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Proposal for accounting cryptocurrencies : a point of view under IFRS

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Research Dissertation

Proposal for accounting cryptocurrencies

A point of view under IFRS

Presented by: OLMEDO SALINAS Catalina

Date: from 01/03/22 to 10/06/22

University advisor: BLUM Véronique

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ABSTRACT

Cryptocurrencies have taken popularity in the past years. Most of us have already heard about bitcoins and how its value has been increasing lately. This led us to think that is it possible that companies start investing in this type of currency and adding simplicity to some financial processes. But it is this simply? Even if it's seems advantageous for enterprises, we can't avoid to question how this will affect the accounting process for them, the taxation part and the posteriority auditing process. At the moment, the IFRS foundation haven't made a final decision yet, letting the accountants to decide and classify the cryptocurrency as they thing is best. In this research we are going to explain how the cryptocurrency works to after propose a model to account cryptocurrency under the IFRS norms.

KEYWORDS: cryptocurrency, blockchain, accounting cryptocurrency, stablecoin.

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I would like to dedicate this thesis to my mother, my main motivation and support. Thanks for always encouraging me and backing me up with every decision and every challenge I decide to take. I wouldn't be here it wasn't for her.

To my grandparents and brother, that always believe in my capabilities and support me no matter what.

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Despite being the most challenging year of my life, I would just like to say thank you for the opportunity of growing.

He who does nothing makes no mistakes; he who makes no mistakes learns nothing

- Lucas Paccioli

TABLE OF CONTENTS

CHAPTER 1 – CRYPTOCURRENCY	10
I. The very beginning	10
II. Cryptocurrency in the present	11
III. Acquisition of cryptocurrencies	13
CHAPTER 2 - BLOCKCHAIN TECHNOLOGY	14
I. Blockchain	14
II. Blockchain vs Traditional Network.....	15
IV. Types of blockchain.....	15
CHAPTER 3 – IFRS AND ITS RELATED NORMS TO CRYPTOCURRENCY.....	16
I. IAS 2- Inventories	16
II. IAS 7- Statement of Cash Flows.....	17
III. IAS 13- Fair Value Measurement.....	17
IV. IAS 21- Effects of Changes in Foreign Exchange Rates	18
V. IAS 32- Financial Instruments.....	18
VI. IAS 38- Intangible Assets	19
CHAPTER 4 – CRYPTOCURRENCY AND IFRS	20
I. Definition of Cryptocurrency.....	20
II. Nature of the Cryptocurrency	20
V. Inventories	20
VI. Cash.....	21
VII. Financial Asset.....	21
VIII. Disclosure	21
CHAPTER 5 – CRYPTOCURRENCY AND US GAAP	22
I. Definition of cryptocurrency	22
II. Cryptocurrency as Cash or Cash Equivalent	22
III. Cryptocurrency as a Financial Instrument.....	22
IV. Cryptocurrency as Inventory	23
V. Cryptocurrency as commodity	23
VI. Cryptocurrency as Intangible Asset.....	23
IX. Cryptocurrency treatment-Comparative Table between IFRS and US GAAP	23
CHAPTER 6 – ACCOUNTING CRYPTOCURRENCIES.....	25
I. Practical Case	25
CHAPTER 7 – PROPOSAL FOR ACCOUNTING CRYPTOCURRENCY	30

INTRODUCTION

After the Industrial Revolution started in 1760, technology has become an essential instrument for humanity. It has provided simplicity to our lives, till the point where imagining a life without it seems impossible. On the other hand, accounting have existed since the humanity started to be civilized and it has evolved along with the technology, passing from the single entry and book keeping to the variety of accounting softwares that has simplified the register process of all transactions that might occur in a company, leading to an easier way to analyse the financial statements.

Even now, with the introduction of the blockchain system, it's been proposed of creating a triple entry system, adding the blockchain system. The professor Yuji Ijiri, conceived the concept, which came into focus in the recent years with Ian Grigg, who associate the concept with the blockchain technology, popularizing that accounting should no longer be completely private. The transactions recorded on the blockchain using triple entry should simplifies of what we know the double-entry accounting process, leaving no gaps for errors and being verifiable at the same time. This could potentially revolutionize the future for accountants and auditors (Rana, 2020).

