

# Cryptocurrency as Medium of Exchange and Its Applicability in the Philippine Accounting Standards

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## Abstract

The purpose of the study is to determine the effects of using cryptocurrency as a medium of exchange in the Philippines and how the existing Philippine Accounting Standards are being applied in terms of reporting and valuation in Financial Statements. The study used qualitative method research to assess the relationship between using of cryptocurrency as a mode of payment today and the possibility of using cryptocurrency as a medium of exchange. The variables of the study are trading values, volatility, data security, and marketability. In trading values, the price of bitcoin varies directly to its volatility. If the volatility of the bitcoin increases, the price of bitcoin also increases. Hence, the value of the virtual currency is greatly affected by trading value. Accounting Standards may not be applicable in this situation unless it is considered to be in Hyper Inflationary Economy. Some countries have issued warnings and amendments while others have expanded their laws regarding virtual currency because one of the crucial features of this is data security. Lastly, in the aspect of marketability, the market capitalization of the virtual currency is growing at an unrealistic rate, to which accounting standards have not identified rules and principles to determine how would this rate be being valued. Different countries have different views with regards to cryptocurrencies. Some consider it as a threat, while others see a potential technology in cryptocurrencies wherein in, various countries made those a legal tender with a specific classification with a corresponding tax rate.

**Keywords:** Cryptocurrency, Bitcoin, medium of exchange, fiat currency, blockchain.

## I. INTRODUCTION

Trading is an essential part of a man's life. It can be traced back in history wherein barter system was used to exchange goods. Since then, many people are trying to change the systems that will eventually give way to more rational way of exchange. To be preferred as a medium it must be durable, portable, divisible, and shall have an intrinsic value. Gold is most accepted means of exchange as it satisfied these criteria to be a medium of exchange, but as there is a continuous grow of economy and continued to develop, there is also an increase in the demand of medium used for exchanged.

The government was is then exerting more efforts to have a more accessible and acceptable means of exchange that will fall under their regulation and control. This was the onset of fiat currency on which lacks on intrinsic value (e.g. paper money) that became a legal tender declared by the government. It was, then, adopted worldwide. For a lot of years, various instruments have been used as a medium of exchange yet through the technological advancement and progression, cryptocurrency has evolved and significantly influenced the future of virtual payment and global currency development.

### *Cryptocurrency Status*

Cryptocurrency market has been widely known since it was developed. A cryptocurrency is a virtual currency use for easier transfer of funds between two parties that are not in the same location. It revolutionized a global payment system that was then unimaginable. It allows users to do secure payments [1]. Bitcoin (BTC), the very first decentralized form of digital cash, was first introduced to the public in the early year of 2009 by a programmer (or a group of programmers) named Satoshi Nakamoto. [2] It is the most common and valuable digital currency today. Subsequent to its release, numerous other cryptocurrencies have been introduced. A Bitcoin uses blockchain technology, which is referred to as a ledger in the cryptocurrency world. Unlike banks, it doesn't have an intermediary involvement in a transaction as it is considered as a peer-to-peer transaction. Financial Institution as an intermediary is eliminated with the used of Bitcoin that allows the free trade and exchange by which it decreases the possibility of fraud, and thus, increase the efficiency level and a more effective and objective work environment was guaranteed so as to security of transactions. (Nakamoto, 2018) [2]. Its anonymity and lack of regulation, though convenient, gives rise to concerns about it being a threat to society, especially when it comes to money laundering and tax evasion. Some countries have taken steps to promote cryptocurrency while others have completely banned the use of the currency. Japan in

particular, passed a law regarding virtual currency as a form of payment while in Bangladesh, it is strictly prohibited under the country's strict anti-money laundering act.

