bitcoin community perform. Finally, Bitcoin is not any other thing used in corroboration of the electronic data for showing the relationship between person and electronic data by the object for specifying the owner.<sup>102</sup>

Bitcoin does not fall within any abovementioned meaning of electronic card which means that it cannot be categorized as electronic money.

#### **(4) Virtual Currency vs. Securities**

According to the fact that virtual currency has value which can change so quickly that some people find it an opportunity for investment or speculation like they do with stocks or other securities. Thus, this writer studies the meaning of securities under the Securities and Exchange Act B.E. 2535 (“SEA B.E. 2535”) in order to find whether virtual currency is securities or not.

Securities under SEA B.E. 2535 can be divided into three main categories of financial instruments, debt, equity and derivatives instruments.<sup>103</sup> According to the Act, securities means “treasury bills; bonds; bills; shares; debentures; investment units which are instruments or evidence representing the rights to the property of a mutual fund; certificates representing the rights to purchase shares; certificates representing the rights to purchase debentures; certificates representing the rights to purchase investment units; and any other instruments as

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other similar ways and applying the ways of letters, figures, ciphers, identify number or symbols either able to be seen or not to be seen by the naked eyes;

(B) data, cipher, account number, any of set numbers of electron or figures which issuer having issued to the person entitled to use by any of documents or materials not to be issued, but there is the way to use in the same manner as (A); or

(C) Anything else to be used in corroboration of the electronic data for showing the relationship between person and electronic data by the object for specifying the owner. ”

<sup>101</sup> *Id.*

<sup>102</sup> *Id.*

<sup>103</sup> ผู้ช่วยศาสตราจารย์ พันตำรวจเอกสุรเชษฐ์ ชีรวินิจ, ฎหมายหลักทรัพย์และตลาดหลักทรัพย์ 2 (พิมพ์ครั้งที่ 1, 2547) (Surachet Cheeravinij, **The Securities and Exchange Law 2** (1st ed. 2004)).



specified by the Securities and Exchange Commission (“SEC”).<sup>104</sup> Currently, other instruments specified by the SEC are Transferable Subscription Right or TSR,<sup>105</sup> Derivative Warrants or DW,<sup>106</sup> Non - Voting Depository Receipt or NVDR<sup>107</sup> and Depository Receipt or DR.<sup>108</sup>

The definition of securities is specifically defined. Virtual currency does not fall within any abovementioned meaning of securities at all. Therefore, it is not securities under this Act which means that it cannot be regulated under such law at this time.

However, it is notable that the authority to specify any other instruments as securities belongs to the SEC.<sup>109</sup> This writer believes that if the SEC considers the essential of regulating virtual currency, it has the authority to specify virtual currency as securities under this Act.

#### **(5) Virtual Currency vs. Commodity or Goods**

The meaning of goods can be differently defined by different laws. This writer selectively studies the definition of goods under three laws which are the Price of Goods and Services Act B.E. 2542, the Consumer Protection Act B.E. 2522 and the Derivatives Act B.E. 2546.

According to the Price of Goods and Services Act B.E. 2542, goods means “an article which may be used or consumed, including a document of ownership in such article.”<sup>110</sup> Goods governed by this Act are restricted to articles for using or consuming which are considered essential for life, for example, clothes, food,

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<sup>104</sup> The Securities and Exchange Act B.E. 2535 sec. 4 [hereinafter *The SEA B.E. 2535*].

<sup>105</sup> Notification of the Securities and Exchange Commission No. KorJor. 20/2541 Re: Additional Types of Securities, notified on June 11th, 1998, clause 1.

<sup>106</sup> Notification of the Securities and Exchange Commission No. KorJor. 7/2558 Re: Additional Types of Securities (No. 9), notified on April 9th, 2015, clause 2(1) [hereinafter *Notification of the SEC No. KorJor. 7/2558*].

<sup>107</sup> Notification of the SEC No. KorJor. 7/2558, *supra* note 106, clause 2(2).

<sup>108</sup> Notification of the SEC No. KorJor. 7/2558, *supra* note 106, clause 2(3)

<sup>109</sup> The SEA B.E. 2535, *supra* note 104.

<sup>110</sup> The Price of Goods and Services Act B.E. 2542 sec. 4.



medicine, shelters and cars.<sup>111</sup> Articles which, normally, are not used or consumed in daily life, are not goods under this Act, for example, lottery.<sup>112</sup>

Currently, virtual currency is not used or consumed in daily life. A group of people may use it as a mean of payment for sales and services or invest in virtual currency, however, it is not considered essential for life yet. In this writer's opinion, virtual currency is not goods under this Act.

Another law which this writer studies is the Consumer Protection Act B.E. 2522. According to this Act, goods means "articles produced or possessed for sale."<sup>113</sup> Virtual currency like Bitcoin was initially designed for electronic transactions as earlier studied, therefore, virtual currency itself is not produced for sale. Anyway, virtual currency is possible to be possessed for sale. But the issue is the possessor's purpose of holding Bitcoin may be variable. A Bitcoin holder may possess it for sale, invest or use as a mean of payment at any time. This writer has an opinion that it is still arguable whether Bitcoin can be goods under this Act.

The last law this writer studies is the Derivatives Act B.E. 2546. Goods under this Act means "securities, gold, crude oil, or any other property as specified in the notification of the SEC with the approval of the Cabinet, excluding currencies."<sup>114</sup>

This writer has studied and found in 2.1.4.1(4) that virtual currency is not securities under the SEA B.E. 2535. It is not gold, crude oil and any other property as specified in the notification of the SEC with the approval of the Cabinet. Goods under this Act is specifically defined. Accordingly, virtual currency is not goods under this Act.

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<sup>111</sup> กรมการค้าภายใน กระทรวงพาณิชย์, คำอธิบายกฎหมายพระราชบัญญัติว่าด้วยราคาสินค้าและบริการ พ.ศ. 2542 (2013). (Department of Internal Trade, Ministry of Commerce, **Commentaries on The Price of Goods and Services Act B.E. 2542** (2013). available at <http://www.dit.go.th/aboutdetail.asp?catid=103370101&ID=1493>.

<sup>112</sup> *Id.*

<sup>113</sup> The Consumer Protection Act B.E. 2522 sec. 3 [hereinafter *The Consumer Protection Act*].

<sup>114</sup> The Derivatives Act B.E. 2546 sec. 3.

### (6) Virtual Currency vs. Property

Section 137 of the Civil and Commercial Code (“CCC”) defines that “things” are corporeal objects.<sup>115</sup> Corporeal objects are tangible, for example, books, tables and houses.<sup>116</sup> In contrast, virtual currency is incorporeal, it is intangible which cannot be visually seen or touched. Virtual currency is not thing under the CCC.

Section 138 of the CCC defines “property” as “things as well as incorporeal objects, susceptible of having a value and of being appropriated.”<sup>117</sup> Virtual currency is not thing as mentioned earlier, but it is incorporeal object. An incorporeal object is property under the CCC when two characteristics are met, a value and the ability to be appropriated.

Value of property is measured by possessor not by real market price. It can be economic or market or worth value. It does not required everybody to agree to the same value.<sup>118</sup> Even the value of property decrease, it is still considered property.<sup>119</sup>

The susceptible of being appropriated means the ability to possess the property or claim for the ownership including restricting the property from others. In other words, the possessor has authority to control and manage such incorporeal object.<sup>120</sup>

In this writer’s opinion, virtual currency can be property under the CCC. Virtual currency is incorporeal object. It is susceptible of having a

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<sup>115</sup> ศาสตราจารย์กมล สนธิเกษตริณ, *ประมวลกฎหมายแพ่งและพาณิชย์ บรรพ 1-6 37* (พิมพ์ครั้งที่ 9, 2551) (Kamol Sandhikshetrin, **The Civil and Commercial Code Book 1-6 37** (9th ed. 2008))

<sup>116</sup> ศาสตราจารย์บัญญัติ สุชีวะ, *คำอธิบายกฎหมายลักษณะทรัพย์ 4-8* (พิมพ์ครั้งที่ 16, 2557) ปรับปรุงโดย ไพโรจน์ วายุภาพ (Banyat Suchiwa, **Commentaries on Property Law 4-8** (16th ed. 2014) revised by Pairoj Vayuparb).

<sup>117</sup> Kamol Sandhikshetrin, *supra* note 115.

<sup>118</sup> ประมุข สุวรรณศร, *คำอธิบายประมวลกฎหมายแพ่งและพาณิชย์ ว่าด้วยทรัพย์สิน 6* (พิมพ์ครั้งที่ 7, 2545) (Pramul Suwannasorn, **Commentaries on the Civil and Commercial Code: Property Law 6** (7th ed. 2002))

<sup>119</sup> Banyat Suchiwa, *supra* note 116.

<sup>120</sup> ศรีราชา เจริญพานิช, *คำอธิบายกฎหมายว่าด้วยทรัพย์สิน 23-25* (พิมพ์ครั้งที่ 5, 2557) (Sriracha Charoenpanich, **Property Law 23-25** (5th ed. 2014))

value. The basic economic rule applies to virtual currency, its value is determined by demand and supply. With a finite supply and increasing demand, the price of virtual currency like Bitcoin is changing every day. For example, on August 21, 2015, the value of a single bitcoin was around \$233 USD.<sup>121</sup> Moreover, virtual currency is susceptible of being appropriated. A possessor can claim for the ownership of virtual currency in his wallet. The possessor has his own public address and private key used for checking the balance and processing transactions which restricting his virtual currency from others.

Property under the CCC can be categorized into two types which are immovable property and movable property. Section 139 of the CCC defines immovable property as “land and things fixed permanently to land or forming a body therewith. It includes real rights connected with the land or things fixed to or forming a body with land.”<sup>122</sup> While Section 140 of the CCC defines that movable property denotes “things other than immovable property. It includes rights connected therewith.”<sup>123</sup> According to the definition, virtual currency is apparently not immovable property. It then falls within the definition of movable property.<sup>124</sup> Under the CCC, movable property can be the subject matter of obligation, for example, the subject matter of pledge. It can be hostile possessed as stated in Section 1382 also.

Virtual currency is found being used as a mean of payment instead of money in many areas of many countries. In the obligation matter, parties may initially agree to perform the obligation by any specific thing, such as money. However, if virtual currency is later used in performing such obligation instead of the original one, the obligation can be extinguished if the creditor accepts such virtual

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<sup>121</sup> Bitcoincharts.com, **Bitcoin Charts / Charts** (2015), <http://bitcoincharts.com/charts/bitstampUSD#rg1zigDailyzcsg2015-08-21zeg2015-08-21zm1g10zm2g25zv> (last visited August 22, 2015).

<sup>122</sup> Kamol Sandhikshetrin, *supra* note 115.

<sup>123</sup> *Id.*

<sup>124</sup> สนธิ สนั่นศิลป์, คำอธิบายทรัพย์สิน - ที่ดิน ตามประมวลกฎหมายแพ่งและพาณิชย์ และประมวลกฎหมายที่ดิน พร้อมคำพิพากษาศาลฎีกาที่เกี่ยวข้อง 3 (พิมพ์ครั้งที่ 1, 2549) (Sanit Sanansin, **Commentaries on the Civil and Commercial Code and Code of Real Estate Laws: Property and Real Estate** 3 (1st ed. 2008)).

currency in accordance with Section 321 of the CCC.<sup>125</sup> For example, a book seller normally offers his books for cash only. A customer agrees to buy his book at the price of 1,000 Baht, therefore, such customer is obliged to pay 1,000 Baht in cash to the seller. Instead of paying cash as agreed, the customer then transfer a bitcoin to the seller and the seller accepts such bitcoin instead of cash. Accordingly, the customer's obligation to pay cash is extinguished because the seller accepts bitcoin instead of cash.<sup>126</sup> However, if the customer does not transfer a bitcoin to the seller or the seller does not accept such bitcoin instead of cash, the obligation is totally unextinguished. Apparently, this case is not under the scope of Section 321 of the CCC. Rights and obligations of parties remain the same. The seller is entitled to claim for damages based on the original obligation which is cash as agreed.

#### 2.1.4.2 Foreign Countries

##### (1) United States of America

###### a. Virtual Currency vs. Legal Currency

Definition of legal currency or legal tender can be found in Section 31 U.S.C. 5103 under the Coinage Act of 1965. The statute states that "US coins and currency (including Federal Reserve notes and circulating notes of Federal Reserve banks and national banks) are legal tender for all debts, public charges, taxes, and dues."

Currently, more than 99 percent of all US currency in circulation are Federal Reserve notes. They have been issued into circulation by the Federal Reserve Banks subsequent to the Federal Reserve Act of 1913.<sup>127</sup> US notes, national bank notes and silver certificates are at a small number of US currency. Anyway, all of them are US legal tender.<sup>128</sup>

<sup>125</sup> Thai Civil and Commercial Code sec. 321 para. 1 [hereinafter *Thai CCC*]

"An obligation is extinguished if the creditor accepts in lieu of performance another performance than agreed upon."

<sup>126</sup> รองศาสตราจารย์ ดร. สุนทร มณีสวัสดิ์, คำอธิบายประมวลกฎหมายแพ่งและพาณิชย์ หนี้ 313 (พิมพ์ครั้งที่ 3, 2555) (Sunthorn Manisawat, **Commentaries on the Civil and Commercial Code: Obligation Law 313** (3rd ed. 2012)).

<sup>127</sup> Federalreserve.gov, **FRB: Federal Reserve Act: Section 16** (2015), <http://www.federalreserve.gov/aboutthefed/section16.htm> (last visited Oct 3, 2015).

<sup>128</sup> Federalreserve.gov, **FRB: Currency and Coin Services** (2015), [http://www.federalreserve.gov/paymentsystems/coin\\_about.htm](http://www.federalreserve.gov/paymentsystems/coin_about.htm) (last visited Oct 3, 2015).

US Notes were the first national currency which began circulating during the Civil War. The notes were issued pursuant to the Legal Tender Act of 1862 subject to limitations ruled by Congress. However, they were stopped issuing by the Treasury Department. Since January 21, 1971, US Notes have no more been placed into circulation.<sup>129</sup>

Under those laws, virtual currency is not United States money as identified above. It is not issued by Federal Reserve banks or national banks, it is not the legal tender of the United States.

However, on September 18, 2014, Texas magistrate judge Amos L Mazzant in *SEC v. Shavers*, Case No. 4:13-CV-416 (E.D.Tex.) ruled that Bitcoin, the most popular virtual currency at the time, is a currency and a form of money.

In the court document, the judge said:

*“It is clear that bitcoin can be used as money. It can be used to purchase goods or services, and as Shavers stated, used to pay for individual living expenses. [...] it can also be exchanged for conventional currencies, such as the US dollar, Euro, Yen, and Yuan. Therefore, Bitcoin is a currency or form of money, and investors wishing to invest in BTCST provided an investment of money.”*<sup>130</sup>

Similarly, US District Judge Jed Rakoff also ruled in *US v. Faiella*, US District Court, Southern District of New York, Case No. 14-cr-00243 that Bitcoin is money. The judge said:

*“Money in ordinary parlance means ‘something generally accepted as a medium of exchange, a measure of value, or a means of payment’. Bitcoin clearly qualifies as ‘money’.”*<sup>131</sup>

In contrast to the point of view of the Internal Revenue Service (“IRS”) which issued a notice, on March 25, 2014, providing answers that

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<sup>129</sup> Treasury.gov, **Legal Tender Status** (2015), <http://www.treasury.gov/resource-center/faqs/Currency/Pages/legal-tender.aspx> (last visited Oct 3, 2015).

<sup>130</sup> *SEC v. Shavers*, Case No. 4:13-CV-416 (E.D.Tex.).

<sup>131</sup> *U.S. v. Faiella*, Case No. 14-cr-00243 (U.S. District Court, Southern District of New York).

virtual currency like bitcoin was not legal currency.<sup>132</sup> The IRS recognized that virtual currency operated like “real” currency. In other words, virtual currency functioned similar to US coin and paper money or any other country’s money. Real currency is circulated, generally used and accepted as a mean of exchange and designated to be legal tender in the issuing country. Though virtual currency is capable of serving those functions, it does not have legal tender status in any jurisdiction.<sup>133</sup>

#### **b. Virtual Currency vs. Foreign Currency**

This writer finds that foreign currency is defined under the Code of Federal Regulations Title 26 Chapter I Subchapter A Part 1 Section 1.6045-1, the section related to the returns of information of brokers and barter exchanges.<sup>134</sup> Foreign currency for purposes of this section means “currency of a foreign country.”<sup>135</sup>

Virtual currency like Bitcoin is not treated as currency of Thailand as previously studied. Up to now, it is not currency of any country which shall be studied in more detail next part. It is not currency of any foreign country other than US, therefore, it is not foreign currency under such definition at all.

#### **c. Virtual Currency vs. Electronic Money**

The definition of electronic money has not been directly found under US law. The closest one relevant to the transfers of funds electronically is the Electronic Fund Transfer Act (“EFTA”) of 1978.<sup>136</sup> The EFTA is intended to protect individual consumers who engage in electronic fund transfers (“EFTs”) and remittance transfers. According to the fact that virtual currency exists digitally and

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<sup>132</sup> [Irs.gov](http://www.irs.gov), **IRS Virtual Currency Guidance : Virtual Currency Is Treated as Property for U.S. Federal Tax Purposes; General Rules for Property Transactions Apply** (2015), <http://www.irs.gov/uac/Newsroom/IRS-Virtual-Currency-Guidance> (last visited Oct 3, 2015).

<sup>133</sup> *Id.*

<sup>134</sup> [Law.cornell.edu](http://www.law.cornell.edu), **26 CFR 1.6045-1 - Returns of information of brokers and barter exchanges. | US Law | LII / Legal Information Institute** (2015), <https://www.law.cornell.edu/cfr/text/26/1.6045-1> (last visited Oct 3, 2015).

<sup>135</sup> *Id.*

<sup>136</sup> The EFTA is implemented through Regulation E which includes official interpretations. The Dodd-Frank Wall Street Reform and Consumer Protection Act (Dodd-Frank Act) transferred rulemaking authority under the EFTA from the Board of Governors of the Federal Reserve System to the Consumer Financial Protection Bureau (CFPB).



transfers among users are electronically executed,<sup>137</sup> the EFTA may possibly be examined then.

EFT is defined under the EFTA as “a transfer of funds initiated through an electronic terminal, telephone, computer (including online banking) or magnetic tape for the purpose of ordering, instructing, or authorizing a financial institution to debit or credit a consumer’s account.”<sup>138</sup>

This writer finds that even a transfer of virtual currency initiated through an electronic terminal like computer, it is not the transfer for the purpose of ordering, instructing, or empowering any financial institution to debit or credit a consumer’s account as above defined.

The US Consumer Financial Protection Bureau which has the authority under the EFTA, has not made any clearer interpretations or official guidelines concerning this issue yet. It only issued a warning to consumers on August 2014, advising that they should exercise caution when engaging with Bitcoin and virtual currency markets.<sup>139</sup>

At this point, virtual currency transactions may neither be considered as electronic fund transfers nor regulated under the EFTA.

#### **d. Virtual Currency vs. Securities**

Securities are broadly defined under the Securities Act of 1933. The Securities Act of 1933 defines security in both specific, e.g. any stock, bond, note, debenture, etc., and general terms, e.g. any investment contract or instrument commonly known as a security.<sup>140</sup> Virtual currency like Bitcoin is not an instrument for which the maker agrees to pay an amount of money to another party, it

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<sup>137</sup> Matthew Kien-Meng Ly, **COINING BITCOIN’S “LEGAL-BITS”:  
EXAMINING THE REGULATORY FRAMEWORK FOR BITCOIN AND  
VIRTUAL CURRENCIES**, 27 *Harvard Journal of Law & Technology* (2014).

<sup>138</sup> 15 U.S.C. § 1693(a)(6)

<sup>139</sup> Consumer Financial Protection Bureau, **CONSUMER ADVISORY: Risks To Consumers Posed By Virtual Currencies** (2014). [http://files.consumerfinance.gov/f/201408\\_cfpb\\_consumer-advisory\\_virtual-currencies.pdf](http://files.consumerfinance.gov/f/201408_cfpb_consumer-advisory_virtual-currencies.pdf). (last visited May 2, 2015).