Technology has advanced until the point where almost everything is available to do online, such as purchasing, selling, transferring money, and even between countries, something that years ago it seemed almost impossible. Not long ago, the technology has developed something new, as we must already heard in these days, known as the cryptocurrency. Technology has made possible to invest in virtual money, where no papers are needed. This cryptocurrency works through a blockchain system, making all the information encrypted.

Even though there were multiple attempts, it wasn't until 2009 that the bitcoin took force into the crypto market and started to be very popular in a lot of countries. We might believe that it has only advantages, that aides and simplifies many aspects in the business world, but the reality is as the system is relatively new, a lot of regulations and standards are needed.

In September 2021, El Salvador tried to stablish the bitcoin as legal currency. The main reasons were economic opportunities that this could bring, such as attracting foreign tourists who could save the bank charges. As an incentive, residents were given the equivalent of 30 dollars in bitcoins to spend form a digital wallet, along with some training to know how to use this system. There were many consequences due to this decision. First one, only 5% of the business used the cryptocurrency system regularly. Normally educated young who already have a bank account were most likely to used them, excluding automatically the older citizens and the most disadvantaged. Second one, since the purchased, the value of the cryptocurrencies acquired by the government has depreciated by 40 million euros, with its price falling by 40% since March. The country is currently close to default, with

a debt that has risen since the start of the Covid 19 pandemic. The international Monetary Fund ask the president to abandon the project because they believe that the large fluctuation of prices could threaten the financial stability of the country. But the president has the idea of emancipate the country from the dollar (In El Salvador, 2022).

Cryptocurrencies are highly volatile, as we saw in the example of El Salvador. Another example that we can consider is the impact of a geopolitical situation. The conflict between Russia and Ukraine led to lost almost half of the value of the bitcoin, and decrease the value of Ethereum, another considered stablecoin. Experts said that bitcoin may not stabilized anytime soon (Bitcoin plunges below \$37, 2022).

No government have declared sovereignty over cryptocurrencies, making more difficult for accountants the treatment for accounting, auditing and taxing. Most of the regulatory entities in the accounting environment have made announcement of how to treat cryptocurrencies, but they haven't made a final decision, much more like a "patch" solution due the unexpected impact of the cryptocurrencies into the economic and financial system. In the case of the IFRS Foundation, they haven't added the new regulations as part of the financial standards, giving free will to accountants all over the world to classify this type of currency where they think suits better for the company. This could affect for eventual tax purposes and also for making financial statements comparable, which is one of the purposes of adapting IFRS as accounting standards in the enterprises.

All these situations lead to the research question, is there a more efficient way to account cryptocurrencies in the present under the International Financial Standards of Reporting?

In this research we are going to explain with more detail what are the cryptocurrencies, how they appeared, and the system they use. After that, we are going to analyse how two main organizations are proposing to account them, to finally propose a new idea of how cryptocurrency should be accounting under IFRS normative.

Is important to mention that this thesis is based in pure research and its limitation consist in a proposal, which does not include the implementation and subsequent results.

PART 1:

**LITERATURE REVIEW-
TECHNICAL AND REGULATORY FRAMEWORK**

CHAPTER 1 – CRYPTOCURRENCY

In order to understand the functioning of the cryptocurrency world we are going to remount to its very beginning and explain how the system of blockchain works to finally create the transaction.

I. THE VERY BEGINNING

We probably think that cryptocurrency starts not long time ago, but the truth is that since the early eighties, people have been trying to introduce a new way of virtual currency to the world. “Crypto” comes from the technology used to create encrypted communications, so cryptocurrency makes reference to a digital money, and as it is encrypted, no banks or other institutions are needed.