According to Circular No. 944 Series 2017 by the Central Bank of the Philippines, guidelines for virtual currency exchanges, it states that virtual currency systems have a great potential to change the practice of delivery of financial services in terms of payments and remittances, this will provide a platform for faster and less cost in transfer on funds especially for international transactions. There are possible risks associated with utilization of virtual currencies as medium of exchange, with use of technology, still, many observers hope that a currency will exist outside the leverage of banks and government through this virtual trade. This study will assess on how effective the use of cryptocurrency as a related medium of exchange in terms of volatility, security, trading value and marketability [3]. As the market capitalization of the cryptocurrency industry has been altering dramatically. This study attempts to deliver an economic theory on how cryptocurrency will influence the economy, the general and financial market and its significant effects when used as a medium of exchange in the Philippines.

#### *Trading Values*

Because bitcoin is a virtual currency, it is believed that the sale is less reliable than of the fiat for reasons. Since it is not yet widely acceptable, the market is not relative and too small as compared to usual commodities and those traded in forex markets. [5] Dollar is more marketable than bitcoin even though it has a larger value, however, bitcoins and other virtual currencies have a large potential to be used as common medium of exchange because if the buyers and sellers may allow, transmission cost is sufficiently lower than commodity such that bitcoin do not require approval of financial institution.

Nowadays, bitcoin is not yet accepted universally as medium of exchange or value for money, it has a great potential to fulfill both functions as virtual currency. Further generation may invest in virtual currency instead of gold as means of accumulating wealth. [19]. Cryptocurrencies and virtual trade are new generations development, hence, it brought up competition with the existing modalities of money and government regulations. These currencies open a new platform as alternative for transactions that encourage innovation that tends to enhance the features of deleterious ones. According to Gandal and Halaburda, Cryptocurrencies and new market with market players are interested and are competing given that these virtual currencies offer high quality data and well-defined information that increases overtime. According to Kam (2017) [6], these cryptocurrencies may be quote against other currencies since it is not yet back up by government, financial institution, or legal entity as commodity.

#### *Role of Banko Sentral ng Pilipinas (BSP)*

The Bangko Sentral ng Pilipinas (BSP) on February 06, 2017 issued a policy on how the virtual currency (VC) transactions are to be done in the Philippines. BSP will provide platform that will encourage financial institution to innovate their process while preventing the act of money laundering [7].

The BSP recognizes the capability of Virtual Currency systems to transform the delivery of financial services, especially for payments and remittances in both domestic and international, and may support financial inclusion. BSP also consider the risks in VCs such as volatility of prices, the velocity of transactions, and global accessibility. BSP has no plan to endorse virtual currency, because it is not guaranteed by a central bank and foreign currency. But, BSP intends to make conform VCs for the delivery of financial services, for payments and remittances, which have material impact on consumer protection and financial stability. [6]

BSP Circular No. 944 provide guidelines for exchanges of virtual currency in the Philippines or any engaged services that is used as a facility for the exchange or conversion of money to VC. In order to operate, a VC exchange shall obtain Certificate of Registration (COR) as a remittance and transfer company, and submit Application for Registration and Notarized Deeds of Undertaking to the BSP through the appropriate department of the Supervision and Examination Sector. The issuance of COR, Registration with the Anti-Money Laundering Council Secretariat, Accreditation of Remittance sub-agents, and mandatory training also apply to VC exchanges and pay annual service fees and registration.

#### *Marketability*

According to Conrad Roos (2015), Bitcoin is the root of the emergence of other cryptocurrencies and they are referred as alcoins which means alternative coins. [8] Kristoufek (2013) the value of these cryptocurrencies is driven by

investors, speculators and other trend chasers and is not affected by economic variables to wit GDP, interest rates, and unemployment rate.

Cryptocurrencies are continuously increasing in number, where, entrepreneurs in technology would benefit with this interest in several ways as a means of generating capital for their business and to fasten the process of business without any hassle from rule and regulations of central authority. In 2014, the use of Bitcoin as medium of exchange was pioneered by Overstock.com that open platform for the exchange which followed by other companies.