<sup>140</sup> Course of Study Materials: Fundamentals of Securities Law, 9 (2008).

does not fall within the meaning of note.<sup>141</sup> It cannot be categorized as stock because Bitcoin holders are not entitled to all the fundamental rights belong to stock holders, for example, the right to attend the meeting, the right to vote and the right to receive dividends.

Previously, it was unlikely that Bitcoin would be considered an investment contract. Probably, it was unfit to the elements of the definition. An investment contract for the Securities Act of 1933 purposes is “any contract, transaction, or scheme involving (1) an investment of money, (2) in a common enterprise, (3) with the expectation that profits will be derived from the efforts of the promoter or a third party.”<sup>142</sup>

However, on September 18, 2014, US District Court for the Eastern District of Texas determined in *SEC v. Shavers*, Case No. 4:13-CV-416 (E.D.Tex.), that Bitcoin is a security. It is an investment contract. An investment of money, common enterprise and expectation of profits are fulfilled.<sup>143</sup>

The court accepted that bitcoins are money for the purposes of an investment contract. The court further explained that bitcoins are recognized and taken as payment in many places. It can even be exchanged for cash through market platforms.

Bitcoin also satisfies all three tests for common enterprise including the horizontal commonality, the narrow vertical commonality and the broad vertical commonality. Briefly, the horizontal commonality focuses on the relationship between the investors in the venture,<sup>144</sup> the narrow vertical commonality focuses on the connection between gains and losses of the investor and promoter,<sup>145</sup> and the

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<sup>141</sup> See Derek Dion, Note, **I’ll Gladly Trade You Two Bits on Tuesday for a Byte Today: Bitcoin, Regulating Fraud in the E-Conomy of Hacker-Cash**, 2013 U. ILL. J.L. TECH. & POL’Y 165, 176–77 (2013).

<sup>142</sup> *SEC v. W.J. Howey & Co.*, 328 U.S. 293, 298-99 (1946); *Long v. Shultz Cattle Co.*, 881 F.2d 129, 132 (1989).

<sup>143</sup> The UC Law Review Blog, **Secure Currency or Security? The SEC and Bitcoin Regulation** (2014), <http://uclawreview.org/2014/11/18/secure-currency-or-security-the-sec-and-bitcoin-regulation/> (last visited Oct 3, 2015).

<sup>144</sup> Ruoke Yang, **When Is Bitcoin A Security Under U.S. Securities Law?**, 18 J. Tech. L. & Pol’y 99, 111 (2013).

<sup>145</sup> *Id.* at 112



broad vertical commonality focuses on the performance for investors dependent on the efforts of a promoter.<sup>146</sup>

Firstly, all Bitcoin holders depend on each other for the value of those bitcoins. That is where the horizontal commonality test is satisfied. Secondly, the main promoter of bitcoins namely Bitcoin Foundation, is made up mostly of “early adopters” consists of people who invested in bitcoin initially in its creation by mining or purchasing bitcoins. A lot of these adopters “have large numbers of bitcoins because they took risks and invested time and resources in an unproven technology.”<sup>147</sup> The promoters admit a vested interest in the success of Bitcoin. Early adopters also benefit when prices rise. Thus, the interests of later investors and early adopters are strongly relevant. Finally, the defendant promised investors a return, the investors were forced to rely upon him to obtain these returns and the defendant alone could control the funds and “profits.”

The last requirement to fulfill investment contract security is that investors in the security expect profits. In this case, defendant apparently promised high returns for investors. Investors were convinced to believe that they were investing in a risk-free arbitrage system and expected to make significant amounts of money. Investors with this expectation clearly satisfy the last requirement of the test for a security under US law.

#### **e. Virtual Currency vs. Commodity or Goods**

Commodity is broadly defined under the Commodity Exchange Act (“CEA”) includes all agricultural products and “all services, rights, and interests ... in which contracts for future delivery are presently or in the future dealt in.”<sup>148</sup>

Commodities under the CEA can be categorized into three classes: “agricultural commodities” such as soybean and wheat,<sup>149</sup> “excluded commodities” which are made up of financial interests such as prices and price

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<sup>146</sup> *Id.* at 111-112

<sup>147</sup> Bitcoin.org, **FAQ - Bitcoin** (2015), <https://bitcoin.org/en/faq#doesnt-bitcoin-unfairly-benefit-early-adopters> (last visited Oct. 9, 2014).

<sup>148</sup> 7 U.S. Code § 1a - Definitions

<sup>149</sup> CEA Section 1a(9); CFTC Glossary, Agricultural Commodity.

indices, interest rates, and currencies,<sup>150</sup> and a catch-all category of “exempt commodities” that includes energy interests, precious metals, and measurable events such as the weather.<sup>151</sup>

Commodity futures are regulated by the Commodity Futures Trading Commission (“CFTC”). In the speech of Timothy Massad, the chairman of the CFTC on December 10, 2014, Massad noted that virtual currency derivatives fall within his agency's remit as a commodity.<sup>152</sup> However, virtual currency has not been precisely defined what type of commodity it is.<sup>153</sup> At this point, specific rules governing virtual currencies like Bitcoin have yet been provided.<sup>154</sup>

Interestingly, Houman B. Shadab, a New York Law School professor addresses that Bitcoin may be classified as an excluded commodity if it is considered as “a type of currency or other financial interest.”<sup>155</sup> On the other hand, Bitcoin may be categorized as an exempt commodity for many reasons. For example, it is possible to find that Bitcoin is similar to precious metals. The fact that Bitcoin supply is finite supporting such assumption. Also, even in an electronic form, it is able to be physically delivered. Moreover, acquiring or mining Bitcoin through the computational is equal to physical mining.<sup>156</sup> In another point of view, Bitcoin may consequently be considered as an intangible exempt commodity. Even Bitcoin exists electronically, it can be possessed, consumed, traded and spent.<sup>157</sup> Another idea to support that Bitcoin may be classified as an exempt commodity is that, when

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<sup>150</sup> CEA Section 1a(19), 7 U.S.C. § 1a(19).

<sup>151</sup> CEA Section 1a(20); CFTC Glossary, Exempt Commodity; CFTC Glossary, Weather Derivative.

<sup>152</sup> Cftc.gov, **Testimony of Chairman Timothy Massad before the U.S. Senate Committee on Agriculture, Nutrition & Forestry** (2015), <http://www.cftc.gov/PressRoom/SpeechesTestimony/opamassad-6> (last visited Oct 3, 2015).

<sup>153</sup> Houman B. Shadab, **Regulating Bitcoin and Block Chain Derivatives** (1 ed. 2015), [http://www.cftc.gov/idc/groups/public/@aboutcftc/documents/file/gmac\\_100914\\_bitcoin.pdf](http://www.cftc.gov/idc/groups/public/@aboutcftc/documents/file/gmac_100914_bitcoin.pdf) (last visited Oct 3, 2015).

<sup>154</sup> Cftc.gov, *supra* note 152.

<sup>155</sup> Shadab, *supra* note 153.

<sup>156</sup> *Id.*

<sup>157</sup> 77 Fed. Reg. 48227, 48233 (Aug. 13, 2012).

commodities does not fall within any category of an agricultural commodity or an excluded (financial) commodity, that commodity is then an exempt commodities.<sup>158</sup>

At this point, virtual currency like Bitcoin is found as a commodity in US. However, this writer believes that, when the right time comes, the CFTC will further provide more clarity to the type of commodity and how Bitcoin businesses should go forward.

#### **f. Virtual Currency vs. Property**

The meaning of property under US laws is not easy to define. The common people recognize property as things owned or possessed by people. While property is likely to be explained as rights among people who involve things in law.<sup>159</sup>

According to the studies, this writer finds that property can be differently defined under different scope of laws. For example, the 12 US Code § 5433 states the meaning of property for the purpose of Property transferred section that it includes “all real property (including leaseholds) and all personal property, including computers, furniture, fixtures, equipment, books, accounts, records, reports, files, memoranda, paper, reports of examination, work papers, and correspondence related to such reports, and any other information or materials.”<sup>160</sup>

The 21 US Code § 853 gives the meaning of property subject to criminal forfeiture which includes “(1) real property, including things growing on, affixed to, and found in land; and (2) tangible and intangible personal property, including rights, privileges, interests, claims, and securities.”<sup>161</sup>

John G. Sprankling simply concludes that there are two types of property: “real property” and “personal property.”<sup>162</sup> Real property consists of “rights in land and anything attached to the land (e.g., buildings, signs, fences, or trees).”<sup>163</sup> Personal property consists of “rights in things other than land.” Personal property can be further divided into two main sorts: “chattels (tangible, visible

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<sup>158</sup> CEA Section 1a(20); CFTC Glossary, Exempt Commodity.

<sup>159</sup> John G. Sprankling, **Understanding property law** (2012).

<sup>160</sup> 12 U.S. Code § 5433 - Property transferred.

<sup>161</sup> 21 U.S. Code § 853 - Criminal forfeitures.

<sup>162</sup> Sprankling, *supra* note 159.

<sup>163</sup> *Id.*

personal property such as jewelry, livestock, cars, and books)” and “intangible personal property (invisible, intangible things such as stocks, bonds, patents, debts, and other contract rights).”<sup>164</sup>

This writer finds that virtual currency like Bitcoin is very possible to fall within those definitions and found as property under some US laws.

In addition, this writer has earlier studied and found the notice on March 25, 2014 issued by the IRS stated that virtual currency like Bitcoin is not legal currency. Virtual currency in contrast is viewed as property for US federal tax purposes. Transactions using virtual currency are subject to general tax principles as well as other property transactions are.<sup>165</sup>

The IRS further clarified some sample activities which are subject to taxes.<sup>166</sup> “Wages paid to employees using virtual currency are taxable to the employee and subject to federal income tax withholding and payroll taxes.” “Payments using virtual currency made to independent contractors and other service providers are taxable and self-employment tax rules generally apply.” “A payment made using virtual currency is subject to information reporting to the same extent as any other payment made in property.” Additionally, “gains from buying and selling bitcoins are subject to capital gains taxation.”<sup>167</sup> At this point, standard income taxation shall apply to Bitcoin acquiring through mining activities as well.<sup>168</sup>

Notably, on May 7, 2014, Virtual Currency Tax Reform Act was introduced by Steve Stockman, a US Representative for Texas's 36th congressional district.<sup>169</sup> The bill was meant to address the status of virtual currency as foreign currency instead of property for the tax purpose. In this bill, virtual currency was explained as “a digital representation of value that functioned as a

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<sup>164</sup> *Id.*

<sup>165</sup> *Irs.gov, supra* note 132.

<sup>166</sup> *Id.*

<sup>167</sup> *Id.*

<sup>168</sup> *Id.*

<sup>169</sup> GovTrack.us, **Virtual Currency Tax Reform Act (2014 - H.R. 4602)** (2015), <https://www.govtrack.us/congress/bills/113/hr4602> (last visited Oct 3, 2015).

medium of exchange, a unit of account, and/or a store of value.<sup>170</sup> However, it was not enacted to become law.<sup>171</sup>

## (2) Other Countries

Apart from US, this writer finds that financial-related regulators of many other countries have taken their stances toward virtual currency by either making announcements or amending their existing laws. This writer widely divides those stances into two groups as follows;

The first one is those countries which explicitly announce that virtual currency is neither legal currency nor legal tender in their countries. Additionally, the negative actions against virtual currency like Bitcoin are presented publicly.

For example, financial institutions in China are prohibited to deal businesses with virtual currency. The Notice on Precautions against the Risks of Bitcoin was issued by the central bank of China together with four other central government ministries and commissions on December 3, 2013.<sup>172</sup> The notice defined that Bitcoin was a special “virtual commodity” which was by nature neither currency nor legal tender. In other words, it should not be circulated, exchanged and spent in the market as a currency.<sup>173</sup> The notice did not prohibit the use of Bitcoin as such virtual commodity amongst private users upon their own risks. In contrast, it barred the banks and financial and payment institutions in China from dealing businesses with Bitcoin.<sup>174</sup>

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<sup>170</sup> GovTrack.us, **Text of H.R. 4602 (113th): Virtual Currency Tax Reform Act (Introduced version) - GovTrack.us** (2015), <https://www.govtrack.us/congress/bills/113/hr4602/text/ih> (last visited Oct 3, 2015).

<sup>171</sup> GovTrack.us, *supra* note 169.

<sup>172</sup> 关于防范比特币风险的通知[Notice on Precautions Against the Risks of Bitcoins] (issued by the People’s Bank of China, the Ministry of Industry and Information Technology, China Banking Regulatory Commission, China Securities Regulatory Commission, and China Insurance Regulatory Commission, Dec. 3, 2013) YIN FA, 2013, No. 289, *available at* [http://www.pbc.gov.cn/publish/goutongjiaoliu/524/2013/20131205153156832222251/20131205153156832222\\_251\\_.html](http://www.pbc.gov.cn/publish/goutongjiaoliu/524/2013/20131205153156832222251/20131205153156832222_251_.html) (China).

<sup>173</sup> *Id.*

<sup>174</sup> *Id.*

While in Russia, virtual currency, if used as money substitutes, will be prohibited shortly after the law amendments are passed. Russia is aware of the problem of using money substitutes that it is associated with a high level of risk, lack of regulation of issuance, and lack of the responsible authorities legally bound by this. The possibility of anonymity and lack of control of the national authorities are attracted to criminal misuses like fraud and money laundering. The anonymity and virtuality are the problems for consumers and stakeholders to hardly be able to protect their interests in court and (or) in administrative manner. Therefore, on October 3, 2014, the Ministry of Finance of the Russian Federation revealed the Draft of Federal Law on Amendments to Certain Legislative Acts of the Russian Federation<sup>175</sup> which will establish the obligation for the use of money substitutes and the ban on use of crypto currencies. It was told by Aleksey Moiseev, the Deputy Finance Minister of the Russian Federation<sup>176</sup> that such amendments are in the session of parliament and expected to be possibly passed by year 2015.

Another group is those countries which present the positive actions toward virtual currency like Bitcoin. They allow the development and use of virtual currency. Basically, virtual currency is, similar to the first group, neither legal currency nor legal tender in these countries. This writer finds that US is a very friendly country to new financial innovation like Bitcoin as previously studied, and so other countries in Europe are.

In Germany, virtual currency is not legal tender. It is qualified as financial instruments in the form of units of account pursuant to the relevant statutory interpretation, the German Banking Act (Kreditwesengesetz - "KWG"), by the German Federal Financial Supervisory Authority (Bundesamt für

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<sup>175</sup> Federal Law on Amendments to Selected Legal Acts of the Russian Federation, Draft [in Russian] (Oct. 3, 2014), Document ID 00/03-17205/08-14/21-14-4, Unified Web Portal for Information on Government Legislative Initiatives (last visited Oct. 6, 2014).

<sup>176</sup> Reported by Russia Today (RT), the leading Russian news organization, *See* Rt.com, 'You can play with you bitcoins, but you can't pay with them': Russia may ban cryptocurrencies by 2015 (2014), <http://rt.com/business/187440-bitcoin-ban-russia-cryptocurrency/> (last visited Dec 26, 2014).



Finanzdienstleistungen – “BaFin”).<sup>177</sup> Bitcoin include units of value functioning as private medium of payment in barter transactions. In other words, Bitcoin is utilized similar to other private money or complementary currency in settlement accounts by virtue of private-law agreements.<sup>178</sup> Mining or using Bitcoin in personal contracts amongst the users involved is considered legal in Germany. No need to be concerned, those activities are not supervised or regulated by BaFin. In an opposite way, if Bitcoin is used different from its actual function, authorization of BaFin may be required. Importantly, Bitcoin trade in commercial is possible to be subject to authorization pursuant to the KWG.<sup>179</sup>

In March 2015, HM Treasury, the government’s economic and finance ministry of the United of Kingdom (UK), presented the intention to be the global-leading for the development of innovative payments and financial technology.<sup>180</sup> The UK government considers that when virtual currencies are used lawfully, they put forward an innovative and alternative payment option. This kind of financial technology is challenging the conventional payment models. Apparently, it has specific short-term benefits for micro-payments, cross-border remittances and international trade.<sup>181</sup> It also recognizes that the technology associated with virtual currencies offers considerable promise. This makes it possible for users to transfer value or other information faster, securer and more efficient than traditional method. Virtual currencies provide a lasting record without any trusted third party to manage the process.<sup>182</sup> The UK government intends to create the right environment for legitimate actors to flourish and to create a hostile environment for illicit users of virtual currencies.<sup>183</sup>

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<sup>177</sup> Bafin.de, **BaFin - Extracts from the Annual Report 2013 - Trading in Bitcoins** (2014), [http://www.bafin.de/SharedDocs/Veroeffentlichungen/EN/Jahresbericht/2013/jb\\_2013\\_II\\_9\\_2\\_trading\\_in\\_bitcoins.html](http://www.bafin.de/SharedDocs/Veroeffentlichungen/EN/Jahresbericht/2013/jb_2013_II_9_2_trading_in_bitcoins.html) (last visited Oct 6, 2015).

<sup>178</sup> *Id.*

<sup>179</sup> *Id.*

<sup>180</sup> HM Treasury, **Digital currencies: response to the call for information** (2015), [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/414040/digital\\_currencies\\_response\\_to\\_call\\_for\\_information\\_final\\_changes.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/414040/digital_currencies_response_to_call_for_information_final_changes.pdf) (last visited Oct 3, 2015).

<sup>181</sup> *Id.*

<sup>182</sup> *Id.*

<sup>183</sup> *Id.*

In Canada, virtual currencies are utilized and generally being discussed on three roles: “a form of money”; “a commodity”; and “a payments system.”<sup>184</sup> Considering the first role, the Bank of Canada only issues Canadian dollars as legal tender under the Currency Act of Canada, therefore, virtual currency is not legal tender under its current legal framework.<sup>185</sup> As a commodity, the Department of Finance stated that virtual currency has some interest, but it has significant investor issues. Virtual currency is mentioned that it is possible to be regulated under the securities regulation in Canada.<sup>186</sup> The role that virtual currency serves as a payment system is probably the most important of those three functions. The Department of Finance stated that virtual currency represents an innovation that could bring potential benefit to consumers and merchants. Furthermore, there is more transparency in Bitcoin transaction than in most other types of payments, and certainly much more than cash payments.<sup>187</sup>

In Australia, virtual currency does not constitute legal tender. The Reserve Bank of Australia stated in April 2015 that virtual currencies are in its interest and their developments are being monitored. However, virtual currencies are not broadly used in Australia or in other developed economies at present. The Reserve Bank then considered that it is unnecessary to intervene in transactions between parties who willingly agree to use virtual currency as a mean of payment.<sup>188</sup> In fact, virtual currencies do not currently raise any issues in concern of the Bank's monetary policy and financial stability mandates.<sup>189</sup> Therefore, it is unlikely that the regulations would be introduced in Australia shortly.

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<sup>184</sup> The Standing Senate Committee on Banking, **Trade and Commerce of Canada, Digital Currency: You Can't Flip This Coin!** (2015), <http://www.parl.gc.ca/Content/SEN/Committee/412/banc/rep/rep12jun15-e.pdf> (last visited Oct 3, 2015).

<sup>185</sup> *Id.*

<sup>186</sup> *Id.*

<sup>187</sup> Parl.gc.ca, **Banking, Issue 6, Evidence - March 26, 2014** (2014), <http://www.parl.gc.ca/content/sen/committee/412/BANC/06EV-51275-E.HTM> (last visited Oct 3, 2015).

<sup>188</sup> Rba.gov.au, **RBA: Speech-Opening Statement to the Senate Economics References Committee Inquiry into Digital Currency** (2015), <http://www.rba.gov.au/speeches/2015/sp-so-2015-04-07.html> (last visited Oct 3, 2015).