Some of the examples of the first attempts of cryptocurrencies are mention below:

- In 1989, David Chaum launched the DigiCash, same name than his company, where he developed a number of cryptographic protocols that governed DigiCash transactions and set his currency apart from the competitors. These protocols made this currency an important predecessor of the modern digital currencies. DigiCash was in business for less than a decade (DigiCash, 2021).
- In 1990, David Chaum conceived the E-cash, an anonymous type of cryptographic electronic money or electronic cash system. It was used as a micropayment system at one US bank between 1995 and 1998 (e-Cash, 2021).
- In the mid-1990’s, HashCash was developed, being one of the most successful pre-bitcoin digital currencies. It used a proof-of-work algorithm to aid the generation and distribution of new coins. With the time, it became less and less effective (Bitcoin?, 2021).
- In 1998, the B-money and Bit Gold appeared. The B-money was proposed by Wei Dai as an anonymous, distributed electronic cash system. Sadly, it was never successful and it rest just like an attempt. On the other hand, the Bit Gold was proposed by Nick Szabo. It had his own proof-of-work system. The most revolutionary aspect of the Bit Gold was the concept was away from a centralized status. As the B-money, it couldn’t reach the success but it provided inspiration for other currencies that appeared after (Bitcoin?, 2021).

As we can see, there were many attempts to introduce digital currency into the world, but it wasn’t until 2009 that the introduction of the Bitcoin, the biggest cryptocurrency at the time, was made. And it wasn’t until 2010 that the first exchange of a digital currency for a physical good was made. Laszlo Hanyecz traded 10.000 bitcoins for a pizza. By then, the value of one bitcoin was about a third of a cent (STONE, 2022).

II. CRYPTOCURRENCY IN THE PRESENT

As we mentioned previously, the Bitcoin has become the most popular type of cryptocurrency, leading to the 20% of the adult population and 36% of the millennials, people that was born between the eighties and nineties, to own already some cryptocurrency in their power in the United States (STONE, 2022).

But as the bitcoin, there exist other types of currency, such as Ethereum, Binance Coin, Tether, among other.

A. Altcoins

As we have the stablecoins, we also have the Altcoins, compose for two words, ALT for alternative and COIN. Normally is define as all the cryptocurrencies other than Bitcoin. Some people consider that they are all the cryptocurrency excluding Bitcoin and Ethereum, because most of them are forked from one of the two.

Many Altcoins are used with their respective blockchain. There are many types of Altcoins:

- a) Payment Tokens: Design to be used as a currency. Bitcoin is a good example.
- b) Stablecoins: Type of coin that reduce its volatility. We are going to explain with more detail after.
- c) Security Tokens: They are tokenized assets offered on stock markets. Tokenization is the transfer of value from an asset to a token, making them available for investors.
- d) Utility Tokens: Used to provide services without a network. Filecoin for example, is used to buy storage space on a network and secure the information.
- e) Meme Coins: Inspired by a joke in other cryptocurrencies. They gain popularity in a short period of time.
- f) Governance Tokens: They allow the holders certain rights regarding the blockchain system, such as voting for changes in the protocols (Altcoin, 2022) .

B. Stablecoins

The Stablecoins are cryptocurrencies with its value are pegged or tied to another currency, commodity, or financial instrument, aiming to provide an alternative to the high volatility that the most popular cryptocurrencies present.

Some of the principal characteristics of a Stablecoin are:

- They attempt to peg their market value to some external references.
- They are more useful than more volatile cryptocurrencies as a medium of exchange.

- They are normally pegged to a currency like the US Dollar or to the price of a commodity such as gold.
- They pursue price stability by maintaining reserve assets as a collateral or through algorithmic formulas that are supposed to control supply (Stablecoin, 2022).

C. Types of Stablecoins

There are three types of stablecoins based on the mechanism used to stabilize their value:

- Fiat-Collateralized Stablecoins: they usually maintain a reserve of a fiat currency such as the U.S dollar, as a collateral assuring the stable's coin value.
- Crypto-Collateralized Stablecoins: in this case, cryptocurrencies are backed up by other cryptocurrencies. The value of the cryptocurrency held in reserves exceeds the value of the stablecoin issued.
- Algorithm Stablecoins: In this case, the stablecoins may or may not hold reserve assets. The distinction of this stablecoin is that they stabilize the value by controlling its supply through an algorithm, essentially a computer program running a preset formula (Stablecoin, 2022).