As stated by Alexander Pando (2018), cryptocurrencies open possibilities where everyone can enjoy the benefits of exciting technologies, which has been monopolized long time ago by capitalist and private investors. [4] Given that there is about \$370 billion of circulating value of cryptocurrencies, there's a lot of opportunities to have this technological advancement and utilized it. These cryptocurrencies may be stored into cards and apply it to the real-world transactions, where, no delays, guarantee of security, less possible time and minimal cost. [4] Chauhan (2018), even if these currencies are not legalized as medium of exchange, it has its value and in fact, it has a strong ready market. With use of bitcoin in international setting such as remittances, it will create an alternative in terms of pricing the services and conversion of value. [9]

#### *Volatility of the Currency*

Due to inconveniences barter brings, the system of exchanging different goods led to exchanging of specific commodities such as seashells, pearls, precious stones, tea, tobacco, cow, leather, cloth, salt, wine, etc. This system is called the commodity money system (Economics Discussions, 2016). After the commodity money, came the use of precious metals such as gold, silver, copper which values money according to its weight and caliber of the metal.

The first metal-made money started in China in 1100 BC, where small replicas of goods cast from bronze were developed into coins. Followed in 600 BC in Turkey where the first official currency was made. Just when it looked like Lydia was taking the lead in currency developments, in 600 B.C., the Chinese moved from coins to paper money. That is where the first paper money was established. Real digital currencies have been around for some time like the first E-gold, founded in 1996 and back-up by gold, and the Liberty Reserve, founded in 2006 which lets converters to use dollars or Euros to Liberty Reserve Dollars or Euros, and exchange them without restrictions at convenience fee of 1%. This type of services are used as a tool to launder money, and eventually was shut down by the US government (ABC news, 2013). Online payment vast emerge with these services like PayPal, which was founded in 1998, its function is similar and is based on traditional money, which were governed by law and regulations set forth by the government. But based on offshore tax havens monopolized by rich and favored, digital currencies are not really a good experience (Wagner, 2014) [10].

Cryptocurrencies have been used and accepted by several countries and development of the currencies are still in progress. The value of the currency derived from the information and data mined from different portals that lead in development of the currency. Since, the value is volatile, there is no current measurement bases that can be used to identify the exact classification of these currencies. [18] Accounting standards have been developed to ensure that every business transaction are properly included and reported in the annual report of financial performance and business position, at the moment, since value is not identified, no identification and measurement can be used to report the same. [14] However, since this are virtual, these currencies may be included and fall under the definition of Intangible Asset of the Philippine Accounting Standard 38. Valuation of these currencies is at fair market value only, where, any increase or decrease in its current fair market value is reported in profit or loss during the period. Although, this may or may not be followed, cryptocurrencies when used in any business transactions shall be reported in its financial statement [10]. The emergence of cryptocurrencies opens possibilities for creation of new asset in form of an Intangible Asset. If the company is into trading, then, it may be classified as an investment.

As per Eddie Chung (2018), given the price volatility of cryptocurrencies, it is very hard for anyone to establish an exchange rate between the relevant cryptocurrency and the goods and services one can exchange with it [12]. The Bitcoin or other cryptocurrencies are probably not a practical medium of exchange by this time, unless the suppliers for goods and services are prepared to keep adjusting their Bitcoin exchange rate as its price fluctuates. The price fluctuation of the cryptocurrency means that not a lot of people would accept this as medium of exchange. Perhaps the price of cryptocurrencies may become sufficiently stable one day for them to become a credible storage of value.

Among all the cryptocurrencies, Bitcoin has the highest price volatility. According to Aleksander Berentsen and Fabian Schär, Bitcoin in nature is volatile. This fact leads us to determine the impact of the currency in the existing and desirable monetary policy, thus, it made cryptocurrencies are a stable currency. Since the value of Bitcoin highly depends on market demand, therefore, there's no room for Bitcoin to stabilized for now. Since the value of money is fluctuating, the demand for money also fluctuates. Bitcoin is not regulated and therefore there is no chance to stabilized its price, and will always results to a higher price due to short-term profit. [13]

#### *Data Security*

As stated in an article of TechTarget (2017) [5], cryptocurrency is a decentralized, virtual or digital currency (Oxford, 2017) free from manipulation and interference of government, which uses cryptography for security, making it difficult to counterfeit. It has no physical representation and can be used for online or in-person transaction typically done through mobile payment and digital wallet.