<sup>189</sup> *Id.*



Like most other countries, virtual currencies in Singapore are neither considered as legal tender nor the securities under the Financial Advisers Act and the Securities and Futures Act respectively.<sup>190</sup> They are therefore not supervised by the financial services regulator like the Monetary Authority of Singapore (“MAS”). There is no legal obligation for individuals or businesses to accept virtual currencies. Consumers and businesses have been cautioned by the MAS, through its national financial education programme MoneySENSE,<sup>191</sup> concerning the risks of monetary losses resulting from the volatile prices of virtual currencies and the cease to operate by virtual intermediaries since June 2013. On March 13, 2014, the MAS’s intention to regulate virtual currency intermediaries was presented in order to manage potential money laundering and terrorist financing risks.<sup>192</sup> As at the end of July 2015, the regulations have not been issued. In the eye of another authority like the Inland Revenue Authority of Singapore, virtual currencies are not classified as money, currency or goods for Goods and Services Tax (“GST”) purposes.<sup>193</sup> The supply of virtual currency is instead viewed as a supply of services. And such supply does not fall within the scope of GST exemption.<sup>194</sup> When a person use virtual currencies to pay for goods or services, the transaction will be considered as a barter trade and that is where supplies are made. GST will need to be charged on each supply if the respective supplier is GST-registered.<sup>195</sup>

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<sup>190</sup> Mas.gov.sg, **Virtual Currencies - MoneySENSE**, <http://www.mas.gov.sg/moneysense/understanding-financial-products/investments/consumer-alerts/virtual-currencies.aspx> (last visited Oct 3, 2015).

<sup>191</sup> *Id.*

<sup>192</sup> Mas.gov.sg, **MAS to Regulate Virtual Currency Intermediaries for Money Laundering and Terrorist Financing Risks** (2014), <http://www.mas.gov.sg/news-and-publications/media-releases/2014/mas-to-regulate-virtual-currency-intermediaries-for-money-laundering-and-terrorist-financing-risks.aspx> (last visited Oct 3, 2015).

<sup>193</sup> Iras.gov.sg, **e-Commerce - IRAS**, [https://www.iras.gov.sg/IRASHome/GST/GST-registered-businesses/Specific-business-sectors/e-Commerce/#sale\\_of\\_virtual\\_currency](https://www.iras.gov.sg/IRASHome/GST/GST-registered-businesses/Specific-business-sectors/e-Commerce/#sale_of_virtual_currency) (last visited Oct 3, 2015).

<sup>194</sup> *Id.*

<sup>195</sup> *Id.*

## 2.2 Virtual Currency Service Businesses

### 2.2.1 Introduction to Virtual Currency Service Businesses

#### 2.2.1.1 Virtual Currency Participants

This writer widely divides virtual currency participants into two groups; non-virtual currency service business and virtual currency service business.

##### (1) Non-Virtual Currency Service Businesses

This writer refers non-virtual currency service businesses to those participants who obtain and use virtual currency only for their own purposes and do not operate businesses providing services like exchange, conversion, or deposit virtual currency for benefits.

Non-virtual currency service businesses generally include users, miners, merchants, technical service providers and information providers.

A user is a person that obtains virtual currency to purchase goods or services,<sup>196</sup> or for investment<sup>197</sup> on the user's own behalf.

A miner<sup>198</sup> is a user who obtains virtual currency by anyhow. Based on the particular virtual currency model involved, obtaining can be differently illustrated as mining, creating, producing, manufacturing, harvesting, earning, or auto-generating. A virtual currency miner who obtains and uses it only for his own purposes, not for the benefit of another, is non-virtual currency service businesses.

A merchant<sup>199</sup> is a user in a trade, business or professional role who accepts virtual currency as a mean of payment for goods and services.

A technical service provider<sup>200</sup> is a third party providing additional (non-core) technical services that interact with virtual currency through, for example, software applications, or to enable mining pool access.

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<sup>196</sup> The Financial Crimes Enforcement Network, **FIN-2014-R001: Application of FinCEN's Regulations to Virtual Currency Mining Operations** (2014), [http://www.fincen.gov/news\\_room/rp/rulings/pdf/FIN-2014-R001.pdf](http://www.fincen.gov/news_room/rp/rulings/pdf/FIN-2014-R001.pdf) (last visited May 1, 2015).

<sup>197</sup> European Banking Authority, **EBA Opinion on 'virtual currencies'** (2014).

<sup>198</sup> The Financial Crimes Enforcement Network, *supra* note 196.

<sup>199</sup> European Banking Authority, *supra* note 197.

<sup>200</sup> *Id.*

An information provider<sup>201</sup> makes available information on virtual currency related exchange rates, news feeds and other data.

## (2) Virtual Currency Service Businesses

This writer refers virtual currency service businesses to those participants who represent themselves like intermediaries operating businesses providing services like issuing, exchanging, conversing, or depositing virtual currency for benefits.

Virtual currency service businesses generally include exchangers, administrators and trading platform providers.

An exchanger<sup>202</sup> is a person engaged in a business providing service of exchanging virtual currency for real currency or other virtual currencies.

Some exchangers are providing virtual currency kiosks like Bitcoin “ATMs” - machines connected to the internet that allow users to insert cash in exchange for bitcoins. Bitcoin ATMs may look like traditional ATMs, but they do not connect to any banks at all.<sup>203</sup>

An administrator<sup>204</sup> is a person engaged in a business providing service of issuing or circulating a virtual currency. An administrator also includes a person who has the authority to redeem or withdraw virtual currency from circulation.

A trading platform provider<sup>205</sup> is functioning as a market place where it brings buyers and sellers of virtual currency together by offering them a platform on which they can offer and bid for virtual currency.

This writer finds that virtual currency service businesses are conducting businesses similar to the traditional money transmitting service businesses including banks, financial institutions and foreign currency exchangers. The great difference between those businesses is the medium of payment of transactions. Virtual

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<sup>201</sup> *Id.*

<sup>202</sup> The Financial Crimes Enforcement Network, *supra* note 35.

<sup>203</sup> **CONSUMER ADVISORY: Risks to consumers posed by virtual currencies**, (1 ed. 2014), [http://files.consumerfinance.gov/f/201408\\_cfpb\\_consumer-advisory\\_virtual-currencies.pdf](http://files.consumerfinance.gov/f/201408_cfpb_consumer-advisory_virtual-currencies.pdf) (last visited May 2, 2015).

<sup>204</sup> The Financial Crimes Enforcement Network, *supra* note 35.

<sup>205</sup> European Banking Authority, *supra* note 197.

currency service businesses are conducting businesses with virtual currency while those traditional businesses are conducting businesses with legal currency.

### 2.2.1.2 Existing Virtual Currency Participants

Examples of existing virtual currency participants can be found below.

#### (1) Non-Virtual Currency Service Businesses

Users and miners are hardly able to be identified as studied earlier, but their existing can be seen from the continuing of block chain recording virtual currency transactions. Also, this could be an example of Bitcoin users, employees of an Irish electronic repairs firms, GSM Solutions, have been paid their salaries in Bitcoin instead of Euros since April 2014.<sup>206</sup>

Merchants are found receiving virtual currency as a mean of payment for goods and services are, for examples; Overstock<sup>207</sup> - a major retailer offers a wide selection of items ranging from jewelry to electronics; Expedia<sup>208</sup> - a travel bookings giant; Dell<sup>209</sup> - an American privately owned multinational computer technology company; Subway<sup>210</sup> - an American fast food restaurant franchise; CheapAir.com<sup>211</sup> - an online travel booking site; London Theatre Direct<sup>212</sup> - a leading

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<sup>206</sup> Gsmsolutions.ie, **Irish firm GSMsolutions now pay staff in Bitcoin! | GSMsolutions Latest News** (2014), <http://www.gsmsolutions.ie/LatestNews/?p=951> (last visited Oct 3, 2015).

<sup>207</sup> overstock.com, **Bitcoin on Overstock.com** (2015), <http://www.overstock.com/bitcoin?keywords=bitcoin&searchtype=Header> (last visited May 1, 2015).

<sup>208</sup> Expedia.com, **Bitcoin Terms & Conditions** (2015), <http://www.expedia.com/Checkout/BitcoinTermsAndConditions> (last visited May 1, 2015).

<sup>209</sup> Dell us, **Dell now accepts bitcoin Dell** (2015), <http://www.dell.com/learn/us/en/uscorp1/campaigns/bitcoin-marketing> (last visited May 1, 2015).

<sup>210</sup> Earnings - CNBC Stock Markets, **CNBC US Home CNBC** (2015), <http://www.cnbc.com/id/> (last visited May 1, 2015).

<sup>211</sup> Cheapair.com, **Book your flights on CheapAir with Bitcoin virtual currency | CheapAir** (2015), <http://www.cheapair.com/blog/travel-news/book-your-flights-on-cheapair-with-bitcoin-virtual-currency/> (last visited May 1, 2015).

<sup>212</sup> London Limited, **PRESS RELEASE: London Theatre Tickets Can Now Be Bought Using Bitcoin Londontheatredirect.com** (2015), <https://www.londontheatredirect.com/news/1425/PRESS-RELEASE--London-Theatre-Tickets-Can-Now-Be-Bought-Using-Bitcoin.aspx> (last visited May 1, 2015).

London theatre ticket agency; and WordPress.com<sup>213</sup> - an online company allows user to create free blogs.

Two universities additionally accepting Bitcoin for payment of tuition and fees are the University of Nicosia, the biggest private university in Cyprus and one of the largest English language universities in the Mediterranean region,<sup>214</sup> and the University of Cumbria, the UK public university in northwest England.<sup>215</sup>

In Thailand, merchants accepting Bitcoin as payment can be found in many areas.<sup>216</sup> The number is not very huge, however, it seems to continue increasing. To date, restaurants located in Bangkok accepting Bitcoin are, for example, Eat Me,<sup>217</sup> Paulybee's American Burger,<sup>218</sup> Wolff's Bar and Grill and the Smokin' Pug. Baan Tewa Massage and the Prince<sup>219</sup> are men's spas in Bangkok which also accept Bitcoin. Other sales and services found in Bangkok are Siamlancard<sup>220</sup> - a Lan Card and barcode printer distributor, Bangkok Limousine<sup>221</sup> - a transportation service provider, and Indo-Siam Group<sup>222</sup> - a business support services provider for

<sup>213</sup> WordPress.com News, **Pay Another Way: Bitcoin** (2012), <https://en.blog.wordpress.com/2012/11/15/pay-another-way-bitcoin/> (last visited May 1, 2015).

<sup>214</sup> Unic.ac.cy, **University of Nicosia Digital Currency Initiative | University of Nicosia**, <http://www.unic.ac.cy/digitalcurrency> (last visited Oct 3, 2015).

<sup>215</sup> Cumbria.ac.uk, **UoC becomes the first public university in the world to accept Bitcoin for payment of fees - University of Cumbria**, <http://www.cumbria.ac.uk/AboutUs/News/Articles/201314/January/PR1327.aspx> (last visited Oct 3, 2015).

<sup>216</sup> coinmap.org - Map of Bitcoin accepting venues, **coinmap.org - Bitcoin accepting shops, ATM's & venues.**, <https://coinmap.org/#/world/15.94654071/102.71777317/7> (last visited Aug 15, 2015).

<sup>217</sup> Eatmerrestaurant.com, <http://eatmerrestaurant.com/> (last visited Aug 15, 2015).

<sup>218</sup> Facebook.com, **Paulybee's American Burger - Bangkok**, <https://www.facebook.com/paulybeesamericanburger> (last visited Aug 15, 2015).

<sup>219</sup> Theprincebkk.com, **The Prince BKK : เกย์ Gay สปาเกย์ ร้านนวดเกย์ สาทร สีลม สวนพลู**, <http://www.theprincebkk.com/contact.php> (last visited Aug 15, 2015).

<sup>220</sup> Siamlancard.com, **ศูนย์รวม แลนการ์ด card lan และ Thermal printer ราคาถูก**, <http://www.siamlancard.com/> (last visited Aug 15, 2015).

<sup>221</sup> Bangkoklimousine.com, **Bangkok limousine for transfers to Hua Hin, Pattaya, Koh Chang, Ban Phe, Trat, Kanchanaburi, Chumphon, Cha-am, and many other locations in Thailand.**, <http://www.bangkoklimousine.com/index.html> (last visited Aug 15, 2015).

<sup>222</sup> Indo-siam.com, **Welcome to Indo-Siam**, <http://www.indo-siam.com/?ref=coinmap.org> (last visited Aug 15, 2015).

non-Thai business activities operating in Thailand. Those merchants are found not only in Bangkok but also other provinces like Chiangmai,<sup>223</sup> Phetchaburi,<sup>224</sup> Prachuap Khiri Khan,<sup>225</sup> Phuket,<sup>226</sup> Krabi,<sup>227</sup> Chonburi,<sup>228</sup> Trat,<sup>229</sup> Ubon Ratchathani<sup>230</sup> and Maha Sarakham.<sup>231</sup>

Existing technical service providers and information providers are for examples; Bitcoin Charts<sup>232</sup> - provides financial and technical data related to Bitcoin network; Bitcoinx.com<sup>233</sup> - provides a variety of tools and charts including financial and technical data, related to Bitcoin network and markets; 50BTC.com<sup>234</sup> - a Bitcoin mining pool; CoinDesk<sup>235</sup> - the world leader in news, prices and information on bitcoin and other virtual currencies; and Bitcoin Foundation<sup>236</sup> - an American nonprofit corporation provides funding for development and infrastructure for Bitcoin.

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<sup>223</sup> For example, Thai Secret Cooking School & Organic Farm, Masumi Spa Chiangmai Orchid Hotel and Sure Design T-shirts.

<sup>224</sup> For example, Chelona Hua Hin - Boutique Mediterranean Resort.

<sup>225</sup> For example, Ban Krut Backpack, Kruu Noi Shop.

<sup>226</sup> For example, Royal Prince Residence and Kamala Penthouse.

<sup>227</sup> For example, Krabi Good Dream Guesthouse and Restaurant and Little Viking Burger Restaurant.

<sup>228</sup> For example, Pattaya Beer Garden.

<sup>229</sup> For example, Koh Chang Minibus.

<sup>230</sup> For example, สัตว์แพทย์ Petshop (Veterinarian) and Kosinsoft (Independent software developer).

<sup>231</sup> For example, ร้านอาหารครัวเวียดนาม (Vietnamese restaurant).

<sup>232</sup> Bitcoincharts.com, **Bitcoin Charts**, <http://bitcoincharts.com/> (last visited May 1, 2015).

<sup>233</sup> Bitcoinx, **Bitcoin and crypto currencies news, prices, charts, guides & analysis**, <http://www.bitcoinx.com/> (last visited May 1, 2015).

<sup>234</sup> 50btc.com, **50BTC.com - Bitcoin mining pool. Get Bitcoins**, <https://50btc.com/en> (last visited May 1, 2015).

<sup>235</sup> CoinDesk, **Bitcoin News, Prices, Charts, Guides & Analysis - CoinDesk**, <http://www.coindesk.com/> (last visited May 1, 2015).

<sup>236</sup> Bitcoinfoundation.org, **The Bitcoin Foundation | Supporting the development of Bitcoin**, <http://bitcoinfoundation.org/> (last visited May 1, 2015).



## (2) Virtual Currency Service Businesses

Virtual currency service businesses are for examples; Bitstamp<sup>237</sup> - an European Union based bitcoin marketplace allows people from all around the world to buy and sell bitcoins; Coinbase<sup>238</sup> - provides the services of buying, selling, sending, receiving, and storing bitcoin; BitPay<sup>239</sup> - an electronic payment processing system for bitcoin; Bitcoin.co.th<sup>240</sup> - provides buying, selling, exchanging bitcoins in Thailand; and Coins.co.th<sup>241</sup> - provides bitcoin wallet services and allows users to buy and sell bitcoin.

Robocoin<sup>242</sup> is the World's First Bitcoin ATM installed in Canada.<sup>243</sup> The number of Robocoin Bitcoin ATM increases to thirty-one kiosks<sup>244</sup> installed in US, Italy, Spain, Hong Kong, Japan, China, Israel and Romania. There are two Bitcoin ATMs also installed in Thailand; in Nonthaburi Province and Bangkok in specific.<sup>245</sup>

### 2.2.2 Potentiality of Unspecifically Regulated Virtual Currency Service Businesses Supporting Illegitimate Activities

Virtual currency is a phenomenon of technological development. Businesses related to virtual currency are very new and still developing. At this time, the proper regulations for virtual currency service businesses are still absent, they then become a great place where criminals and fraudsters use to perform their illegitimate activities.

<sup>237</sup> Bitstamp.net, <https://www.bitstamp.net/> (last visited May 1, 2015).

<sup>238</sup> Coinbase.com, *supra* note 57.

<sup>239</sup> Bitpay.com, **Accept Bitcoin | BitPay**, <https://bitpay.com/> (last visited May 1, 2015).

<sup>240</sup> Bitcoin.co.th, **Bitcoin / Buy, Sell, Exchange Bitcoins in Thailand**, <https://bitcoin.co.th/en/> (last visited May 1, 2015).

<sup>241</sup> Coins.co.th, **coins.co.th: Thailand's leading Bitcoin Wallet**, <https://coins.co.th/> (last visited May 1, 2015).

<sup>242</sup> Robocoin.com, **Robocoin**, <https://robocoin.com/> (last visited May 1, 2015).

<sup>243</sup> Mashable, **World's First Bitcoin ATM Opens In Vancouver, Canada** (2013), <http://mashable.com/2013/10/30/bitcoin-atm-2/> (last visited May 1, 2015).

<sup>244</sup> As of April 30, 2015 See Coinatmradar.com, **Robocoin Kiosk Bitcoin ATM machine producer** – Page 2, <http://coinatmradar.com/manufacturer/4/robocoin-kiosk-bitcoin-atm-producer/2/> (last visited April 30, 2015).

<sup>245</sup> Coinatmradar.com, **Bitcoin ATM Thailand – Buy Bitcoin with Cash**, <http://coinatmradar.com/country/211/bitcoin-atm-thailand/> (last visited April 30, 2015).

### 2.2.2.1 Black Market Trade

The black market<sup>246</sup> is the venue where highly controlled substances or products such as drugs and weapons are illegally traded. Silk Road,<sup>247</sup> launched in January 2011, operated as a world online black marketplace that brokered anonymous illicit transactions. A lot of drug traders and other illegitimate vendors used Silk Road to distribute restricted goods and services to a number of buyers. It successfully served those functions by operating on the hidden Tor network. Importantly, the only acceptable payment in this place is Bitcoin, the most popular virtual currency today.<sup>248</sup>

Liberty Reserve<sup>249</sup> was a web-based virtual currency particularly designed and regularly utilized as a preferred method of payment to facilitate illicit web based activities. Liberty Reserve was broadly used by criminals worldwide to store, transfer, and launder the proceeds of a variety of illicit activities.

To use virtual currency for payment, users may obtain virtual currency by anyhow including mining by themselves or receiving from someone else. Virtual currency service businesses are the great market offering virtual currency for anyone. Even criminals can easily buy virtual currency and later spend it in the black market untraceably.

In the US President Administration's point of view, this issue has also been taken into account. In August 2014, the Obama Administration announced the strategy for the year 2015 covering the target to reduce illegitimate use of virtual currency.<sup>250</sup> The fact that central administration of decentralized virtual currency like Bitcoin is unknown, this currency gains significantly attention from

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<sup>246</sup> CFA Elvis Picardo, **Black Market Definition | Investopedia Investopedia** (2005), <http://www.investopedia.com/terms/b/blackmarket.asp> (last visited May 1, 2015).

<sup>247</sup> The Financial Action Task Force, *supra* note 25.

<sup>248</sup> *Id.*

<sup>249</sup> Treasury.gov, **Treasury Identifies Virtual Currency Provider Liberty Reserve as a Financial Institution of Primary Money Laundering Concern under USA Patriot Act Section 311**, <http://www.treasury.gov/press-center/press-releases/Pages/j11956.aspx> (last visited May 3, 2015).