The existing stablecoin market is worth nearly \$130 billion, and it only represent a 5 percent of all the crypto assets. In October 2021, more than 75 percent of the trading cryptos occurred between a stablecoin and some other token (Stablecoins, 2021).

D. Shitcoins

This is a pejorative term that make reference to the altcoins with little to no value or a digital currency that has no immediate, discernible purpose. This type of coins was normally developed after the bitcoins became popular.

Its diminished value is due to failed investor interest because either the creating was not in good faith or the prices was based no more than pure speculation. This is the reason why they are considered as bad investments (Shitcoin, 2021).

III. ACQUISITION OF CRYPTOCURRENCIES

Where we can get cryptocurrencies? Currently, there are three ways to realize this procedure according to Gregorio Labatut (Serer, 2021).

1. Mining: Is the original way. It is created through an algorithm to get a block added to the chain of transactions and creating a personal account to storage it. A lot of IT resources are needed and the creation has an elevated cost.
2. In the derivative market. It would be similar to acquire derivatives at the current price. It is made through an exchange with digital wallets or any trade platform
3. As consideration. They could be perceived as a consideration from a transaction. There are some businesses that accept this type of cryptocurrency as method of payment.

CHAPTER 2 - BLOCKCHAIN TECHNOLOGY

I. BLOCKCHAIN

To understand the functioning of the cryptocurrencies, we need to explain the whole system behind. That would be the blockchain.

The blockchain is defined as a distributed, peer-to-peer database that host a continuously growing number of transactions. Each transaction is going to conform a “block”, secured by cryptography, time-stamped, and validated by every authorized member of the database using consensus algorithms. If the transactions turns not to be validated, is not going to be added to the database. Once the transaction is added, is not possible to edit or delete it after (Vasquez, 2021).

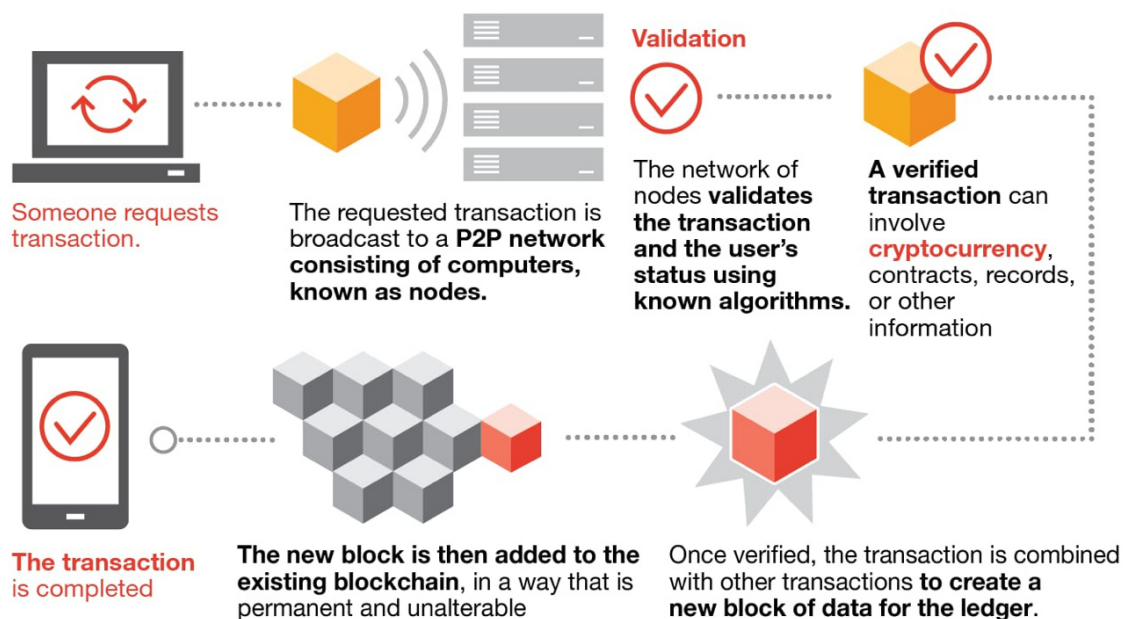


Figure 1: The blockchain system (Source: PWC)

The previous image explains better how the transaction process work for a cryptocurrency. The first step occurs when a user demands or request the transaction, eventually the transaction needs to be validated through algorithms. Once the transaction is verified, is going to be added to the chain as a new block. After this whole process we can say that the transaction is complete.