Cryptocurrency is not new, in fact it can be traced back in 1996 when the E-Gold was founded and established by Douglass Jackson and Attorney Barry Downey, but eventually been suspended and failed due to legal issues (Dixon, 2013) [11]. Then it was followed by other cryptocurrencies that was established but also failed. Not long after that, in 2008 an unknown developer Satoshi Nakamoto has unintendedly invented the first and still most important cryptocurrency, primarily developed as a Peer-to-Peer Electronic Cash System which is known as the Bitcoin (Mills, 2016) [15]. Since cryptocurrency is a virtual currency that primarily relies on technology, data security is one of the concerns of the user. As cryptocurrencies become more widespread, there's concern that scammers or fraudsters will try to use them to camouflage their illicit activities in other arenas, particularly when it comes to laundering funds (Cooper, 2017) [12]. Bitcoin, a type of decentralized cryptocurrency, uses a blockchain technology which created the backbone of a new type of internet.

A study shows that the security in the cryptocurrency has three (3) factors which are the security of block and blockchains, security of generation algorithm, and the network security (Bucko, et. al, 2015) [11].

News and articles are being publish that points out the high potential of using virtual currency in money laundering activities, this was supported by lot of financial experts and practitioners in the world. Since it has no trace than that of traditional method of virtual payments, virtual currency creates high risk due to its anonymity. There is no means or platform available to perfectly identify the source of virtual transaction because it allows the contactless transaction with clients of virtual currency for an anonymous funding. Serious issues arise such as complications to capture data and analytics because there is no available software that can be used to identify and track ventures, hence, its bears suspicious characters.

## **II. OBJECTIVE OF THE STUDY**

The main objective of this study is to determine the impact of using cryptocurrency as a regulated medium of exchange in the Philippines. The study focuses on the implementation of laws and regulations in other country.

## **III. METHODS OF RESEARCH**

### **Research Design**

The research design involved the utilization of qualitative research methods in addressing the research questions. The methodology focused on the assessment of the influence of cryptocurrency as a medium of exchange in the Republic of the Philippines. Qualitative methodology was appropriate for this study because the researchers seek to assess the relationship which exists between standard modes of payment of today and the possibility of cryptocurrency as medium of exchange. The research questions for this study centered on the classification of cryptocurrency based on variables and aspects.

### **Sources of Data**

The research relied on the secondary data in order to come up with accurate and objective findings. Data collected are secondary data which it purports to be used rather than the original data. The data will be analyzed and will be used for another purpose. Data collected were adjusted with basis are historical facts that were either a quantitative or qualitative in nature and. Further validated before used in the study. This data includes documentary data. Information and data are gathered and analyzed from published and unpublished document and researches, data were also taken from journal, new clippings, related literatures, newsletter and monthly transaction report. Websites were also utilized.

Collecting this data saves time and fasten the analysis part because it has been done by other researchers and was further improved.

### Data Gathering Procedures

The instrument used by the researcher to gather data for the discussion of this study was content analysis. The study was based on the researchers' readings, previous study, professional literature, published and unpublished articles and journals relevant to the subject. The Financial Stability Board (FSB), released a report that found bitcoin and cryptocurrencies do not currently pose a material risk to the global financial system, becoming a major part in the assessment of the influence of cryptocurrency as a medium of exchange. In this way, the instrument is authorized to obtain several outcomes of using bitcoin as regulated medium of exchange.