<sup>250</sup> Executive Office of the President of the United States, **National Northern Border Counter Narcotics Strategy** (2014). [https://www.whitehouse.gov/sites/default/files/ondcp/policy-and-research/noborder\\_counternarc\\_2014.pdf](https://www.whitehouse.gov/sites/default/files/ondcp/policy-and-research/noborder_counternarc_2014.pdf) (last visited Oct 6, 2015).



authorities. Importantly, it is capable of posing a challenge to law enforcement investigations. In the publication of strategy, the Office of National Drug Control Policy (“ONDCP”) which serves as US President’s advisor on drug-control issues,<sup>251</sup> is increasing the efforts to detect and prohibit Bitcoin transactions facilitating drug trafficking across US and Canada border.<sup>252</sup> In addition to the strategy, ONDCP repeatedly mentioned in the Congressional budget report for the year 2015 that new virtual currency and emerging technologies are used to launder illegal drug proceeds. At this relevant concern, ONDCP requested for \$3,730,815 USD to support the national drug control strategy.<sup>253</sup>

Up to now, the explicit stance of Thai drug control supervisor like the Office of the Narcotics Control Board on this matter has not publicly been found yet.

### 2.2.2.2 Money Laundering

Money laundering can be defined in a number of ways. The international standard setter for anti-money laundering efforts known as the FATF on Money Laundering<sup>254</sup> defines money laundering as “the processing of criminal proceeds to disguise their illegal origin in order to legitimize the ill-gotten gains of crime.”<sup>255</sup>

The Anti-Money Laundering Office (“AMLO”) of Thailand described money laundering as “aiding the movement of money illegally obtained into the ground legal economy or hiding it from legally authorized scrutiny.”<sup>256</sup> Not

<sup>251</sup> The White House, **About ONDCP**, <https://www.whitehouse.gov/ondcp/about>. (last visited Oct 6, 2015).

<sup>252</sup> Executive Office of the President of the United States, *supra* note 250.

<sup>253</sup> Executive Office of the President of the United States, **Congressional Budget Submission Fiscal Year 2015** (2014). [https://www.whitehouse.gov/sites/default/files/ondcp/about-content/fy\\_2015\\_cbj\\_final\\_030414\\_w\\_bookmarks\\_and\\_cover.pdf](https://www.whitehouse.gov/sites/default/files/ondcp/about-content/fy_2015_cbj_final_030414_w_bookmarks_and_cover.pdf) (last visited Oct 6, 2015).

<sup>254</sup> Schott, Paul Allan, **Reference Guide to Anti-Money Laundering and Combating the Financing of Terrorism**, 2 (2004).

<sup>255</sup> Fatf-gafi.org, **Money Laundering - Financial Action Task Force (FATF)**, <http://www.fatf-gafi.org/faq/moneylaundering/#d.en.11223> (last visited Aug 25, 2015).

<sup>256</sup> สำนักงานป้องกันและปราบปรามการฟอกเงิน, **ความรู้ทั่วไปเกี่ยวกับการป้องกันและปราบปรามการฟอกเงิน**. (The Anti-Money Laundering Office, **General Information on Anti-Money Laundering**). <http://www.amlo.go.th/amlofarm/farm/web/files/1%20Part1.pdf> (last visited August 24, 2015).

only money, but property can be laundered also. Basically, money or property laundering shall be an offence after a criminal commits a particular crime, obtains money or property and uses or changes such money or property by any means.<sup>257</sup> Hiding illegally money in any places, depositing dirty money in a bank, buying houses, lands, or cars, spending dirty money on the stock market and purchasing foreign money with illegal funds through foreign currency exchanges are examples of money laundering.

Liberty Reserve was the largest online money laundering case in history. Silk Road was another place facilitating money laundering as well. Criminals used those places to launder illegal money or properties. Virtual currencies were illegally used as main means of payment in both cases.

In recent years, virtual currency, in particular Bitcoin, was many times found using in hacker's illegal activities in many countries including in Thailand.<sup>258</sup> Hackers infected the government and business network with a form of Internet malware and encrypted the vital records. They threatened for money, an amount of bitcoins, to decrypt the files. They used Bitcoin as a mean of payment performing the crimes instead of cash or legal currency because the benefit of its unidentifiable. Some desperately decided to pay the untraceable virtual currency rather than risked losing the data forever.<sup>259</sup> While some decided not to pay but instead bought a new computer and spent times restoring all the lost information.<sup>260</sup>

Virtual currency service businesses are providing virtual currency and exchanging it to legal currency or other virtual currencies, they are not only facilitating the black market trade but also the money laundering. After the sellers of unlawful goods and services receive virtual currency as a mean of payment, they can then exchange it to other virtual currencies or legal currency in order to turn it into lawful money, this is money laundering.

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<sup>257</sup> *Id.*

<sup>258</sup> บันทึกสำนักเทคโนโลยีและศูนย์ข้อมูลการตรวจสอบ ที่ ยช 0813/ว.794 เรื่อง แจ้งเตือนการเปิดอ่านจดหมายอิเล็กทรอนิกส์ ลงวันที่ 29 เมษายน 2558. (Bureau of Technology and Information Inspection Center's Memo No. YorTor. 0813/Wor.794 dated April 29, 2015 Re. Warning on Opening Electronics Mails)

<sup>259</sup> Mail Online, *supra* note 10.

<sup>260</sup> Joe Fryer, *supra* note 11.

Money launderers may even use virtual currency service business as a place to exchange their legal currency, which obtained from illegal activities in the real world, to virtual currency to hide it from the government.

On May 8, 2014, Police Colonel Seehanat Prayoonrat, the AMLO Secretary-General said that Bitcoin and other similar virtual currencies are not legal tender in Thailand and valueless by themselves. The Secretary-General further concerned that those virtual currency transactions are not strictly regulated which may be illegally used for money laundering and terrorist finance. Moreover, businesses providing the exchange service of virtual currencies are at risk in violation of laws. Those transactions could pose a threat to society and stability of the country. The AMLO then warned people and financial institutions to be aware of consuming and providing any of virtual currency services.<sup>261</sup>

### 2.2.2.3 Fraud

Fraud<sup>262</sup> is “a type of criminal activity.” It is “an act of deception intended for personal gain or to cause a loss to another person.” There are many different types of fraud. Ponzi schemes is one type of fraud.

A Ponzi scheme<sup>263</sup> is “an investment fraud that involves the payment of purported returns to existing investors from funds contributed by new investors.” Ponzi scheme organizers usually offer new investors opportunities to gain, as they claim, high returns with very few or no risk. Instead of involving in any lawful investment activity, the fraudulent actors in many Ponzi schemes tend to attract new investors with new money in hands in order to use to those money in returning benefits to the earlier investors. In most cases, those money are divertingly turn into funds for fraudster’s personal use.

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<sup>261</sup> สำนักงานป้องกันและปราบปรามการฟอกเงิน, ปปง. **ห่วงใยเตือนภัยแก๊งคอลเซ็นเตอร์ และการใช้เงินสกุลเหมือนจริง** (2014), (The Anti-Money Laundering Office, **AMLO’s Concerns on Call Center Gang and Virtual Currency Uses** (2014)). [http://www.amlo.go.th/amlofarm/farm/web/files/Thailand%20List\(12\).pdf](http://www.amlo.go.th/amlofarm/farm/web/files/Thailand%20List(12).pdf) (last visited Oct 3, 2015).

<sup>262</sup> Sfo.gov.uk, **What is fraud? | Fraud | SFO - Serious Fraud Office**, <http://www.sfo.gov.uk/fraud/what-is-fraud.aspx> (last visited May 3, 2015).

<sup>263</sup> U.S. Securities and Exchange Commission, **SEC Pub. No. 153 (7/13) Investor Alert : Ponzi schemes Using virtual Currencies** (2014), [http://www.sec.gov/investor/alerts/ia\\_virtualcurrencies.pdf](http://www.sec.gov/investor/alerts/ia_virtualcurrencies.pdf) (last visited May 4, 2015).

There are many concerns that the rising use of virtual currency attracts fraudsters to lure investors into Ponzi and other schemes in which this currency is used to facilitate fraudulent.<sup>264</sup> Virtual currency service businesses are even found as a great place with potentiality to support fraudulent.

For example, Mt. Gox was publicly questioned if its business involved with fraudulent issue or not. Mt. Gox was a Japan-based exchange market launched on July 18, 2010, allowing people to buy and sell bitcoins in exchange for real currencies as well as providing a simple way for merchants to accept bitcoins as payment on their websites. In 2011, it was hacked, usernames and passwords were stolen and million dollars were lost, said by its executives. The website was then shut down. After losing 750,000 of its customer's bitcoins, in estimate, the company accordingly filed for bankruptcy in Japan on February 28, 2014. Also, the company's executive has been called to appear in US Court on April 17, 2014.<sup>265</sup>

#### 2.2.2.4 Cybercrime

Cybercrime<sup>266</sup> is generally characterized as committing a misdeed through the use of a computer or the internet. Cybercrime<sup>267</sup> is “an unlawful act in which a computer/s is/are used as means of committing a crime against a person, property or the government.”

Basically, virtual currency service businesses conduct their businesses through the internet network. Computers are the main device consumers use to process the transactions, other devices like smart phones are also increasingly used. When the businesses are conducted electronically through the network, it is very risky that system can be attacked by cybercriminals. Consumer's virtual currencies are at risk to be hacked and stolen. To help mitigate this kind of problem, it is very

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<sup>264</sup> *Id.*

<sup>265</sup> Marcin Szczepański, **Bitcoin Market, economics and regulation** (2014), [http://www.europarl.europa.eu/RegData/bibliotheque/briefing/2014/140793/LDM\\_BRI\(2014\)140793\\_REV1\\_EN.pdf](http://www.europarl.europa.eu/RegData/bibliotheque/briefing/2014/140793/LDM_BRI(2014)140793_REV1_EN.pdf) (last visited May 3, 2015).

<sup>266</sup> Ammar Yassir & Smitha Nayak, **Cybercrime: A threat to Network Security**, **12 IJCSNS International Journal of Computer Science and Network Security** (2012), [http://paper.ijcsns.org/07\\_book/201202/20120214.pdf](http://paper.ijcsns.org/07_book/201202/20120214.pdf) (last visited May 4, 2015).

<sup>267</sup> Crime-research.org, **What Is Cybercrime?** (2004), <http://www.crime-research.org/analytics/702/> (last visited May 6, 2015).

important for those businesses to establish and maintain the minimum standard of information and technology security system.

Last few years, a number of virtual currency service businesses have been hacked and manipulated by cybercriminals. Mt. Gox was the large case study shown the failure of security system of its business. Mt. Gox claimed that the system was hacked, consumer's virtual currencies were stolen, millions of dollars were lost, and Mt. Gox eventually filed for bankruptcy.

#### 2.2.2.5 Tax Evasion

It is learnt by this thesis that virtual currency like Bitcoin could be property, commodity or goods under Thai and foreign laws. It is also the fact that Bitcoin has the price value which can change daily. Bitcoin transactions can either generate profit or loss to the related parties. In case a person obtains bitcoins at a low price and sells them at a higher one, that person gains the profit, and that is where the income is generated. Merchants who accept Bitcoin as a mean of payment for the sale of goods or services are earning revenue as well as those who accept cash for payment. Generally, people are liable to pay tax on income. Every Bitcoin user is a potential taxpayer and so those virtual currency service businesses earning money with Bitcoin-transactions are.<sup>268</sup> However, Bitcoin makes it easier to avoid taxes because its transaction does not involve the banking system. Potentially, Bitcoin could lead to untraceable transactions over the internet. Tax authorities then face difficulties in detecting taxable Bitcoin transactions and identifying the taxable persons.<sup>269</sup>

Previously studied, the IRS, the tax authorities of US, stated that virtual currency like Bitcoin is viewed as property for tax purposes. The IRS explained that the obligation to report information applying to any payment made in property shall also apply to any payment made using virtual currency.<sup>270</sup> In addition, capital gains taxation shall also apply to gains from Bitcoin tradings.<sup>271</sup> Bitcoins

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<sup>268</sup> Franziska Boehm & Paulina Pesch, **Bitcoin: A First Legal Analysis with reference to German and US-American law** (1 ed.), [http://www.uni-muenster.de/Jura.itm/hoeren/materialien/boehm\\_pesch/BTC\\_final\\_camready.pdf](http://www.uni-muenster.de/Jura.itm/hoeren/materialien/boehm_pesch/BTC_final_camready.pdf) (last visited Oct 3, 2015).

<sup>269</sup> *Id.*

<sup>270</sup> *Irs.gov, supra* note 132.

<sup>271</sup> *Id.*

obtained through mining activities are subject to standard income taxation.<sup>272</sup> Basically, all US citizens and residents are subject to a worldwide income tax. Though the IRS has made a clear guidance on taxation of virtual currency, it may be questionable how to track and audit those transaction practically.

In Thailand, any official announcement on this issue made by the Revenue Department has not been found yet. At this point, this writer believes that if virtual currency could be property under the law as earlier studied, it would then be subject to the income tax under the tax laws also. However, the authority may face the problems of detecting taxable transactions and identifying the taxable persons as well.

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<sup>272</sup> *Id.*

## CHAPTER 3

### VIRTUAL CURRENCY SERVICE BUSINESSES REGULATION IN THAILAND

#### 3.1 Laws Regulating the Conduct of Businesses

##### 3.1.1 The Business Registration Act B.E. 2499

The Business Registration Act, B.E. 2499 and Regulation of Ministry of Commerce on Persons who Have the Duties for Commercial Registration (No. 11), B.E. 2553 require the entrepreneurs engaged in the prescribed businesses to apply for e-commerce registration<sup>273</sup> at the commercial registration office in Bangkok, Pattaya City, municipality, Sub-district Administrative Organizations (SAOs) where their head offices are located.<sup>274</sup>

Such entrepreneurs, who fail to apply for commercial registration, present false information, fail to show up for examination or investigation by the Commercial Register, or do not allow the Commercial Register to make a required inspection, shall be subject to penalties in accordance with applicable laws.<sup>275</sup>

Virtual currency service business is providing services by electronic media via internet system<sup>276</sup> and is also a central market for virtual currency services by electronic media via internet system (e-marketplace)<sup>277</sup> under these laws. It is therefore required to apply for e-commerce registration.

The main purpose of these laws is to improve reliability and attest existence of entrepreneurs.<sup>278</sup> Entrepreneurs are only required to provide some general information about their businesses for registration, for example, name, age, nationality, address, capital money, business starting date, and business description. If

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<sup>273</sup> Regulation of Ministry of Commerce on Persons who Have the Duties for Commercial Registration (No. 11) B.E. 2553 sec. 5 [hereinafter *Regulation of Ministry of Commerce*].

<sup>274</sup> The Business Registration Act B.E. 2499 sec. 9 and sec. 10 [hereinafter *The Business Registration Act*].

<sup>275</sup> The Business Registration Act, *supra* note 274, sec. 19.

<sup>276</sup> Regulation of Ministry of Commerce, *supra* note 273, sec. 5(3).

<sup>277</sup> Regulation of Ministry of Commerce, *supra* note 273, sec. 5(6).

<sup>278</sup> Trustmarkthai.com, <http://www.trustmarkthai.com/ecm/public/newsletter/view.html?id=385> (last visited May 1, 2015).



they fail to comply with these laws, they will be punished at a small amount of fine. These laws are only providing the minimum information of businesses, they are lack of requirements which should be established properly for specific business like virtual currency service business.

### 3.1.2 The Exchange Control Act B.E. 2485

The Exchange Control Act B.E. 2485 and Ministerial Regulation No. 13 B.E. 2497 issued under the Exchange Control Act B.E. 2485 represent the legal fundamentals of exchange control in Thailand. Basically, the rules of controlling, restricting, or prohibiting the process of all exchange or other operations involving foreign currency in whatever form are set out in these laws. Also, the laws empower the Minister of Finance to issue ministerial regulations to set rules for those operations and various issues related to the exchange control.<sup>279</sup> It also imposes a fine or years imprisonment to any person who violates or fails to comply with such rules and regulations.<sup>280</sup>

Any person conducting business relating to foreign exchange transactions must obtain license from the Minister of Finance through the BOT. Presently, commercial banks and through authorized non-banks, namely authorized money changers, authorized money transfer agents, and authorized companies, that are granted foreign exchange licenses by the Minister of Finance are conducting all foreign exchange transactions.<sup>281</sup>

Conducting such business without obtaining license from the Minister of Finance is the offense under the Decree on Loans of Money Amounting to Public Cheating and Fraud B.E. 2527 which is found as a predicate offence under the Anti-Money Laundering Act B.E. 2542 also.

Virtual currency service businesses providing the services of use, exchange and storage of virtual currencies and their conversion to or in foreign currencies, are considered conducting business relating to foreign exchange transactions. However, they are neither any kind of authorized persons granted

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<sup>279</sup> The Exchange Control Act, *supra* note 95, sec. 4.

<sup>280</sup> The Exchange Control Act, *supra* note 95, sec. 8.

<sup>281</sup> Bot.or.th, **Exchange Control Regulations in Thailand**, <https://www.bot.or.th/English/FinancialMarkets/ForeignExchangeRegulations/FXRegulation/Pages/default.aspx> (last visited May 6, 2015).

foreign exchange licenses by the Minister of Finance, nor possible to be any qualified authorized persons, this business activity conducted by them is then prohibited by law.<sup>282</sup>

Nonetheless, as long as those virtual currency service businesses do not get involve with foreign currency by specifically limiting their businesses to providing the services of use, exchange and storage of virtual currencies and their conversion to or in legal currencies; Baht, they are not prohibited by laws. In conclusion, this kind of business activity is currently not categorized as any specific business under the laws, therefore, they are not required to comply with any legal requirement.

### 3.1.3 The Financial Institution Business Act B.E. 2551

The Financial Institution Business Act B.E. 2551 is established to supervise and regulate the financial institution businesses in Thailand. Financial institution under this Act includes “commercial bank, finance company and credit foncier company.”<sup>283</sup> Only a public limited company licensed by the Minister of Finance with the BOT’s advices is capable to operate as a financial institution under this Act.<sup>284</sup>

Basically, this Act regulates business that “accepts deposits of money or accepts money from the public subject to withdrawal on demand or at the end of a specified period.” Virtual currency is not legal money or legal currency, therefore, conducting business the way that virtual currency service business does with virtual currency is not any kind of financial institution businesses under this Act.

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<sup>282</sup> หนังสือธนาคารแห่งประเทศไทย ที่ ผกง. (23) 129/2556 เรื่อง การประกอบธุรกิจบิตคอยน์ของบริษัท

บิตคอยน์ จำกัด ลงวันที่ 16 ธันวาคม 2556 (BOT’s letter No. ForKorNgor. (23) 129/2556 dated December 16, 2013 Re. Business Operating of the Bitcoin Company Limited)

<sup>283</sup> The Financial Institution Business Act B.E. 2551 sec. 4 [hereinafter *The Financial Institution Business Act*].

<sup>284</sup> The Financial Institution Business Act, *supra* note 283, sec. 9.

### 3.1.4 The Electronic Transaction Act B.E. 2544

The Electronic Transaction Act B.E. 2544 applies to “all civil and commercial transactions performed by using a data message, except the transactions prescribed by a Royal Decree to be excluded from this Act wholly or partly.”<sup>285</sup>

Electronic transaction under this Act means “a transaction in which an electronic means is used in whole or in part.”<sup>286</sup> Service business relating to electronic transaction is allowed under the issuance of the Royal Decree.<sup>287</sup> Currently, the Royal Decree Regulating Electronic Payment Service Business B.E. 2551 is the applicable law for service business relating to electronic transaction.

The objectives of this Royal Decree are “to maintain stability of financial and commercial, to increase credibility and acceptance of electronic data system, to protect public interests, and to enhance electronic payment (E-Payment)<sup>288</sup> usage.” E-Payment service providers<sup>289</sup> under this Royal Decree regulated by the BOT<sup>290</sup> are electronic money (E-Money)<sup>291</sup> service, Credit Card Network<sup>292</sup> service,

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<sup>285</sup> The Electronic Transaction Act B.E. 2544 sec. 3 [hereinafter *The Electronic Transaction Act*].