II. BLOCKCHAIN VS TRADITIONAL NETWORK

There are differences between a distributed ledger and a traditional network structure. In the following chart we are going to analyze the most principal ones.

Distributed Ledger Using Blockchain	Traditional Network Structure
<ul style="list-style-type: none"> • Doesn't have central authority. 	<ul style="list-style-type: none"> • Decision making resides with a central authority.
<ul style="list-style-type: none"> • Consensus between the members is required to add transactions to the database. 	<ul style="list-style-type: none"> • They are not validated by all parties due limited network participation.
<ul style="list-style-type: none"> • The process expected to be quickly and at a lower cost. 	<ul style="list-style-type: none"> • Transaction take time to process and cost money.
<ul style="list-style-type: none"> • The process tends to be less prone to error and virtually hacking proof because needs to be validated by all participants members. 	<ul style="list-style-type: none"> • They are prone to error and vulnerable to hacking.

Table 1: Blockchain v/s Traditional Network (Vasquez, 2021)

IV. TYPES OF BLOCKCHAIN

We should be aware that blockchain technology is a new form of data base and each blockchain implementation may have different characteristics that makes it unique. Currently, there are two major classifications of blockchain networks according to the CPA Canada and AICPA (AICPA, 2017):

- a. Permissionless: Also known as "public blockchain". Is open to any potential user, like the blockchain of the bitcoin for example.
- b. Permissioned: Also known as "private blockchain". There is a restrict participation where only the administration can give the permission to form part of the system. For example, a supply chain network may want to use a blockchain to track the movement of goods.

CHAPTER 3 – IFRS AND ITS RELATED NORMS TO CRYPTOCURRENCY

In order to define a base and analyze what is the better suit for the cryptocurrencies, we need to examine some norms that were established by the IFRS Foundation that are directly related with the accounting of cryptocurrencies. There has been a lot of speculation about the classification of cryptocurrencies, but as it is developed in a grey area and many factors has not been established yet, it has been hard to take a final decision.

We need to start from the base, what is an asset? The IFRS define an asset as a “resource controlled by the entity as a result of past events and from which future economic benefits are expected to flow to the entity (IFRS Foundation, 2010)”.

Once established this base, we can continue digging into the IAS that are related to the classification of cryptocurrencies.

I. IAS 2- INVENTORIES

According to the IFRS Foundation (IFRS Foundation, 2021), we define Inventories as assets that:

- Are held for sale in the ordinary course of business;
- Are in the process of production for such sale; or
- Are in the form of materials or supplies to be consumed in the production process or in the rendering of services.

Along with this, two concepts are tied that we must consider:

- a) Net Realisable Value: estimated selling price in the ordinary course of business less the estimated cost of completion and the estimated costs necessary to make the sale.
- b) Fair Value: price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. This concept is related to the IFRS 13, Fair Value Measurement that we are going to explain later.

II. IAS 7- STATEMENT OF CASH FLOWS

The concept of cash is really important to define, as we may think cryptocurrency is directly related just for the fact that is a type of currency.

Under the IFRS definitions we have that:

- a) Cash comprises cash on hand and demand deposits.
- b) Cash equivalents are short-term, highly liquid investments that are readily convertible to known amount of cash and which are subject to an insignificant risk of changes in value. They are held for the purpose of meeting short-term cash commitments rather than for investments or other purposes. If we want to considered an investment as cash equivalent it must be readily convertible to a known amount of cash, be subject of an insignificant risk and have a maturity of less than three months (IFRS Foundation, 2021).

III. IAS 13- FAIR VALUE MEASUREMENT

As we mentioned previously, the IFRS defines Faire Value as the price that would be received to sell an asset or paid to transfer an asset or a liability in an orderly transaction between markets participants at the measurement date.