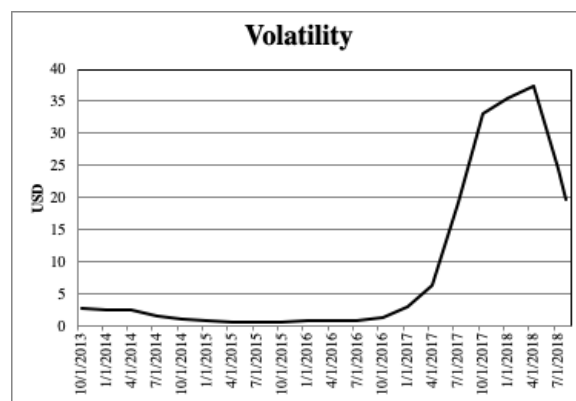
### Ethical Consideration

The researchers always considered the copyright rules stated in the Intellectual Property Code of the Philippines. The researchers used mainly reliable sources for the whole research like journals, newspapers, discussion papers, past studies and online sources like government websites and international accounting firm websites, and followed the APA citation format for every data collected and used in this research. The research had complied with ethical requirements all throughout the conduct of the research.

## IV. RESULTS AND DISCUSSION

Being the first cryptocurrency, Bitcoin continues to battle against volatility, with the price dip reflected in other major cryptocurrencies. When the volume of bitcoin being transacted rises, the price of bitcoin also increases. When the volume being transacted decreases, the price will also decrease. Therefore, the volume of demand and the price of bitcoin is directly proportionate to each other. The volatility, market demand and supply are some factors that could influence the price of the bitcoin. [16]

If the Bitcoin volatility decreases, the cost of converting into and out of Bitcoin will decrease as well. Changes in value of Bitcoin affects by several variables and thus, it is highly volatile. Since it has a high volatility, Bitcoin may be hold by the investors due to short term fluctuation in profits. [17] Various countries like Costa Rica, Czech Republic, Estonia, Isle of Man, Latvia, Luxembourg and Liechtenstein issued warnings and amendments regarding the opportunities that cryptocurrencies create, for illegal activities including money laundering, terrorist financing, fraud, and pyramid schemes. Furthermore, countries like Cayman Islands, Jersey, Singapore, and South Korea have set rules and regulations for cryptocurrency and related transactions and let other banks and intermediaries to use then to at least ensure that cryptocurrencies are being used for money laundering activities. [18]

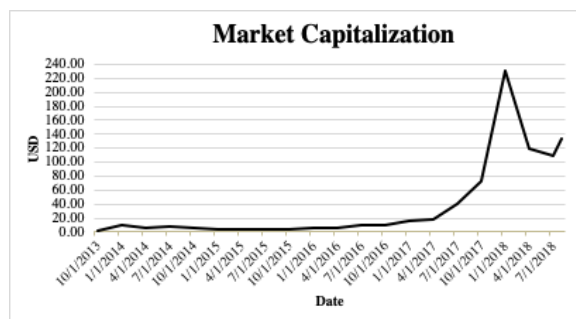


Bitcoin is capitalizing on the market at a rapid pace. As the years pass by, people are starting to know about cryptocurrency—that increased the number of customers and users of bitcoin. When the price of bitcoin increases, the total number of bitcoins in the circulation increases. Most of the users who buy bitcoin, they may be expecting the bitcoin price to increase in the next few years when they re-sell it. [19]

Some countries have adopted rules and regulations to use cryptocurrencies, because they see the potential and growth of business with this, and thus, seeing these currencies as potentials and not threat and further see a potential in the technology behind it and have developed their own cryptocurrency-friendly regulatory regime including countries like Anguilla, Antigua & Barbuda, China, Dominica, Ireland, Marshall Island, and Venezuela. However,

some other countries signed up to participate in the ECCB (Eastern Caribbean Central Bank) pilot, and developing their own systems to properly regularized and monitor the virtual currency transactions.

Different countries have looked at various parts of the crypto-world from mining to trading and assessed how they should be regulated. Furthermore, aside from accepting cryptocurrency as payment, it is also considered as legal tender, specifically in Japan. While other countries are risk averse to the risk of using cryptocurrency, Australia, Canada, Denmark, and Switzerland has adopted a remarkably progressive stance towards cryptocurrency regulations. They welcomed the introduction of new technological investments, which, in turn, has attracted foreign investments. These countries also have progressive political outlooks that support the further development of blockchain technology.