<sup>286</sup> The Electronic Transaction Act, *supra* note 285, sec. 4.

<sup>287</sup> The Electronic Transaction Act, *supra* note 285, sec. 32.

<sup>288</sup> The Royal Decree, *supra* note 98, sec. 3

“ ‘Electronic Payment’ means the transfer of right to possess money or the transfer of right to withdraw or debit from the depositing account of the customer, opened with the service provider, by electronic means in whole or in part. ”

<sup>289</sup> The Royal Decree, *supra* note 98, sec. 3

“ ‘Service Provider’ means a service provider as prescribed in List A, B or C attached to this Royal Decree ”

<sup>290</sup> The Royal Decree, *supra* note 98, sec. 4

<sup>291</sup> The Royal Decree, *supra* note 98, sec. 3

“ ‘e-Money’ means electronic card issued by the service provider for the service user, whose name may be specified or not specified. The service user shall pay money in advance to the service provider and use such e-Money in the payment of goods, services, expenses or others payment instead of payment in cash and money paid to the service provider shall be recorded in advance. ”

<sup>292</sup> The Royal Decree, *supra* note 98, sec. 3

“ ‘Credit Card Network’ means a network of services for transmitting the information of electronic payment via the credit card of the holder to the service provider who is the card issuer in order to approve each transaction or transmitting the information of collecting money resulting from electronic payment, including the balance striking. ”

EDC<sup>293</sup> service, Transaction Switching<sup>294</sup> service for payment, Clearing<sup>295</sup> service, Settlement<sup>296</sup> service, Payment Service Provider<sup>297</sup> service, and Electronic Payment Service through any device or network. Those service providers can be categorized into three groups,<sup>298</sup> those required to notify their services (list A), those required to register their services (list B), and those required to obtain a license before providing services (list C). Those service providers are required to comply with this Royal Decree and the rules prescribed in the notification of the BOT. If they violate or fail to comply or does an act or omit to act evidencing that it may cause serious damage to payment system of the country, there shall be some sanctions like ordering such service providers to ratify in time limitations or suspending the license or imposing administrative fine or revoking their license empowered by the BOT.<sup>299</sup>

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<sup>293</sup> The Royal Decree, *supra* note 98, sec. 3

“ ‘EDC’ (Electronic Data Capture) means the instruments or tools receiving any information from credit card, debit card, e-Money or other electronic cards, which is subjected to transmitting the information of electronic payment to the service provider who is the card issuer in order to approve a transaction upon the card. ”

<sup>294</sup> The Royal Decree, *supra* note 98, sec. 3

“ ‘Transaction Switching’ means the service of being a center or linkage for transmission of information regarding electronic payment record to the service provider as agree. ”

<sup>295</sup> The Royal Decree, *supra* note 98, sec. 3

“ ‘Clearing’ means the service of transmitting, examining and confirming the information, deriving from the payment instruction, for calculating net clearing position in order to settle the balance of the creditor or the debtor, including the arrangement to complete the settlement process. ”

<sup>296</sup> The Royal Decree, *supra* note 98, sec. 3

“ ‘Settlement’ means the service of payment as previously agreed between the creditor and at least two debtors who expressly intent to pay or collect money. The service provider will debit money from the deposit account or receive payment by other means as agreed and then deposit such money to the account of the creditor or pay back to the creditor by other means for extinction of obligation. ”

<sup>297</sup> The Royal Decree, *supra* note 98, sec. 3

“ ‘Payment Service Provider’ means the service of collecting money by electronic means on behalf of the creditor. ”

<sup>298</sup> The Royal Decree, *supra* note 98, sec. 7 and the List Attached to The Royal Decree.

<sup>299</sup> The Royal Decree, *supra* note 98, Chapter 3 Discontinuing to provide service, Suspension, and License revocation.

E-Money prescribed by this Royal Decree means electronic card which required to be further defined in accordance with the Penal Code.<sup>300</sup> Nonetheless, after such definition has been taken into account, virtual currency is not falling within the scope of electronic card at all. Firstly, it is not a document or other material in any description that issuer having issued to the person entitled to use.<sup>301</sup> The first part of this definition shows that electronic card is a tangible material in any form, while virtual currency is in contrast intangible which the issuer has not been found. Secondly, though virtual currency by its nature, may be found closely to the meaning of data, cipher, account number, any of set numbers of electron or figures,<sup>302</sup> it is not one of those which issuer having issued to the person entitled to use. By contrast, virtual currency like Bitcoin for example, is created and entered into circulation through a process, called mining, that members of the network perform. Finally, virtual currency is not any other thing used in corroboration of the electronic data for showing the relationship between person and electronic data by the object for specifying the owner.<sup>303</sup>

Virtual currency does not fall within any abovementioned meaning of electronic card which means that it cannot be categorized as E-Money.

Furthermore, transactions related to virtual currency like mining or virtual currency transferring between users are not considered as any one of those

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<sup>300</sup> The Royal Decree, *supra* note 98, sec. 3

“ ‘Electronic Card’ means Electronic Card in accordance with the Penal Code. ”

<sup>301</sup> The Penal Code, Section 1(14); “Electronics Card means

(A) any documents or any other materials in any description, that issuer having issued to the person entitled to use, whether the name specified or not the data or cipher noted by applying the ways or electron electricity, electromagnet wave or any other similar ways and applying the ways of letters, figures, ciphers, identify number or symbols either able to be seen or not to be seen by the naked eyes;

(B) data, cipher, account \_ number, any of set numbers of electron or figures which issuer having issued to the person entitled to use by any of documents or materials not to be issued, but there is the way to use in the same manner as (A); or

(C) Anything else to be used in corroboration of the electronic data for showing the relationship between person and electronic data by the object for specifying the owner. ”

<sup>302</sup> *Id.*

<sup>303</sup> *Id.*

electronic payments<sup>304</sup> prescribed by this Royal Decree. Virtual currency is neither money nor able to be stored in any depositing account; virtual currency transferring between users are therefore unable to be considered as transfer of right to possess money or the transfer of right to withdraw or debit from the depositing account of the customer, opened with the service provider, by electronic means in whole or in part, defined by the Royal Decree. Thus, businesses which providing or facilitating virtual currency transactions shall not be regulated as service providers under this law.

In conclusion, though virtual currency may be considered as a new technological financial instrument, it is currently not electronic money and its related transactions are not electronic payments under the abovementioned Royal Decree which unable to be regulated under this existing law.

### **3.1.5 The Securities and Exchange Act B.E. 2535**

Virtual currency is not legal currency in Thailand or any other countries as earlier studied. It is very unlikely to replace traditional legal tender in any country. This writer believes that national central banks or banking regulators in most countries including Thailand are not going to supervise the businesses related to virtual currency any time soon.

In other way, virtual currency has value which can change quickly. People find it an opportunity for investment or speculation like they do with stocks or other securities. Related businesses are facilitating the exchange of virtual currency and Baht which make it easier to make profit or suffer loss. In this writer's opinion, this activity is more likely to be an investment and should be supervised under the securities regulations.

SEA B.E. 2535 empowers the SEC to supervise and develop Thai capital market.<sup>305</sup> The SEC supervises the securities issuance for public offering, the Securities Exchange, intermediaries in the capital market and market professionals.

Basically, securities under SEA B.E. 2535 is the priority needed to be concerned. The issue is definition of securities is specifically defined and virtual

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<sup>304</sup> The Royal Decree, *supra* note 98, sec. 3

“ ‘Electronic Payment’ means the transfer of right to possess money or the transfer of right to withdraw or debit from the depositing account of the customer , opened with the service provider, by electronic means in whole or in part. ”

<sup>305</sup> The SEA B.E. 2535, *supra* note 104, sec. 14.



currency does not fall within any of such definition as studied in chapter 2. Notably, the authority to specify any other instruments as securities belongs to the SEC.

In this part, this writer studies on how selected entities and persons associated in securities industry being regulated under SEA B.E. 2535 in concept.

According to SEA B.E. 2535, the offering of newly issued securities for sale to the public or other persons is required to obtain an approval from the Office of the Securities and Exchange Commission (“SEC office”).<sup>306</sup> The offer for sale of securities shall be subject to the provisions in chapter 3 of the SEA B.E. 2535. Securities businesses must obtain licenses from the Minister of Finance upon recommendation of the SEC.<sup>307</sup> The SEC may or may not require a securities company to have a paid-up registered capital in an amount specified for operation of any particular category of securities business. According to SEA B.E. 2535, Securities businesses include “securities brokerage, securities dealing, investment advisory service, securities underwriting, mutual fund management, private fund management and other businesses relating to securities as specified by the Minister of Finance upon recommendation of the SEC.”<sup>308</sup>

Securities brokerage means “brokering or representing any person in the purchase, sale or exchange of securities in the normal course of business in consideration of a commission, fee or other remuneration therefrom.”<sup>309</sup>

Securities dealing means “a purchase, sale or exchange, outside the Securities Exchange or an over-the-counter center, of securities, for one's own account in the normal course of business.”<sup>310</sup>

The Securities Exchange is only established under SEA B.E. 2535.<sup>311</sup> Any person is prohibited to engage in the securities exchange or similar businesses.<sup>312</sup> The SEC has clarified that securities exchange is “any center or network established to (1) bring the orders for securities of multiple buyers and sellers

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<sup>306</sup> The SEA B.E. 2535, *supra* note 104, sec. 32.

<sup>307</sup> The SEA B.E. 2535, *supra* note 104, sec. 90.

<sup>308</sup> The SEA B.E. 2535, *supra* note 104, sec. 4.

<sup>309</sup> The SEA B.E. 2535, *supra* note 104, sec. 4.

<sup>310</sup> The SEA B.E. 2535, *supra* note 104, sec. 4.

<sup>311</sup> The SEA B.E. 2535, *supra* note 104, sec. 153.

<sup>312</sup> The SEA B.E. 2535, *supra* note 104, sec. 155.



together and (2) use established non-discretionary methods to facilitate securities trading, and the buyers and sellers entering such orders agree to the terms of such methods.”<sup>313</sup>

Supposedly, if virtual currency is specified as securities under SEA B.E. 2535, this writer has an opinion that it would be the next issue whether virtual currency service businesses involve with any form of above securities businesses or function as securities exchange under SEA B.E. 2535.

In this writer’s opinion, virtual currency service business is a new kind of business emerged in the financial technology market. A virtual currency service business may involve with multiple forms of securities activities which is different from traditional securities business and securities exchange. Though virtual currency has the potential to be specified as securities, its related businesses should be differently regulated due to the business functions they serve investors and the development of financial technology today.

### **3.2 General Principle of Contract Law**

This writer has studied and found in 3.1 that virtual currency service business is uncategorized as any specific business under the laws. It cannot be regulated under any specific laws which meant to regulate the conduct of businesses. At this time, a virtual currency service business is only required to comply with the Business Registration Act B.E. 2499 by providing the very general information about its business for registration with the commercial registration office.

In this part, this writer studies the concept of general principle of contract law in order to find how it could apply to the relationship between virtual currency service business and its customers.

The CCC is the main code governs the principle of contract law, however, it does not specifically define the meaning of contract. Basically, contract is one form

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<sup>313</sup> Notification of the Office of the Securities and Exchange Commission No. NorYor. 2/2547 Re: Guideline for Consideration on Undertaking which is deemed to be a Securities Exchange or a Securities Trading Center, notified on September 24th, 2004.

of juristic act.<sup>314</sup> A contract means any bilateral or multilateral juristic act made by a mutual intent of parties which is intended to create, modify or extinguish the legal relationships.<sup>315</sup>

This writer has analyzed in chapter 2 that virtual currency could be property and the subject matter of obligation including contract. Payment for the purchase and sale of virtual currencies in exchange for Baht or other virtual currencies requires a mutual expression of intent by the parties. Necessarily, the requirements for the conclusion of a bilateral contract must met.<sup>316</sup> This writer finds that transactions with virtual currency are subject to contracts law in general. In other words, virtual currency transactions is a reciprocal contract<sup>317</sup> in which one party agrees to transfer virtual currency for payment and another party agrees to pay for the transferred virtual currency. Accordingly, each party of the contract has a duty to perform his obligation. If one of them fails to perform, the other party has the right to refuse to perform his obligation.

Additionally, he has the right to rescind the contract due to the delay of performance<sup>318</sup> or failure to perform in fixed period.<sup>319</sup> After rescinding the contract,

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<sup>314</sup> รองศาสตราจารย์ ดร. ศันันท์กรณ (จำปี) โสทธิพันธ์, คำอธิบายนิติกรรม-สัญญา พร้อมคำอธิบายในส่วนของ พ.ร.บ. ว่าด้วยข้อสัญญาที่ไม่เป็นธรรม พ.ศ. 2540 และกฎหมายใหม่ที่เกี่ยวข้อ 23 (พิมพ์ครั้งที่ 18, 2557) (Sanunkorn Sothibundhu, **Commentaries on Juristic Act - Contracts, the Unfair Contract Terms Act B.E. 2540 and New Relevant Laws 23** (18th ed. 2014))

<sup>315</sup> *Id.* at 285.

<sup>316</sup> Bitcoin Foundation Canada, **Bitcoin and the law: An analytical report on Bitcoin's legal and regulatory framework in Canada** (2014), <http://btcfoundation.ca/wp-content/uploads/2014/07/BITCOIN-AND-THE-LAW.pdf> (last visited Oct 3, 2015).

<sup>317</sup> Thai CCC, *supra* note 125, sec. 369

“A party to a reciprocal contract may refuse to perform his obligation until the other party performs or tenders performance of his obligation. But this does not apply, if the other party's obligation is not yet due.”

<sup>318</sup> Thai CCC, *supra* note 125, sec. 387

“If one part does not perform the obligation, the other party may fix a reasonable period and notify him to perform within that period. If he does not perform within that period, the other party may rescind the contract.”

<sup>319</sup> Thai CCC, *supra* note 125, sec. 388

“If the object of a contract according to its nature or to an intention declared by the parties can be accomplished only by performance at a fixed time or within a fixed period, and such time or period has passed without one of the parties having

the breaching party has to return what he received as performance due to the contract or perform something in order to restore the injured party to his former condition.<sup>320</sup> The injured party also has the right to claim for damages.<sup>321</sup>

For example, if a virtual currency service business agrees to transfer a bitcoin to its customer in exchange for 10,000 Baht at the specific date and time and the customer agrees with such condition, the reciprocal contract is found. Each party of the contract consequently has a duty to perform his obligation. If the customer transfers 10,000 Baht to the virtual currency service business's bank account as method prescribed by the business, but that business fails to transfer a bitcoin to the customer in return without the customer's fault, the customer has the right to rescind the contract. After rescinding the contract, the business has to return what it receives which are the money at the amount of 10,000 Baht and the interest at the rate of seven and half percent per annum which starts from the day the business receives such money in accordance with Section 391 paragraph 1 and 2 and Section 224 of the CCC. In addition, the customer has the right to claim for further damages. In other words, after the business fails to perform its obligation and the customer has to buy a bitcoin from other person instead, if the price increases to 12,000 Baht per a bitcoin, the customer is entitled to claim for the difference at the amount of 2,000 Baht with the additional interest in accordance with Section 391 paragraph 4 and Section 224 of the CCC.

Merely, such relationship is a personal right between parties. If one party fails to perform his obligation, the other party may only be entitled to claim the right by bring a case to the court for compulsory performance. The injured party is unable to enforce the right by himself.<sup>322</sup>

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performed, the other party may rescind the contract without the notification mentioned in the foregoing section.”

<sup>320</sup> Thai CCC, *supra* note 125, sec. 391 para. 1

“If one party has exercised his right of rescission, each party is bound to restore the other to his former condition; but the rights of third persons cannot be impaired.”

<sup>321</sup> Thai CCC, *supra* note 125, sec. 391 para. 4

“The exercise of the right of rescission does not affect a claim for damages.”

<sup>322</sup> Sunthorn Manisawat, *supra* note 126 at 84-85.

### 3.3 Other Relevant Laws

#### 3.3.1 The Consumer Protection Act B.E. 2522

The Consumer Protection Act B.E. 2522 is a law protecting the right of consumer in general. Business man and consumer regulated by this Act are specifically defined. According to the Act, consumer has “the right to receive correct and sufficient information and description as to the quality of goods or services, the right to enjoy freedom in the choice of goods or service, the right to expect safety in the use of goods or services, the right to receive a fair contract and the right to have the injury considered and compensated.”<sup>323</sup> Only matter which is not specifically provided by other laws shall be subject to the provisions of this Act.<sup>324</sup> The Consumer Protection Act B.E. 2522 is not established to regulate the conducting of any specific business. It only puts some duties on business man in specific matters including advertising, labeling, contract and unsafe products. In this writer’s opinion, most provisions do not prevent business man from misconduct but merely help resolve problems.

This Act empowers the Consumer Protection Board, for example, “to consider the complaints from the consumers who suffer hardship or injury resulting from the acts of the business man, to settle or compromise in any dispute between business man and consumer before court proceeding and to institute legal proceedings regarding the infringement of the consumer’s right.”

In order to find whether the relationship between virtual currency service business and its customers can be applied to the Consumer Protection Act B.E. 2522 or not, the first issue needed to be clarified is the definitions of business man and consumer under this Act.

Business man under this Act means “a seller, manufacturer or importer of goods sale, or purchaser of goods for re-sale, person who renders services, and includes a person who operates the advertising business.”<sup>325</sup>

Consumer means “a person who buys or obtains services from a business man or a person who has been offered or invited by a business man to

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<sup>323</sup> The Consumer Protection Act, *supra* note 113, sec. 4.

<sup>324</sup> The Consumer Protection Act, *supra* note 113, sec. 21.

<sup>325</sup> The Consumer Protection Act, *supra* note 113, sec. 3.

purchase goods or obtain services and includes a person who duly uses goods or obtains services from a business man even that person does not pay the remuneration.”<sup>326</sup>

This writer has analyzed in 2.1.4.1(5) that it is still arguable whether virtual currency like Bitcoin can be goods under this Act. Consequently, when a virtual currency service business offers Bitcoin in exchange for Baht, it may be a seller or it may be not. In contrast, when such virtual currency service business offers Baht in exchange for Bitcoin, it does not offer goods because Baht is not goods but legal tender. Anyway, it is arguable if that is a purchase of Bitcoin for re-sale or not.

This writer finds that it is more likely to say that virtual currency service business is providing service. Service under this Act means “an undertaking to accomplish a work, grant of any right or permission to use or conferring benefit in any property or business, for which monetary consideration or other value is demanded, excluding hire of services under the labour laws.”<sup>327</sup> However, it may still be questionable if service that virtual currency service business providing fit to such definition undoubtedly. In this writer’s opinion, virtual currency service business is providing exchange service for virtual currencies and Baht for monetary consideration. According to the definition, it may be an undertaking to accomplish an exchange or conferring benefit in any property.

It would be clearer if the authority responsible for this issue, the Office of the Consumer Protection Board, officially presents the stance towards this kind of business. Up to now, such stance has not been found yet. Therefore, it is still unclear if virtual currency service business can be regulated under this Act or not.

### **3.3.2 The Anti-Money Laundering Act B.E. 2542**

The Anti-Money Laundering Act B.E. 2542 is not established to regulate the conducting of any business in Thailand. However, this thesis has earlier studied and found that virtual currency is being used in money laundering and virtual currency service business is potentially supporting such activity, this writer finds it is important to study about this law as well.

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<sup>326</sup> The Consumer Protection Act, *supra* note 113, sec. 3.

<sup>327</sup> The Consumer Protection Act, *supra* note 113, sec. 3.

The Act imposes duties on financial institutions to report to the AMLO when a transaction is made as prescribed by the Act,<sup>328</sup> to establish customer acceptance policy and risk management possibly relating to customer's money laundering and to verify and review customer identification.<sup>329</sup> This procedure means to help prevent money laundering and detecting the commit an offence of money laundering. However, virtual currency service business is not any of the financial institutions under this Act, those duties are not in concern of them.