It must be taken into consideration that the assets and/or liabilities include some characteristics as:

- a) The condition and location of the asset; and
- b) Restrictions, if any, on the sale or use of the asset.

The asset or liability measured at fair value might be either

- a) A stand-alone asset/liability (financial instrument or non-financial asset)
- b) A group of assets/liabilities (cash-generating unit or a business)

For the transaction where the asset/liability is exchange, it must take place either:

- a) In the principal market for the asset/liability; or
- b) In case of absence of the principal market, in the most advantageous market for the asset/liability (IFRS Foundation, 2021).

IV. IAS 21- EFFECTS OF CHANGES IN FOREIGN EXCHANGE RATES

Under this normative, foreign currency is a currency other than the functional currency used by the entity, thus, a foreign operation occurs when the activities of the subsidiary entity are based or conducted in a country or currency other than those of the reporting entity.

This normative will be applied in three cases:

- a) In accounting for transactions and balances in foreign currencies, except the ones that are linked to the IFRS 9 Financial Instruments.
- b) In translating the results and financial position of foreign operations included in the financial statements either by consolidation or by the equity mode.
- c) In translating an entity's result and financial position into a presentation currency.

And at the end of each reporting period, the entity must:

- a) Translate the foreign currency monetary items using the closing rate.
- b) In case of non-monetary items measured in historical cost in a foreign currency, they shall be translated using the exchange rate at the date of the transaction.
- c) In case of non-monetary items measured with the fair value in a foreign currency, they shall be translated using the exchange rate at the date when the fair value was measured (IFRS Foundation, 2021).

V. IAS 32- FINANCIAL INSTRUMENTS

A Financial Instrument is defined as “any contract that gives the rise to a financial asset of one entity and a financial liability or equity instrument of another entity”.

A financial asset could be:

- a) Cash
- b) An equity instrument of another entity
- c) A contractual right.
 - i. To receive cash or another financial asset from another entity; or
 - ii. To exchange financial assets or financial liabilities with another entity.
- d) A contract that will be settled with another entity's own equity instruments:
 - i. A non-derivative for which the entity is or may be obliged to receive a variable number of the entity's own equity.

- ii. A derivative that will may be settled other than by the exchange of a fixed amount of cash or another financial asset for a fixed number of the entity's own equity (IFRS Foundation, 2021).

VI. IAS 38- INTANGIBLE ASSETS

An intangible asset is an identifiable non-monetary asset without physical substance. Along with the acquisition of an asset, there is a cost associated, defines as the amount of cash or cash equivalents paid or the fair value of other consideration given to acquire an asset.

Now, the period over which an asset is expected to be available for use by an entity we know it as its useful life.

In order to identify an asset, we need to see if either:

- a) The asset is separable, capable of being separated or divided from the entity and sold, transferred, licensed, rented or exchanged with a related contract; or
- b) The asset arises from contractual or other legal rights, regardless of whether those rights are transferable or separable from the entity.

For recognizing an intangible asset, they must:

- a) Expect a future economic benefit attributable to the asset.
- b) Have the capability to measure reliably the cost of the asset. (IFRS Foundation, 2021).

CHAPTER 4 – CRYPTOCURRENCY AND IFRS

I. DEFINITION OF CRYPTOCURRENCY

In June, 2019 the IFRS Foundation made a statement regarding the accounting of cryptocurrencies named “Holding of Cryptocurrencies” (IFRS Foundation).

Being aware of the universe of crypto assets, they decided that cryptocurrency will be a subset of this category, defining cryptocurrency as:

- a. A digital or virtual currency recorded on a distributed ledger that uses cryptography for security.
- b. Not issued by a jurisdictional authority or other part.
- c. Does not give rise to a contract between the holder and another part.

II. NATURE OF THE CRYPTOCURRENCY

Once defined the term, they proceed to determine the nature of the cryptocurrencies, delivering that the term meets the definition of Intangible Assets¹. They based this decision in two aspects:

- a. It is capable of being separated from the holder and sold or transferred individually, and
- b. It does not give the holder a right to receive a fixed or determinable number of units of currency.