There are countries that issued tax laws on cryptocurrency whether regulated, registered, authorized or backed by the government or any regulating authority. Argentina, Austria, Bulgaria, Poland, Romania, Slovakia, and Spain provide income from cryptocurrency transactions subject to tax while in Finland and United Kingdom, capital gains apply. South Africa depends whether this should be taxed as normal income or is subject to capital gains tax. In Iceland, tax on cryptocurrencies are based on they mine the data as they consumed electricity, Russia, however, in excess of allowable electricity consumption for data mining is being taxed.

Countries adopting cryptocurrency as Regional Currency	
Code	Name
AB	Antigua and Barbuda
Ch	China
D	Dominica
Gr	Grenada
Ir	Ireland
Lt	Lithuania
MI	Marshall Islands
Mo	Montserrat
SK	Saint Kitts and Nevis
SL	Saint Lucia
SV	Saint Vincent and the Grenadines

Existing IFRS Standards do not mentioned or set guides specifically to cryptocurrencies. There are lots of cryptocurrencies and lot more are expected to be develop in the near future. Characteristics of these currencies are not similar, and thus, it will have a serious effects and accounting consequences. [12,13,20]. Under Paragraph 7 of PAS 8 Accounting Policies, Changes in Accounting Estimates and Errors, this standard requires PFRS to be used for specific financial statement accounts. Although, PFRS do not specifically mentioned the cryptocurrencies, its scope and guidelines applicable when met the requirements of the related PFRS.

Accounting Standard	Cryptocurrency	Limitations
Cash (PAS 7, Statement of Cash Flows) and PFRS 9 (Financial Instruments)	Is still not condisired as cash to any standards and is not necessarility recorded in the book as cash. Cryptocurrency does not account for within the 3 month rule of the standard and significantly changes in value in short period.	High volatility and risk as the leading factors behind their decision. There issues regarding the conversion rates of this currency, since their value changes from time to time.

Accounting Standard	Cryptocurrency	Limitations
Intangible Assets (PAS 38)	Cryptocurrenci es are generally does not have physical substance bit does give economic benefits to the entity. It may qualify as intangible assets in the financial statement.	Cost model may not be adopted since the value is highly volatile, Revaluation model is the most appropriate means of presentation, but fair value may not be determinable.

Accounting Standard	Cryptocurrency	Limitations
Inventories (PAS 2)	Assets covered by this standard shall be measured and presented at lower of cost and net realizable value. Any decrease in the assets value is reported in profit or loss, hence, recovery is up to loss previously recorded only.	Fair value and cost to sell are hard to measure for cryptocurrencies.

## V. CONCLUSION AND RECOMMENDATION

The following conclusion were draw by the researchers.

1. Cryptocurrency should be used only in trade, and not for investment as stated in the Circular no. 944 issued by the Bangko Sentral ng Pilipinas (BSP). At the present time, the economy of the Republic of the Philippines are currently incapable to provide enough resources to gain access and have the ability to use cryptocurrency. One of the characteristics of cryptocurrency is its extreme volatility. It involves a high risk.
2. Cryptocurrency is still an experimental currency and there is no accounting standard. Cryptocurrency is extremely resistant to government regulation. All transactions involving cryptocurrency are not easily traceable. There is no ready infrastructure that allows the identification of transaction with virtual currencies from its opening point to end point, thus, an anonymous funding maybe done through virtual currency transactions. All transactions involving cryptocurrency are irreversible. In addition to that, it could be used in illegal operations such tax evasion and money laundering; whereas the Congress should create and draft a bill with regards to the sale, purchase, barter and exchange of cryptocurrencies as well as the management of the transactions.
3. Philippine Accounting Standards may be applied to Cryptocurrencies if the standard setting bodies will draw rules and principles about the valuation and classification of this currencies, whereas the Commission on Higher Education should include cryptocurrency in the curriculum of the business programs.
4. For future researchers:
  - a. Identify the relationship of cryptocurrencies in the profitability of the business as it may be reported in the Financial Statement.
  - b. To test the further valuation principles of related accounting standards of other countries that may apply in valuation and presentation of cryptocurrencies.

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