### 3.3.3 The Computer Crime Act B.E.2550

The Computer Crime Act B.E.2550 is not established to regulate the conducting of any business in Thailand. But as this thesis has earlier studied and found that virtual currency exists electronically, and virtual currency transfer and virtual currency service business may be attacked by the computer criminal or cyber-criminal. The prominent concern in this thesis is that virtual currency service business may be found as a great place supporting such activity. This writer finds it is important to study about this law as well.

This Act sets out “the offences against computer crime covering hacking, unauthorized access, distributed denial of service, viruses/worms, website defacement, Internet fraud, identity theft, forgery, blackmail, gambling and pornography.” The authority of competent officials and criminal procedures are also stipulated. The authority who is in charge and control of this Act is the Minister of Information and Communication Technology. This Act particularly empowers the Minister of Information and Communication Technology to issue Ministerial Regulations for the execution of this Act.<sup>330</sup>

Virtual currency is also included in the meaning of computer data under this Act. If virtual currency in the possession of virtual currency service business is hacked, unauthorized accessed, or stolen, it can be considered that the offence against computer crime is committed. However, this Act is in practical used to punish the offender who commits the crime, it is not designed to prevent people

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<sup>328</sup> The Anti-Money Laundering Act B.E. 2542 sec. 13 [hereinafter *The AMLA*].

<sup>329</sup> The AMLA, *supra* note 328, sec. 20/1.

<sup>330</sup> The Computer Crime Act B.E.2550 sec. 4.

from committing the crime. The standard preventive system required specific business like virtual currency service business to adopt should be established particularly.





## CHAPTER 4

### VIRTUAL CURRENCY SERVICE BUSINESSES REGULATION IN UNITED STATES OF AMERICA

#### 4.1 Applicability of Current Laws to Virtual Currency Service Businesses in United States of America

##### 4.1.1 Federal Regulations

##### 4.1.1.1 Money Regulations

##### (1) The Bank Secrecy Act

##### a. Background

The Bank Secrecy Act (“BSA”) is commonly used to refer to “the Currency and Foreign Transactions Reporting Act of 1970.”<sup>331</sup> US financial institutions are obliged to assist US government agencies to carefully inspect and prevent money laundering in pursuant to BSA. BSA is occasionally referred to as an “anti-money laundering” law (“AML”) or jointly as “BSA/AML”.<sup>332</sup>

Basically, BSA Regulations<sup>333</sup> which regulating money services business (“MSB”)<sup>334</sup> requires “any business engaged in money transmission or money transmitter in US to be registered,<sup>335</sup> conduct a comprehensive risk assessment of its exposure to money laundering, implement an AML Program based on such risk assessment, and comply with the recordkeeping, reporting and transaction monitoring obligations.” Particularly, financial institutions are obliged to “keep records of cash purchases of negotiable instruments, to file reports of cash transactions exceeding \$10,000 (daily aggregate amount) and to report suspicious

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<sup>331</sup> Fincen.gov, **Bank Secrecy Act**, [http://www.fincen.gov/statutes\\_regs/bsa/](http://www.fincen.gov/statutes_regs/bsa/) (last visited May 4, 2015).

<sup>332</sup> *Id.*

<sup>333</sup> 76 FR 43585 (July 21, 2011), Bank Secrecy Act Regulations – Definitions and Other Regulations Relating to Money Services Businesses.

<sup>334</sup> 31 C.F.R. 1010.100 (ff)(1-7) *available at* <http://www.ecfr.gov/cgi-bin/text-idx?c=ecfr&SID=5636207e673ff7cecf7c987df50e99f3&rgn=div8&view=text&node=31:3.1.6.1.2.1.3.1&idno=31/>.

<sup>335</sup> 31 C.F.R. 1022.380 *available at* <http://www.ecfr.gov/cgi-bin/text-idx?c=ecfr&sid=d3fa52ff9a4fe55018e5bb710ef9a98e&rgn=div5&view=text&node=31:3.1.6.1.6&idno=31#31:3.1.6.1.6.3.5.9>.

activity that might signify money laundering, tax evasion, or other criminal activities.”

Financial Crimes Enforcement Network (“FinCEN”) is a bureau within the Treasury Department established by the US Code.<sup>336</sup> FinCEN was created “to support federal, state, local, and international law enforcement by analyzing the information required under the BSA.”<sup>337</sup> FinCEN’s mission is “to safeguard the financial system from illicit use and combat money laundering and promote national security through the collection, analysis, and dissemination of financial intelligence and strategic use of financial authorities.”<sup>338</sup>

#### **b. BSA and Virtual Currency Service Businesses**

Previously, many questions concerning how FinCEN characterizes certain activities involving virtual currencies under the BSA and FinCEN regulations were raising.

On March 18, 2013, the guidance on the application of FinCEN’s regulations to transactions in virtual currencies was issued by FinCEN.<sup>339</sup> According to the guidance, virtual currency is explained as “a medium of exchange that operates like a real currency in some environments, but does not have all the attributes of real currency nor legal tender status in any jurisdiction.”

FinCEN uses the terms “exchanger,” “administrator,” and “user” to refer to “the participants in generic virtual currency arrangements.” An administrator or exchanger of convertible virtual currencies that “(1) accepts and transmits a convertible virtual currency or (2) buys or sells convertible virtual currency in exchange for currency of legal tender or another convertible virtual currency for any reason (including when intermediating between a user and a seller of goods or services the user is purchasing on the user’s behalf) is a money transmitter under FinCEN's regulations, unless a limitation to or exemption from the definition

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<sup>336</sup> Title 31, Subtitle 1 General, Chapter 3 - Department of the Treasury, Subchapter 1 Organization, Sec. 310 Financial Crimes Enforcement Network.

<sup>337</sup> Fincen.gov, **Law Enforcement Overview**, [http://www.fincen.gov/law\\_enforcement/](http://www.fincen.gov/law_enforcement/) (last visited May 3, 2015).

<sup>338</sup> Fincen.gov, **Welcome To FinCEN.gov**, <http://www.fincen.gov/> (last visited May 3, 2015).

<sup>339</sup> The Financial Crimes Enforcement Network, *supra* note 35.

applies to the person.”<sup>340</sup> A user who “obtains convertible virtual currency and uses it to purchase real or virtual goods or services” does not constitute an MSB under FinCEN’s regulations.<sup>341</sup>

Furthermore, FinCEN has made few responses to the questions of some businesses about their possible status as an MSB under the BSA. It was found that a Bitcoin mining company would be “a user of Bitcoin,” and not “an MSB.” FinCEN has explained that Bitcoin mining operation mines and uses Bitcoin only to make payments or for its own investment purposes.<sup>342</sup> The company which provides “production and distribution of contemplated software” is not “an MSB subject to BSA regulation.”<sup>343</sup> The company which provides “services to others (including investment-related or brokerage services) that involved the accepting, transmitting, exchanging of convertible virtual currency” is likely to become a money transmitter. However, further analysis would be essential to determine clearly.<sup>344</sup> FinCEN finds the company that provides “virtual currency trading platform” would also be a money transmitter.<sup>345</sup> In addition, the company that provides “virtual currency payment system for merchants who wish to receive customer payments in Bitcoin” would be a money transmitter as well.<sup>346</sup>

### c. Consequences of Non-Compliance with BSA

Virtual currency business found as an MSB under BSA regulation is required “to register as a money transmitter and to comply with anti-

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<sup>340</sup> *Id.*

<sup>341</sup> *Id.*

<sup>342</sup> The Financial Crimes Enforcement Network, *supra* note 196.

<sup>343</sup> The Financial Crimes Enforcement Network, **FIN-2014-R002: Application of FinCEN’s Regulations to Virtual Currency Software Development and Certain Investment Activity** (2014), [http://www.fincen.gov/news\\_room/rp/rulings/pdf/FIN-2014-R002.pdf](http://www.fincen.gov/news_room/rp/rulings/pdf/FIN-2014-R002.pdf) (last visited May 3, 2015).

<sup>344</sup> *Id.*

<sup>345</sup> The Financial Crimes Enforcement Network, **FIN-2014-R011: Request for Administrative Ruling on the Application of FinCEN’s Regulations to a Virtual Currency Trading Platform** (2014), [http://www.fincen.gov/news\\_room/rp/rulings/pdf/FIN-2014-R011.pdf](http://www.fincen.gov/news_room/rp/rulings/pdf/FIN-2014-R011.pdf) (last visited May 3, 2015).

<sup>346</sup> The Financial Crimes Enforcement Network, **FIN-2014-R012: Request for Administrative Ruling on the Application of FinCEN’s Regulations to a Virtual Currency Payment System** (2014), [http://www.fincen.gov/news\\_room/rp/rulings/html/FIN-2014-R012.html](http://www.fincen.gov/news_room/rp/rulings/html/FIN-2014-R012.html) (last visited May 3, 2015).

money laundering rules, risk management, risk mitigation, recordkeeping, reporting, and transaction monitoring requirements corresponding to such status.”

US law imposes both civil and criminal penalties for failing to comply with those requirements.<sup>347</sup> “Criminal penalties on operation of unlicensed money transmitting businesses” shall be fined or imprisoned not more than 5 years, or both.<sup>348</sup>

## **(2) The Electronic Fund Transfer Act**

The Electronic Fund Transfer Act of 1978 (“EFTA”) is intended “to protect individual consumers engaging in electronic fund transfers (“EFTs”) and remittance transfers.”<sup>349</sup> Financial institutions engaging in or facilitating electronic fund transfers are subject to the EFTA. According to the fact that virtual currency exists electronically, transfers between users are performed electronically<sup>350</sup> and virtual currency service businesses are facilitating the transfers, the EFTA may possibly be examined then.

The definitions of EFT and financial institution are important for analyzing on the potentiality of applicability. EFT is defined under the EFTA as “a transfer of funds initiated through an electronic terminal, telephone, computer (including online banking) or magnetic tape for the purpose of ordering, instructing, or authorizing a financial institution to debit or credit a consumer’s account.”<sup>351</sup>

A financial institution is defined as “a State or National bank, a State or Federal savings and loan association, a mutual savings bank, a State or Federal credit union, or any other person who, directly or indirectly, holds an account belonging to a consumer.”<sup>352</sup>

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<sup>347</sup> View &arr;, I Deal With Virtual Currency. Do I Need To Register as an MSB With FinCEN; and What Happens If I Don't? - Modern Payment Systems Modern Payment Systems (2013), <http://www.epaylaw.com/2013/05/08/i-deal-with-virtual-currency-do-i-need-to-register-with-fincen-and-what-happens-if-i-dont/> (last visited May 4, 2015).

<sup>348</sup> 18 U.S.C. 1960 *available at* <https://www.law.cornell.edu/uscode/text/18/1960>.

<sup>349</sup> 15 USC 1693 et seq.

<sup>350</sup> Matthew Kien-Meng Ly, *supra* note 137.

<sup>351</sup> 15 U.S.C. § 1693(a)(6)

<sup>352</sup> 15 U.S.C. § 1693a.

If transfers of virtual currency can be found as EFTs and virtual currency service businesses which provide the transfer services like wallet providers<sup>353</sup> found as financial institutions, the EFTA will be applied to those virtual currency service businesses as well.

However, the official guidelines or interpretations concerning this issue by the authority responsible for regulating electronic payments under the EFTA; the Federal Reserve System,<sup>354</sup> have not been found yet.

#### 4.1.1.2 Securities Regulations

It has been learnt in chapter 2 that virtual currency like Bitcoin is found as a security under the Securities Act of 1933 according to the Texas court decision on September 18, 2014. Defining Bitcoin as a security allows US SEC to regulate this growing industry. Dan Stroh, an associate member of the University of Cincinnati Law Review, stated that the regulation should be based on proper disclosure requirement and should protect the interests of individual investors in previously unregulated markets.<sup>355</sup>

After the court, any further guidance on how US SEC specifically regulating business related to virtual currency has not been found yet. At this point, this writer studies on how selected entities and persons associated in securities industry being regulated under US law in order to find the potential to apply to existing virtual currency related business.

According to the Securities Act of 1933, “a registration statement is required to be filed for offers to sell or offers to buy securities.”<sup>356</sup> “Registration entails the publication of detailed information about the firm, its management, the intended uses for the funds raised through the sale of securities, and the risks to investors.”<sup>357</sup> The Act prohibits any person who directly or indirectly engaging in the unregistered offer or sale of securities in interstate commerce.<sup>358</sup>

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<sup>353</sup> The letter of the American Bankers Association (ABA) to the Emerging Payments Task Force Conference of State Bank Supervisors February 16, 2015.

<sup>354</sup> 15 U.S.C. § 1693 (2006).

<sup>355</sup> The UC Law Review Blog, *supra* note 143.

<sup>356</sup> The Securities Act of 1933 sec. 5(c) [hereinafter *The Securities Act*].

<sup>357</sup> The Securities Act, *supra* note 356, sec. 6(a).

<sup>358</sup> The Securities Act, *supra* note 356, sec. 5(a).

Accordingly, business which offers to sell or buy Bitcoin may be required to file the registration statement.

Under the Securities Exchange Act of 1934, securities exchanges, brokers and dealers must register with US SEC.<sup>359</sup>

Exchange means “any organization, association, or group of persons, whether incorporated or unincorporated, which constitutes, maintains, or provides a market place or facilities for bringing together purchasers and sellers of securities or for otherwise performing with respect to securities the functions commonly performed by a stock exchange as that term is generally understood...”<sup>360</sup> In other words, an exchange “(1) brings together the orders for securities of multiple buyers and sellers; and (2) uses established, non-discretionary methods (whether by providing a trading facility or by setting rules) under which such orders interact with each other, and the buyers and sellers entering such orders agree to the terms of the trade.”<sup>361</sup>

Today, many Bitcoin website providers utilize their sites as places bringing Bitcoin buyers and sellers together, and leave those parties negotiating the price and amount of Bitcoin by themselves. Those providers may not be found as securities exchanges according to the fact that orders are not in their knowledge. Likely, they could be securities markets where only bringing buyers and sellers together. Notwithstanding such providers, there are many website providers which not only utilize their sites as places bringing Bitcoin buyers and sellers together, but also matching those party’s orders, upon the service fees. This may be arguable whether they use non-discretionary system to match and execute orders, and whether they are securities exchanges.

Broker means “a person engaged in the business of effecting transactions in securities for the account of others.”<sup>362</sup> A person is “engaged in the business of effecting securities transactions” if he or she “regularly participates in

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<sup>359</sup> James Hamilton, **Elements of Federal Securities Law** (1 ed. 2007), <http://www.business.cch.com/securitieslaw/news/10-25-07a.pdf> (last visited Oct 3, 2015).

<sup>360</sup> The Securities Exchange Act of 1934 sec. 3(a)(1) [hereinafter *The Securities Exchange Act*].

<sup>361</sup> The Securities Exchange Act, *supra* note 360, Rule 3b-16.

<sup>362</sup> The Securities Exchange Act, *supra* note 360, sec. 3(a)(4).



securities transactions at key points in the chain of distribution.”<sup>363</sup> Such participation “includes, among other activities, assisting an issuer to structure prospective securities transactions, helping an issuer to identify potential purchasers of securities, and soliciting securities transactions.”<sup>364</sup>

Many Bitcoin website providers utilize their sites to solicit Bitcoin buyers and sellers to open accounts, trade Bitcoin and exchange Bitcoin to legal currency by advertising on their websites and other websites dedicated to virtual currency. As a result of these solicitation efforts, those providers may be required to register with US SEC as a broker.

Dealer means “any person engaged in the business of buying and selling securities for such person’s own account through a broker or otherwise.”<sup>365</sup> Many Bitcoin website providers utilize their sites as market places not only to facilitate Bitcoin buyers and sellers, but also offer to sell or buy Bitcoin for their own accounts. Accordingly, those providers may be required to register with US SEC as a dealer.

As described above, a virtual currency related business may be found as any single type of existing securities business and required to comply with US securities regulations. However, a virtual currency related business could possibly provide multiple forms of services in connection with security like Bitcoin. A part of its business may likely be an exchange. But if the orders of buyers and sellers cannot match and it decides to buy or sell Bitcoin for customers in order to execute those orders, that is where it may be found as a broker or dealer. Moreover, if such business actively offers to sell or buy Bitcoin, the issue is whether it is an offer to sell or offer to buy securities which required to file the registration statement or not.

In this writer’s opinion, it is acceptable that Bitcoin is found as a security according to its functions and how investors utilize it. But it may be arguable whether virtual currency related businesses properly and unquestionably fit

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<sup>363</sup> See *Massachusetts Fin. Servs., Inc. v. Sec. Investor Prot. Corp.*, 411 F. Supp. 411, 415 (D. Mass. 1976), *aff’d*, 545 F.2d 754 (1st Cir. 1976).

<sup>364</sup> See *Strengthening the Commission’s Requirements Regarding Auditor Independence*, Exch. Act Rel. No. 34-47265 (Jan. 28, 2003), 68 FR 6006, 6014-15 n.82 (Feb. 5, 2003) (adopting release).

<sup>365</sup> The Securities Exchange Act, *supra* note 360, sec. 3(a)(5).



to the existing securities businesses regulations. Or, if possible, they should be differently regulated due to the business functions they serve investors and the development of financial technology today.

#### 4.1.2 State Regulations

##### 4.1.2.1 Money Regulations

Generally, the statutory provisions utilized by states are based on the Uniform Money Services Act, adopted by the National Commission on Uniform State Laws.<sup>366</sup> Presently, existing state laws basically require the money transmitters operating within their territories to be licensed and regulated similarly to the principles of BSA studied earlier. If violations are found, enforcement measures used by state authorities include “a letter of understanding or consent order, acknowledging the violation and setting forth a corrective plan; temporary or permanent cease and desist orders (potentially limiting an entity’s ability to operate); civil money penalties; and the revocation of the entity’s license.”<sup>367</sup>

Normally, FinCEN’s rule-making and interpretations have no practical effect on State laws.<sup>368</sup> However, after FinCEN released the virtual currency rulings studied in 3.1.1.1, some state regulators like those in Washington, Texas, Kansas and North Carolina have issued guidance following the steps of FinCEN<sup>369</sup> explaining that certain types of virtual currency activities constitute money transmission for their state-law purposes.<sup>370</sup>

State money transmitter regulations generally focus on AML to help prevent the use of money transmitters in financing illicit activities, and

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<sup>366</sup> LLC Copyright 2008 Highpoint Solutions, **Law Firm Of Pepper Hamilton LLP | Virtual Currency, Real Risks Pepperlaw.com** (2015), [http://www.pepperlaw.com/publications\\_update.aspx?ArticleKey=3125](http://www.pepperlaw.com/publications_update.aspx?ArticleKey=3125) (last visited May 4, 2015).

<sup>367</sup> *Id.*

<sup>368</sup> The Bitcoin Foundation, **Today, we are all money transmitters... (no, really!)** (2013), <http://blog.bitcoinfoundation.org/today-we-are-all-money-transmitters-no-really/> (last visited May 4, 2015).

<sup>369</sup> Study Committee on Alternative and Mobile Payments Proposed Agenda for First Conference Call on September 22, 2014, <http://www.uniformlaws.org/shared/docs/Alternative%20and%20Mobile%20Payments/AMPS%20Report%20092214.pdf> (last visited May 4, 2015).

<sup>370</sup> Theclearinghouse.org, (2015), <https://www.theclearinghouse.org/publications/2014/banking-perspective-q32014/regulating-bitcoin-practical-approaches-for-virtual-currencies#footnote-96856-13> (last visited May 4, 2015).

consumer protection to protect companies and their customers from operational, monetary and fraud risk, but are not well-suited for virtual currency business regulation.

Some state regulators like those in New York and California<sup>371</sup> are also aware of their existing laws licensing and regulating money transmitters, but they alternatively put their efforts to propose new specific regulations for virtual currency business which will be further studied in this chapter.