V. INVENTORIES

As we know, the classification at the moment of acquiring an asset will depend on the intention that the company has with it. Thus, the committee concluded that IAS 2 Inventories² applies to cryptocurrencies when they are held for sale in the ordinary course of business.

Also, they observed that in some instance an entity may act as a broker-trader of cryptocurrencies. Under this type of circumstances, the entity should consider the requirements in the paragraph 3b of IAS 2 for commodity broker-traders, who measure their inventories at fair value less the cost of selling. The inventories referred in this paragraph make allusion that are principally acquired with the purpose of selling in the near future and generate profits from the fluctuations in the price or in the broker-trader’s margin.

¹ IAS 38- Intangible Assets, defined in the page 18 of this document.

² IAS 2- Inventories, defined in the page 15 of this document.

VI. CASH

According to the definition, we cannot consider cryptocurrency as cash. The committee observed that cash is expected to be used as a medium of exchange for goods or services, and as the monetary unit in pricing goods and services to such an extent that it would be the basis on which all transactions are measured and recognized in the financial statements.

Even though some cryptocurrencies can be used in exchange for particular goods and/or services, it is not known by the committee that the cryptocurrencies were used as a medium of exchange and as the monetary unit in pricing goods or services and that it would be the basis on which all transactions are measured and recognized in the financial statements. The committee concludes consequently that a holding of cryptocurrency is not cash because the cryptocurrency doesn't meet the characteristics of cash³.

VII. FINANCIAL ASSET

As we previously mentioned, according to the committee, cryptocurrency cannot be considered as cash, is for this reason that it cannot be considered as a financial asset either. It cannot be considered as an equity instrument either. Cryptocurrency does not give rise to a contractual right for the holder and it is not a contract that will or may be settled in the holder's own equity instruments.

VIII. DISCLOSURE

Under IFRS Standards, an entity is obliged to disclose any additional information that is relevant to understand the financial statements (IFRS Foundation, 2021). For this reason, the committee decided to require to the holders of cryptocurrencies the following aspects:

1. An entity must provide the disclosures required in the IAS 2 paragraphs 36-39 for cryptocurrencies held for sale in the ordinary course of business and for cryptocurrencies considered in the IAS 38 the disclosures mentioned in the paragraphs 118-128.
2. If an entity measures the holding cryptocurrencies at a fair value mentioned in the IFRS 13 Fair Value Measurement, must disclose according to the paragraphs 91-99 of this normative.
3. If the hold cryptocurrencies have a significant effect on the amounts recognized in the financial statements, it must be applied the disclose judgment of the paragraph 122 of the IAS 1 Presentation of the Financial Statements.
4. If some big changes are presented after the reporting period, such as considerable changes in the fair value, that may influence economic decisions, the IAS 10 Events after the Reporting Period must be applied, considering the paragraph 21.

³ IAS 7- Statement of Cash Flows, defined in page 15 of this document.

CHAPTER 5 – CRYPTOCURRENCY AND US GAAP

I. DEFINITION OF CRYPTOCURRENCY

In May 30th, 2021, the CCH Incorporated provided a document clarifying the accounting treatment for the cryptocurrencies according to the US GAAP. The considered that cryptocurrencies are one part of the universe of the crypto assets, having as main characteristics that:

- a. They function as a medium of exchange
- b. They are no issued by a jurisdictional authority (such as sovereign government)
- c. They do not give a rise to a contract between the holder and another party
- d. They are not considered as security under the US securities laws.

They can be purchased, received on a peer-to-peer basis, or in some cases, created through “mining activities”.

II. CRYPTOCURRENCY AS CASH OR CASH EQUIVALENT

Under US GAAP, the terms cash and cash equivalents refer to currency; that means a system of money in use in a particular country. There is some basis that needs to be filled in order to accomplish the definition of cash/cash equivalent, such as:

- a. It demands deposit with financial institutions.
- b. They have to be highly liquid financial instruments that are readily convertible into cash along with the maturity very near so there is any risk of a significant change in its value.

As cryptocurrency are not legal tender, they are not backed by sovereign governments, they don't have a maturity date, and they experience significant volatility, it cannot be considered as cash or cash equivalence.