#### 4.1.2.2 Securities Regulations

State laws that impose standards for offering and selling securities are known as “Blue sky laws.” Blue sky laws antedated by more than twenty years the federal securities laws.<sup>372</sup> Such laws aim to “protect individuals from fraudulent or overly speculative investments.”<sup>373</sup> As well as the fundamentals of the federal laws, Blue sky laws are mainly based on “a disclosure-driven basis, and mandate that companies disclose information accurately that will help investors make informed decisions.”<sup>374</sup>

“Securities offered or sold within the state” must be registered in pursuant to the Blue sky laws. “Issuers selling their own securities, brokerage firms and individual brokers” must be registered with and licensed by state’s securities agency. Brokers may be required to obtain additional certifications in some states.<sup>375</sup>

In addition to above requirement, Blue sky laws have antifraud provisions that “create liability for any fraudulent statements or failure to disclose information as required.” Investors in each states may be differently entitled to claim for remedies or bring private cases to courts. Generally, rescission of the

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<sup>371</sup> [leginfo.legislature.ca.gov](http://leginfo.legislature.ca.gov), **Bill Analysis**, <http://leginfo.legislature.ca.gov/faces/billAnalysisClient.xhtml> (last visited Apr 5, 2015).

<sup>372</sup> Russell A. Smith, *The Relation of Federal and State Securities Laws*, 4 *Law and Contemporary Problems* 241 (1937).

<sup>373</sup> [Law.cornell.edu](http://www.law.cornell.edu), **Blue sky law | Wex Legal Dictionary / Encyclopedia | LII / Legal Information Institute**, [https://www.law.cornell.edu/wex/blue\\_sky\\_law](https://www.law.cornell.edu/wex/blue_sky_law) (last visited Oct 3, 2015).

<sup>374</sup> *Id.*

<sup>375</sup> *Id.*

transactions, forcing the seller to give up profits, or other measures of damages are included.<sup>376</sup>

Nevertheless, when the companies or brokerage firms want to sell securities in multiple states, Blue sky laws become conditions that make it harder for companies to comply with each state law. Blue sky laws was found duplicating federal law. As a result, legislation was established by Congress to solve the problems. State regulators now have restricted authority to register and review securities. Section 15(h) of the Securities Exchange Act of 1934 was amended by the National Securities Markets Improvement Act of 1996.

Currently, certain aspects of the regulation of broker-dealers, such as record-keeping, financial standards and operating requirements are supervised by federal law. In addition, the amended Securities Act of 1933 resulting that state registration laws do not apply to particular types of securities anymore. Nevertheless, securities offers and sales are still required to be registered. Also, certain market participants are subject to registrations in pursuant to a state's Blue sky laws. Available, state fraud laws are anyway provided for individual investors to take legal action against fraudsters.<sup>377</sup>

#### **4.2 Regulatory Developments Related to Virtual Currency Service Businesses in United States of America**

According to the previous part, virtual currency falls within the scope of US securities regulations and virtual currency service businesses are likely required to comply with US existing money transmission rules and securities regulations. Even so, US is aware of the development of new FinTech. Virtual currency is unlike anything people have seen before. Lawskey, the Superintendent of NYDFS, commented that “state money transmission rules are outdated and clearly inappropriate for this new FinTech.”<sup>378</sup> “Attempting to force novel technologies and business models into existing regulatory boxes may be simple as it is the way it has always been done.” But it may not be a sensible approach. Regulators should not

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<sup>376</sup> *Id.*

<sup>377</sup> *Id.*

<sup>378</sup> Dfs.ny.gov, *supra* note 18.

simply ban or dismiss technology that they find unfamiliar. In contrast, regulators should be more creative and go outside their comfort zones.<sup>379</sup>

US regulators instead develop the new regulations, both model and state levels, to ensure they put in place guardrails that protect consumers and root out illicit activity without stifling beneficial innovation. The regulatory developments can be explained as follows.

#### 4.2.1 Model Laws

##### 4.2.1.1 Background

The Conference of State Bank Supervisors (“CSBS”) is the “nationwide organization of banking regulators from all 50 states in US, the District of Columbia, Guam, Puerto Rico, and US. Virgin Islands.”<sup>380</sup> State banking regulators supervise “several state-chartered financial institutions and also regulate a variety of non-bank financial services providers.” To develop regulatory policy as well as coordinate supervision of their regulated entities, CSBS has provided state regulators a national forum. The training for state banking and financial regulators are also set by CSBS. This organization also represents itself on behalf of the members before Congress and the federal financial regulatory agencies.<sup>381</sup>

CSBS realizes that many payment innovations including virtual currency increasingly attract more attention. CSBS has engaged with federal and state supervisors, industry participants along with relevant stakeholders, it finally concluded that “activities involving third party control of virtual currency, including for the purposes of transmitting, exchanging, holding, or otherwise controlling virtual currency, should be subject to state licensure and supervision.”<sup>382</sup> CSBS determined that those certain activities raise concerns in the areas of consumer protection,

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<sup>379</sup> *Id.*

<sup>380</sup> Csbs.org, **State Regulators Propose Model Regulatory Framework for Virtual Currency Activities** (2015), <http://www.csbs.org/news/press-releases/pr2014/Pages/pr-121614.aspx> (last visited May 1, 2015).

<sup>381</sup> The Conference of State Bank Supervisors, **Model State Consumer and Investor Guidance on Virtual Currency April 23, 2014** (2014), <http://www.csbs.org/legislative/testimony/Documents/ModelConsumerGuidance--Virtual%20Currencies.pdf> (last visited May 1, 2015).

<sup>382</sup> See CSBS Policy Statement on State Virtual Currency Regulation. *Available at* <http://www.csbs.org/regulatory/ep/Documents/CSBS%20Policy%20on%20State%20Virtual%20Currency%20Regulation%20--%20Dec.%2016%202014.pdf>.

marketplace stability, and law enforcement. Accordingly, licensing and regulations function as a mechanism for protecting consumers, ensuring system stability, safeguarding market development, and assisting law enforcement.<sup>383</sup>

On December 16, 2014, CSBS developed “the Draft Model Regulatory Framework (“Draft Framework”)<sup>384</sup> for state virtual currency regulatory regimes” to support the CSBS Policy on State Regulation of Virtual Currency and to promote consistent state regulation of virtual currency activities. CSBS also launched a list of questions for public comment attached with the Draft Framework. After the comment period ended on February 16, 2015, substantive comments were received from 20 organizations including virtual currency service providers, virtual currency trade groups, traditional financial services trade groups, consumer groups, a bank, a law firm, and a state banking regulator.<sup>385</sup>

Accordingly, CSBS has finalized the Draft Framework as “the CSBS Model Regulatory Framework for State Regulation of Certain Virtual Currency Activities” (“Model Framework”). The Model Framework was issued on September 15, 2015 to assist those states seeking to develop and implement state regulatory regimes for virtual currency activities.<sup>386</sup>

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<sup>383</sup> The Conference of State Bank Supervisors, **STATE REGULATORY REQUIREMENTS FOR VIRTUAL CURRENCY ACTIVITIES CSBS MODEL REGULATORY FRAMEWORK September 15, 2015** (2015), [https://www.csbs.org/regulatory/ep/Documents/CSBS-Model-Regulatory-Framework\(September%2015%202015\).pdf](https://www.csbs.org/regulatory/ep/Documents/CSBS-Model-Regulatory-Framework(September%2015%202015).pdf) (last visited Sep 29, 2015).

<sup>384</sup> The Conference of State Bank Supervisors, **STATE REGULATORY REQUIREMENTS FOR VIRTUAL CURRENCY ACTIVITIES CSBS DRAFT MODEL REGULATORY FRAMEWORK AND REQUEST FOR PUBLIC COMMENT December 16, 2014** (2014), <http://www.csbs.org/regulatory/ep/Documents/CSBS%20Draft%20Model%20Regulatory%20Framework%20for%20Virtual%20Currency%20Proposal%20--%20Dec.%2016%202014.pdf> (last visited May 1, 2015).

<sup>385</sup> The Conference of State Bank Supervisors, *supra* note 381.

<sup>386</sup> Csbs.org, **Model Regulatory Framework** (2015), <https://www.csbs.org/regulatory/ep/pages/framework.aspx> (last visited Oct 3, 2015).

#### 4.2.1.2 Substance of CSBS Model Regulatory Framework for State Regulation of Certain Virtual Currency Activities

The Model Framework appears to be a guideline for the state regulators to develop their financial regulatory regimes applying to virtual currency activities to provide licensing requirements for entities engaged in virtual currency activities and robust licensing systems. The components of a model licensing regime have widely been outlined. This writer finds that the Model Framework does not significantly provide particular details on licensing procedures and requirements.<sup>387</sup>

Firstly, the Model Framework defines virtual currency as “a digital representation of value used as a medium of exchange, a unit of account, or a store of value, but does not have legal tender status as recognized by the US Government.”<sup>388</sup> This Model Framework covers “entities engaged in certain virtual currency activities including transmitting, exchanging, holding, or otherwise controlling virtual currency.”<sup>389</sup> However, a few activities exempted from this Model Framework requirement are “merchants and consumers who use virtual currencies solely for the purchase or sale of goods or services, activities that are not financial in nature but utilize technologies similar to those used by digital currency, activities involving units of value that are issued in affinity or rewards programs and that cannot be redeemed for either real or virtual currencies, and activities involving units of value that are used solely within online gaming platforms.”<sup>390</sup>

According to the Model Framework, the CSBS recommends nine key issues that state financial regulatory regimes applying to virtual currency activities should be included.<sup>391</sup>

Licensing requirements for entities engaged in virtual currency activities must include credentialing of business entity owners, directors, and key personnel, details of the business entity’s business plan and details on the banking

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<sup>387</sup> Obrea O. Poindexter, Jeremy R. Mandell & James C.H. Nguyen, **State Virtual Currency Regulatory Developments** (1 ed. 2015), <http://www.mofo.com/~media/Files/ClientAlert/2015/02/150210VirtualCurrencyRegulatory.pdf> (last visited May 3, 2015).

<sup>388</sup> Csbs.org, *supra* note 380.

<sup>389</sup> *Id.*

<sup>390</sup> *Id.*

<sup>391</sup> The Conference of State Bank Supervisors, *supra* note 381.



arrangements of the business entity. State regulators should utilize a robust licensing system that enables states to share licensing and enforcement data in real time. State regulatory requirements for licensed virtual currency companies should include conditions mean to show sufficient financial strength to maintain sound operations and to protect consumers by the companies, for example, net worth or capital requirements, permissible investment reserves, and policies, procedures, and documentation for disaster recovery and emergency preparedness plans.

Consumer protection requirements include policies and documentation, actual amount of virtual currency in trust, receipt for consumers, risk disclosures, insurance coverage and other licensing information disclosures. Cyber security requirements include policies and procedures, customer notification and reporting requirements, and cyber security audit requirements where necessary.

Furthermore, legal requirements are not only to comply with federal and state laws in general, but also to implement and comply with applicable federal BSA/AML laws. Books and records should be accessed by regulatory authorities. The form, format and detail of books and records can be determined by the state regulators.

CSBS also recommends state regulators to facilitate and support regulatory cooperation and information sharing with other state and federal regulators. Investigative subpoena authority is additionally suggested. Moreover, authority to initiate enforcement actions includes formal or informal actions, removal of officers and directors, impose civil money penalties, authority to take control and authority to appoint a receiver.

The licensure framework approach is being adopted by New York and California, and is under discussion by other states like New Jersey.

#### **4.2.1.3 Potential of Risks Mitigating**

The CSBS is taking a licensing approach to regulate virtual currency service businesses which this writer finds it as a positive step in ensuring that the risks posed to consumers and payment system integrity are addressed. Moreover, a uniform national standard like the Model Framework which can be



adopted by states will help additional states implement such measures as well as ensure that regulations do not differ greatly state-by-state.<sup>392</sup>

This writer agrees that state-based licensing is a proper step that will keep virtual currency service businesses in sight of the state authorities. The regulatory regimes applying to virtual currency service businesses that CSBS recommends state regulators to include i.e. financial strength and stability, consumer protection, cyber security, compliance with BSA/AML, and books and records are much likely to help mitigate virtual currency service businesses supporting illegitimate activities like black market trade, money laundering, fraud and cyber-crime.

However, this will be challenging for state regulators to implement in practice. The Model Framework may set all detailed requirements as recommendations that will definitely cover the concerned areas and help mitigate the potentiality of problems, but too many conditions and excessive costs can be found as a great obstacle for doing businesses in the present time of technological development.

## 4.2.2 State Laws

### 4.2.2.1 New York

#### (1) Background

NYDFS is a governmental agency whose missions are “to reform the regulation of financial services in New York to keep pace with the rapid and dynamic evolution of these industries, to guard against financial crises and to protect consumers and markets from fraud.”<sup>393</sup> Lawskey, the Superintendent of NYDFS, stated in August 2013<sup>394</sup> that “the emergence of Bitcoin and other virtual currencies could help improve the depth and breadth of the nation’s financial system, but the cloak of anonymity provided by virtual currencies has helped support dangerous criminal activity.” He considered that “it was in the common interest of

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<sup>392</sup> The letter of the American Bankers Association (ABA), *supra* note 353.

<sup>393</sup> Dfs.ny.gov, **DFS-About Us** (2014), [http://www.dfs.ny.gov/about/dfs\\_about.htm](http://www.dfs.ny.gov/about/dfs_about.htm) (last visited May 1, 2015).

<sup>394</sup> New York State Department of Financial Services, **Notice of Inquiry on Virtual Currencies** (2013), <http://www.dfs.ny.gov/about/press2013/memo1308121.pdf> (last visited May 1, 2015).

both the public and the virtual currency industry to bring virtual currencies out of the darkness and into the light of day through enhanced transparency.” It was vital to put in place appropriate regulatory safeguards for consumers and law-abiding citizens which would also be beneficial to the long-term strength of the virtual currency industry.

NYDFS therefore announced its inquiry into the appropriate regulatory guidelines for virtual currencies. It released the proposed rules and regulations; “Title 23 Chapter I. Part 200 : Regulations of the Superintendent of Financial Services, Virtual Currencies,” or common known as “BitLicense”, to govern the conduct of business involving virtual currencies in New York. The proposed rules were published in the New York State Register’s July 23, 2014 edition which began a public comment period.<sup>395</sup> After the end of the public comment period, NYDFS received more than 3,700 public comments and determined to revise and publish the new version of framework later.

The revised proposed NYDFS rules for virtual currency businesses were published in the New York State Register's February 25, 2015 edition which began a 30-day public comment period.<sup>396</sup> The comment period ended on the March 27, 2015. In June 2015, NYDFS eventually released the final BitLicense.<sup>397</sup> The final rules were published in the New York State Register's June 24, 2015 edition.<sup>398</sup> Virtual currency firms are invited to apply for licenses. In September 2015,

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<sup>395</sup> New York State Department of Financial Services, **NY DFS RELEASES PROPOSED BITLICENSE REGULATORY FRAMEWORK FOR VIRTUAL CURRENCY FIRMS** (2014), <http://www.dfs.ny.gov/about/press2014/pr1407171.html> (last visited May 1, 2015).

<sup>396</sup> Dfs.ny.gov, **DFS: Revised BitLicense Regulatory Framework** (2015), [http://www.dfs.ny.gov/legal/regulations/rev\\_bitlicense\\_reg\\_framework.htm](http://www.dfs.ny.gov/legal/regulations/rev_bitlicense_reg_framework.htm) (last visited May 1, 2015).

<sup>397</sup> Dfs.ny.gov, *supra* note 18.

<sup>398</sup> Dfs.ny.gov, **NYSDFS: Final BitLicense Regulatory Framework** (2015), [http://www.dfs.ny.gov/legal/regulations/bitlicense\\_reg\\_framework.htm](http://www.dfs.ny.gov/legal/regulations/bitlicense_reg_framework.htm) (last visited Oct 3, 2015).

NYDFS approved the first BitLicense application to a company namely Circle Internet Financial, while 25 BitLicense applications have been received.<sup>399</sup>

On September 22, 2015, Anthony J. Albanese, Acting Superintendent of NYDFS, stated that “the issue of first BitLicense was an important milestone in the long-term development of the virtual currency industry.” NYDFS will continue to move forward on evaluating and approving additional BitLicenses. Importantly, rules that help protect consumers from loss or theft and root out illicit activity is vital to building trust in this new Fintech.<sup>400</sup>

**(2) Substance of Title 23 Chapter I. Part 200 : Regulations of the Superintendent of Financial Services, Virtual Currencies**

“Title 23 Chapter I. Part 200 : Regulations of the Superintendent of Financial Services, Virtual Currencies,” or “BitLicense” contains 22 sections of rules relating to the conduct of business involving virtual currency.

BitLicense defines the meaning of seventeen words for the purpose of the regulation<sup>401</sup> i.e., Affiliate, Cyber Security Event, Department, Exchange Service, Fiat Currency, Licensee, New York, New York Resident, Person, Prepaid Card, Principal Officer, Principal Stockholder, Principal Beneficiary, Qualified Custodian, Transmission, Virtual Currency and Virtual Currency Business Activity.

License is required for “any person engaging in any virtual currency business activity<sup>402</sup> like receiving virtual currency for transmission or transmitting virtual currency; storing, holding, or maintaining custody or control of virtual currency on behalf of others; buying and selling virtual currency as a customer business; performing exchange services as a customer business; or controlling, administering, or issuing a virtual currency.” Persons engaging in virtual currency business activities like software companies and those whose transaction are

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<sup>399</sup> Dfs.ny.gov, **Press Release - September 22, 2015: NYDFS Announces Approval Of First Bitlicense Application From A Virtual Currency Firm** (2015), <http://www.dfs.ny.gov/about/press/pr1509221.htm> (last visited Oct 3, 2015).

<sup>400</sup> *Id.*

<sup>401</sup> Title 23 Chapter I. Part 200 : Regulations of the Superintendent of Financial Services, Virtual Currencies, sec. 200.2 [hereinafter *Title 23 Chapter I. Part 200*].

<sup>402</sup> Title 23 Chapter I. Part 200, *supra* note 401, sec. 200.3 (a).

undertaken for non-financial purposes are excluded.<sup>403</sup> The license applications cost approximately \$5,000.<sup>404</sup> However, license requirement exempted for “persons chartered under the New York Banking Law and merchants and consumers that utilize virtual currency solely for the purchase or sale of goods or services or for investment purposes.”<sup>405</sup>

License holders will be required “to comply with all applicable federal and state laws, rules, and regulations.”<sup>406</sup> The background check for all employee and founders are required and their fingerprints will also be taken for submission to the State Division of Criminal Justice Services and the Federal Bureau of Investigation.<sup>407</sup> BitLicense requires license holders to quarterly submit financial statements within 45 days of the closing of each quarter,<sup>408</sup> and keep 7 years of records of business transactions.<sup>409</sup> All anti-money laundering programs must be instilled by license holders, and they are responsible for cyber security programs and disaster recovery plans.

In case of failing to obtain a BitLicense or violating BitLicense requirements are found, NYDFS has the ability to apply for an injunction and/or suspension or revocation of license.<sup>410</sup> There is no any explicit indication of penalties, however, NYDFS preserves right to impose penalties under any other applicable law, such as New York Banking Law or Financial Services Law.

Though BitLicense will only apply to businesses operating in New York State, it does set a precedent for other states to introduce similar regulations for virtual currencies, at least for California State which shall be further studied herein.

### **(3) Potential of Risks Mitigating**

BitLicense provisions mostly cover the widespread concerned areas that virtual currency service businesses could possibly be supporting

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<sup>403</sup> Title 23 Chapter I. Part 200, *supra* note 401, sec. 200.2 (q).

<sup>404</sup> Title 23 Chapter I. Part 200, *supra* note 401, sec. 200.5.

<sup>405</sup> Title 23 Chapter I. Part 200, *supra* note 401, sec. 200.3 (c).

<sup>406</sup> Title 23 Chapter I. Part 200, *supra* note 401, sec. 200.7.

<sup>407</sup> Title 23 Chapter I. Part 200, *supra* note 401, sec. 200.4 (a).

<sup>408</sup> Title 23 Chapter I. Part 200, *supra* note 401, sec. 200.14.

<sup>409</sup> Title 23 Chapter I. Part 200, *supra* note 401, sec. 200.12 (a).

<sup>410</sup> Title 23 Chapter I. Part 200, *supra* note 401, sec. 200.6.

illegitimate activities like black market trade, money laundering, fraud and cyber-crime. New York State puts many detailed requirements on BitLicense. Licensing system is the first step of regulating that will help virtual currency service businesses kept in sight by the authority. It will also help the consumers ensure that they will be dealing with the legal businesses which should have gain at least the minimum legal standards and system. The requirements further include provisions providing for consumer protections, anti-money laundering program, cyber security program, and customers safeguarding assets program. This writer finds that those provisions will be very likely to help mitigate virtual currency service businesses supporting illegitimate activities.

In another point of view, Jason M. Weinstein, a partner in Steptoe & Johnson LLP's Washington office,<sup>411</sup> pointed that BitLicense imposes cybersecurity and AML provisions that go beyond any regulations imposed on the traditional payments industry. Instead of simply licensing and leaving AML regulation in the capable hands of FinCEN, it is potentially problematic that the rule imposing state-level AML requirements.<sup>412</sup>

In this writer's opinion, it is agreeable that some of BitLicense requirements may go too far and will excessively impose costs onto virtual currency service businesses. Too detailed provisions of BitLicense might bar virtual currency service businesses from operating businesses in New York State and push them moving to somewhere else eventually.

#### **4.2.2.2 California**

##### **(1) Background**

California is one of states which positively aware of the growth of technologies and modern methods of payment by developing its rules and regulations along with those growth. Earlier, the law of California provided under the Corporations Code relating to business associations Section 107 has been repealed,

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<sup>411</sup> Steptoe.com, **Steptoe & Johnson LLP: Jason M. Weinstein - Partner**, [http://www.steptoe.com/professionals-Jason\\_Weinstein.html](http://www.steptoe.com/professionals-Jason_Weinstein.html) (last visited Oct 3, 2015).

<sup>412</sup> Lexology.com, **Are New York's BitLicense rules good or bad for Bitcoin? | Lexology** (2015), <http://www.lexology.com/library/detail.aspx?g=14b2e9a8-fd47-485d-bde3-e0739ab224d9> (last visited Oct 3, 2015).

resulting that the use of any other means as money including virtual currencies is no more prohibited in California.

On February 27, 2015, California later made another significant move by introducing the Assembly Bill No. 1326 (“AB 1326”)<sup>413</sup> in which purpose is very similar to New York’s BitLicense. AB 1326 is an Act introduced by the California Assembly member Matt Dababneh (D - Encino). The Act is to add Division 11 (commencing with Section 26000) to the Financial Code relating to virtual currency. Virtual currency businesses shall be subject to be licensed by the Department of Business Oversight in pursuant to AB 1326.

**(2) Substance of the Assembly Bill No. 1326 (AB 1326)**

AB 1326 will prohibit “a person from engaging in the business of virtual currency in California State unless the person is licensed by the Commissioner of Business Oversight (“Commissioner”) or is exempt from the licensure requirement as provided.”<sup>414</sup> The bill will require “applicants for licensure to pay the commissioner a nonrefundable fee of \$5,000”<sup>415</sup> and “complete an application form required to include, among other things, information about the applicant, prior virtual currency services provided by the applicant, a sample form of receipt for transactions involving the business of virtual currency, and specified financial statements.”<sup>416</sup> However, AB 1326 provides the commissioner the discretion to waive any of the information requirements for licensure.<sup>417</sup>

This bill will also require each licensee “to maintain at all times such capital as the commissioner determines, subject to specified factors, is sufficient to ensure the safety and soundness of the licensee, its ongoing operations, and maintain consumer protection.”<sup>418</sup> To satisfy this capital requirement, the bill will require each licensee “to invest an aggregate amount equal to the value of the virtual

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<sup>413</sup> Leginfo.legislature.ca.gov, *supra* note 371.

<sup>414</sup> The Assembly Bill No. 1326 sec. 26002 [hereinafter *AB 1326*].

<sup>415</sup> AB 1326, *supra* note 414, sec. 26006 (a).

<sup>416</sup> AB 1326, *supra* note 414, sec. 26006 (b).

<sup>417</sup> AB 1326, *supra* note 414, sec. 26006 (c).

<sup>418</sup> AB 1326, *supra* note 414, sec. 26008 (a).

currency that the licensee has on deposit for its customers in only specified investments.”<sup>419</sup>

However, AB 1326 does not mention any of the anti-money laundering programs at all.

### **(3) Potential of Risks Mitigating**

California State approaches the licensing system on AB 1326 to regulate virtual currency service businesses as well as the CSBS and New York State do. Licensing system is the first step that will help virtual currency service businesses kept in sight by the authority. It will also help the consumers ensure that they will be dealing with the legal businesses which should have gain at least the minimum legal standards and system. AB 1326 mostly set requirements to provide and ensure the consumer protection, but it does not pay attention to the anti-money laundering programs at all.

This writer finds that AB 1326 will be mostly helping mitigate virtual currency service businesses supporting fraud, while the other illegitimate activities like black market trade, money laundering and cyber-crime may still be a very prominent concern left unsolved.

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<sup>419</sup> AB 1326, *supra* note 414, sec. 26008 (b).



## **CHAPTER 5**

### **CONCLUSIONS AND RECOMMENDATIONS**

#### **5.1 Conclusions**

Virtual currency is a new kind of financial technology which has recently been developed and used as alternative mean of payment. Bitcoin, found as the most popular virtual currency to date, market capitalization was highest at over \$11,803 Million USD. The businesses conducting with virtual currency are very nascent and may be not developed enough. However, they have sometimes been used to facilitate criminals, fraudsters and money launderers performing their illegitimate activities apparently shown in many news and law enforcements by foreign regulators. In Thailand, it is found that virtual currency has been used and involved with few illegitimate activities also. It is undeniable that virtual currency service businesses are capable of facilitating criminals, fraudsters or money launderers either way. At least, they are unavoidable to exchange virtual currency to legal currency or other virtual currencies anyway.

Virtual currency may have been used as well as money in many areas in Thailand and other countries. Though Bitcoin which is considered the most popular virtual currency to date has the global market capitalization over \$3,506 Million USD as of September 7, 2015, it is not legal currency in Thailand or any other countries. In this writer's opinion, it is not going to replace traditional money easily. In addition, it needs to be much further developed and widely accepted among people than it is being now in order to gain significant attention from traditional money regulators. Possibly, it may take many more years to achieve such strong attention. This writer believes that national central banks or banking regulators in most countries including Thailand are not going to supervise the businesses related to virtual currency any time soon.

In contrast to securities industry, this writer has an opinion that virtual currency has the potential to continue developing in this industry. According to the study, virtual currency has value which can change quickly. People find it an opportunity for investment or speculation like they do with stocks or other securities.

Related businesses are facilitating the exchange of virtual currency and Baht which make it easier to make profit or suffer loss. In this writer's opinion, this activity is more likely to be an investment and should be supervised under the securities regulations.

Therefore, this writer finds it is significant for Thai regulators to get readily prepared to develop the proper regulations for this kind of specific business as explained below.

### **5.1.1 Significances of Regulating**

Virtual currency service businesses providing the services of use, exchange and storage of virtual currencies and their conversion to or in legal currencies; Baht, are currently operating freely and not prohibited by law. They are only providing the very general information about their businesses for registration with the commercial registration office. The absence of law regulating this specific business is raising a prominent concern of its potentiality to facilitate illegitimate activities like black market trade, money laundering, investment fraud and cyber-crime. Law regulating virtual currency service businesses requiring them to provide at least a minimum standard business system will help mitigate the probability of such problems.

### **5.1.2 Limitations of Regulating**

Fundamentally, the unique characteristic of virtual currency that its issuers and users are unable to be identified is the most concern which this writer finds it is the limit of regulating at this point.

Moreover, businesses related to virtual currency are very new and still developing. If regulations are going to provide too many details and complications of legal requirement, and to make the business an unnecessary cost, they will only be found as the great obstacles and burdens resulting as the barrier of business to continue developing eventually. Therefore, the balance of scope of regulating and the potentiality to be a business barrier from continue developing are needed to be carefully taken into account.

### **5.1.3 Directions on Regulating**

Virtual currency is not legal currency in Thailand or any other countries. It still needs to be much further developed and widely accepted among

people which may take many more years to achieve such strong attention from traditional money regulators as abovementioned. In other words, it is not going to replace traditional money easily and banking regulators in Thailand are not going to supervise the businesses related to virtual currency any time soon.

Notwithstanding such opinion, this writer finds that virtual currency services business is different from traditional money businesses. It should be specifically regulated. It should be brought into the legal system first. This may help reduce the incentive for criminals, money launderers and terrorists to use virtual currency services business to facilitate illegal purposes. At this time, the regulations may provide to cover the priority issue like consumer protection. However, the other issues like illegal trading, money laundering, cyber security and tax collecting are also unavoidable to be managed on a timely basis. Therefore, this writer suggests two directions on regulating virtual currency services business, proactive and reactive approaches.

#### (1) Proactive approach

It is undeniable that virtual currency has value which can change quickly. People find it an opportunity for investment or speculation like they do with stocks or other securities. Related businesses are facilitating the exchange of virtual currency and Baht which make it easier to make profit or suffer loss. In this writer's opinion, this activity is more likely to be an investment and should be supervised under the securities regulations. The issue is virtual currency is currently not securities and its related businesses are not regulated by securities regulations. Therefore, this writer proposes the approach to securities regulations in the next part of this chapter.

Notably, this writer believes that virtual currency services business should be regulated under the securities regulations. However, other significant factors must be taken into account before such regulations are established, in particular to the market capitalization and widespread popularity of this business in Thailand.

#### (2) Reactive approach

At this time, it may be arguable whether this is the right time to establish the proactive approach supervising virtual currency services business due to

the condition of market capitalization and widespread popularity as mentioned earlier. However, it is learnt in this thesis that this kind of business exists in Thailand, and so its consumers do.

Currently, this matter is still not specifically provided or regulated by other laws. Consumers should be at least protected by the consumer protection regulations. Even such regulations do not mean to proactively prevent business man from misconduct but only to ensure that consumers will be fairly treated in general. When the disputes occur, they empower the authority to resolve problems for consumers. This, in this writer's opinion, is a reactive approach. At this time, the conduct of virtual currency service business is not specifically regulated. Upon the risks this kind of business may bring to its customers, especially fraud risk, there should be any measure providing for the customers who may suffer damage resulting from the act of virtual currency service business.

The issue is, it is still unclear whether virtual currency service business and its customers are regulated under existing consumer protection regulations. Therefore, this writer provides the approach to consumer protection regulations in the next part of this chapter.

## **5.2 Recommendations**

### **5.2.1 Approach to Securities Regulations**

In this writer's opinion, virtual currency has the potential to be specified as securities by the authority of the SEC. Virtual currency service businesses are also possible to and should be supervised under the securities regulations. Therefore, this thesis proposes that securities regulations should be amended and should establish the proper regime to regulate the conduct of virtual currency service businesses appropriately, especially for the material issues as explained below.

#### **5.2.1.1 Proposed Approach**

(1) By virtue of Section 4 and Section 14 of the SEA B.E. 2535, the SEC should issue the regulations to specify virtual currency as securities in accordance with Section 4 of the SEA B.E. 2535.

Virtual currency by its nature is decentralized. Even virtual currency becomes one type of securities, there is no any securities issuer.

Therefore, it shall not be subject to the provisions related to the issuance of securities in chapter 2 of the SEA B.E. 2535 and the provisions related to the governance of issuing company in chapter 3/1 of the SEA B.E. 2535.

(2) By virtue of Section 14 and Section 64(3) of the SEA B.E. 2535, the SEC should issue the regulations to specify that the offer for sale of securities like virtual currency shall not be applied by the provisions in chapter 3 of the SEA B.E. 2535, but shall be subject to the notification of the SEC.

The way virtual currency service business offering for sale of virtual currency contains different characteristics of investors from traditional offerings. Therefore, it should comply with rules and regulations particularly specified.

(3) Accordingly, the notification of the SEC should contain the provisions establishing the proper regime to regulate the conduct of virtual currency service businesses in accordance with Section 64(3) of the SEA B.E. 2535, including the material issues as follows.

a. The offer for sale of securities under this notification means the offer for sale of virtual currency in exchange for Baht or other virtual currencies.

b. License is required for any person engaging in any virtual currency service business offering for sale of virtual currency in exchange for Baht or other virtual currencies, upon the service fees. Unless the offerings fall within specified exemptions or exclusions from licensing requirements.

Individual investors offering for sale of virtual currency in exchange for Baht or other virtual currencies, to licensed virtual currency service business, are exempted from the licensing requirements.

Merchants and their consumers that utilize virtual currency only for the purchase or sale of goods or services are excluded from the licensing requirements. Users who mine or obtain virtual currency to purchase goods or services, or hold it for investment on the user's own behalf, and not for the benefit of another, are excluded from the licensing requirements.

c. Virtual currency service business can be undertaken only by formation of either a limited company or a public limited company registered under Thai law, and after having obtained a license from the SEC.

d. Application for a license shall be in a form prescribed by the SEC and shall contain the following matters: the name and background of the applicant, the form and date of incorporation and the jurisdiction where incorporated; a list of each director and shareholder of the applicant; a current financial statement for the applicant, as applicable; all written policies and procedures required by, or related to, the requirements of this notification; a copy of any insurance policies maintained for the benefit of the applicant, its directors or officers, or its customers; an explanation of the methodology used to calculate the value of virtual currency in Baht; and other additional information as the SEC may require.

e. Each applicant must submit a nonrefundable application fee to cover the cost of processing the application in the amount prescribed by the SEC.

f. Each licensee shall maintain at all times capital in an amount as prescribed by the SEC to ensure the financial integrity and its ongoing operations based on an assessment of the specific risks applicable to each licensee.

g. Each licensee shall make, keep, and preserve all of its books and records in their original form or native file format in a condition enable to be inspected of its compliance with applicable laws and regulations, for a period as prescribed by the SEC. The records including virtual currency transactions involving the payment, receipt, exchange or conversion, purchase, sale, transfer, or transmission of virtual currency; the identity of customers; the amount or value of the transaction; the method of payment; and the date the transaction was initiated and completed.

h. Each licensee shall submit financial statements for any accounting period in the form specified by the SEC.

i. Each licensee shall establish and maintain an effective cyber security program to ensure the availability and functionality of the electronic systems and to protect those systems and any sensitive data stored on those systems from unauthorized access, use, or tampering.

j. Each licensee shall disclose in clear, conspicuous, and legible writing in both Thai and English language, all material risks associated with its products, services, and activities and virtual currency generally. In addition, it shall disclose all relevant terms and conditions of transactions prior to each transaction. Each licensee shall ensure that all disclosures are acknowledged as received by customers. Upon completion of any transaction, each licensee shall provide to a customer a receipt.

#### **5.2.1.2 Enforcement**

In case where a licensed virtual currency service business fails to maintain the qualifications or performs the duties specified under the notification inappropriately, with deficiency or incompletely or violates or fails to comply with the criteria specified under the notification, the SEC should empower the SEC Office to apply any of the followings to the licensee:

- (1) requesting for explanation, submission of relevant documents or evidence;
- (2) requesting for rectification to comply with the criteria within the specified period;
- (3) requesting to take any action or refrain from taking any action;
- (4) imposing suspension or revocation of the approval.

Additionally, the SEC Office may disclose the abovementioned actions to any person to protect public interest or investors in accordance with Section 24/1 of the SEA B.E. 2535.

#### **5.2.1.3 Potential of Risks Mitigating**

According to the proposed approach, this writer has an opinion that it could potentially help mitigate risks as follow.

- (1) Licensing requirement brings virtual currency service business on the ground and in legal system. Licensee shall be qualified by the authority. It shall establish and maintain the business system. This will ensure that consumers are dealing with reliable business man. Accordingly, it will reduce the potential of fraud committed by such business.



(2) Virtual currency service business is required to know its customers and to keep record of transactions. This will reduce the incentive for criminals, money launderers and terrorists to use virtual currency for illegal purposes.

(3) Virtual currency service business is required to establish and maintain an effective cyber security program. At least, it will mitigate the risks that this kind of business could be attacked or hacked by cybercriminals easily.

(4) Customer information and record of transactions are required to keep by virtual currency service business. This may reduce the incentive for tax evaders to use virtual currency for hiding their revenue from the authority.

### **5.2.2 Approach to Consumer Protection Regulations**

Currently, it may be arguable whether virtual currency service business is business man and its customers are consumer under this regulations. This writer finds it is possible for those parties to fit in the definitions but it is required to be clearer. Therefore, this thesis proposes that the Consumer Protection Board should exercise its powers under the CPA B.E. 2522 as explained below.

#### **5.2.2.1 Proposed Approach**

By virtue of Section 10(3) of the CPA B.E. 2522, the Consumer Protection Board should issue or publicize information explaining that virtual currency service business is a business man who renders services which have potential risks to cause damage to or be prejudicial to the right of the consumers for the purpose of the CPA B.E. 2522. Accordingly, customer of such business is consumer who obtains services from a business man under the CPA B.E. 2522. This means that the Consumer Protection Board shall have the powers and duties to resolve problems for consumers when the disputes occur in accordance with Section 10 of the CPA B.E. 2522.

#### **5.2.2.2 Enforcement**

In case where a virtual currency service business gets involve with complaints or other matters in connection with the protection of the consumer's right, the Consumer Protection Board has the power to order any person to submit documents or give explanations in connection with the matters in accordance with Section 17 of the CPA B.E. 2522. Any person who fails to comply

with such order shall be liable to imprisonment for a term not exceeding one month or a fine not exceeding ten thousand Baht, or both.

In case where the Consumer Protection Board considers it is appropriate to take legal proceedings on conduct infringing upon consumer rights and interests, or receives request by the infringed consumer and considers legal proceedings will be benefit to consumers in general, the Consumer Protection Board has the power to appoint a public prosecutor or an officer of the Office of the Consumer Protection Board to bring civil and criminal proceedings to court against the person infringing the consumer's rights in accordance with Section 39 of the CPA B.E. 2522.

### **5.2.2.3 Potential of Risks Mitigating**

Basically, this proposed approach is a reactive one. It does not mean to directly mitigate the risks studied in this thesis before. It could only help resolve problems for consumers after suffering damage or involving with disputes in connection with services that virtual currency service business renders. Indirectly, this may be a little concern for virtual currency service business to conduct business properly because if it does not, legal proceedings may be taken against it by the authority not just any individual consumer.

## **5.3 Observations for Further Study**

There are many developments concerning virtual currency and the related technologies during this study. Recently, this writer finds that not only virtual currency itself is gaining attention of people and businesses in financial world, but "Blockchain," the technology behind virtual currency like Bitcoin is also gradually gaining attention of many big banks and financial institutions. Blockchain is currently found as a financial challenge that is going to disrupt the traditional financial system. Many major global banks show their interests in blockchain and additionally invest in doing more researches. So far, one of those banks is developing its own coin and a few blockchains. The exact purpose of developing an alternative coin and its features are still unclear at this time. Possibly, such development is likely focusing on facilitating payments in a cross border capacity in order to make them faster and become more transparent across its own network. If so, the alternative coin may only

be used as a tool to facilitate the bank's network. Therefore, it is definitely different from virtual currency like Bitcoin which is the object of this study.

Said development may help bring the more transparent, more secure and lower-cost technology behind Bitcoin to financial services in the future. However, it is still developing in the circle of money and banking system. Accordingly, the scope of regulations providing for this further development may still be better covered by money and banking laws. At this point, this writer has an opinion that the securities approach recommended in this thesis may not be particularly suitable for such further development. Instead, the money regulations should be thoroughly studied and analyzed in order to provide the proper approach for this new coming development.

In conclusion, this writer believes that virtual currency, blockchain technology and the related businesses have potential to continue developing in the financial world. It is very important to closely monitor their developments in order to provide the appropriate regulations accordingly.

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