III. CRYPTOCURRENCY AS A FINANCIAL INSTRUMENT

Financial Instruments according to the US GAAP are considered as cash, as evidence of ownership interest in another company, or as a contract requiring a chain of obligations that ends with the delivery of cash or an ownership interest in another entity.

As Cryptocurrencies are just a medium of exchange and doesn't meet the definition of cash, we cannot consider them as financial instruments.

IV. CRYPTOCURRENCY AS INVENTORY

In contrast to the IFRS, US GAAP doesn't consider that cryptocurrencies could be classified as Inventories, this because Inventory is defined as "tangible personal property". Thus, even though some companies hold cryptocurrencies for sale in the ordinary course of business, they cannot be considered or classified as Inventories.

V. CRYPTOCURRENCY AS COMMODITY

According to US GAAP, commodities are typically tangible assets, such as oil; precious metals, lumber, among others. Generally, commodities are accounted as inventory.

For this reason, cryptocurrencies cannot be considered as commodities under US GAAP.

VI. CRYPTOCURRENCY AS INTANGIBLE ASSET

The US GAAP defines an intangible asset as one that lacks physical substance and is not a financial asset. They can have either a finite or an indefinite life. This definition covers cryptocurrencies. So, if there is no inherent limit imposed on the useful life of the cryptocurrency in a company, cryptocurrencies could be accounted as indefinite-lived intangible asset, being recorded at cost, and adjusted at fair value.

IX. CRYPTOCURRENCY TREATMENT-COMPARATIVE TABLE BETWEEN IFRS AND US GAAP

A continuation we have a recapitulation between the accounting treatment for cryptocurrencies under the two normatives previously seen.

	IFRS	US GAAP
Cash/Cash Equivalent	✗	✗
Inventories	✓	✗
Financial Instrument	✗	✗
Intangible Asset	✓	✓

Table 2: IFRS vs US GAAP (own creation)

PART 2
-
RESEARCH PROBLEM

CHAPTER 6 – ACCOUNTING CRYPTOCURRENCIES

Once we establish the basis for this research that is based in a qualitative method, we will analyze a case study that will help us to understand how cryptocurrencies are being accounted and the issues that this could present because the basis are not well established.

We are going to examine a practical case that propose Gregorio Labatut from Universidad de Valencia, Spain (Serer, 2021).

I. PRACTICAL CASE

A society from the telecommunication area has been realized the next following transactions with cryptocurrencies:

1. They are mining to issue cryptocurrencies. The society through the selling of the cryptocurrencies pretend to get financing for its projects.

Under these circumstances, they issue 10.000 cryptocurrencies, with an emission cost of 15.000 euros. For the year-end closing we know that there has been a variation in the value.

Case a) There has been an increasing in the value for 5.000 euros.

Case b) There has been a decreasing in the value for 5.000 euros.

Solution proposed: As the company is looking to sell this cryptocurrency in the normal course of business, we should classify them as Inventories, valuing at cost. In this case, the issue cost.

Emission

-----x-----

Inventories- Cryptocurrency	€ 15.000
Counterparty Account (1)	€ 15.000

-----x-----

(1) In this case, the counterparty should be an account from earnings.

Case a) There has been an increasing in the value for 5.000 euros.

Solution: There is no movement. At the year-end will be inform in the notes.

Case b) There has been a decreasing in the value for 5.000 euros.

Solution proposed:

Impairment Recognition

-----x-----

Impairment loss of cryptocurrency	€ 5.000
Accumulated Impairment loss	€ 5.000

-----x-----

2. The society has the intention of making a long-term investment. They acquire Ethereum for € 40.000. At the year-end the value of the cryptocurrencies is € 45.000.

Solution proposed: As the intention is to hold the cryptocurrencies in the long term, we are going to classify them as intangible assets.

Acquisition

-----x-----

Intangible Assets in Cryptocurrency	€ 40.000
Counterparty Account (2)	€ 40.000

-----x-----

(2) In this case, the counterparty account should be the method of payment.

At the year-end, the increase of the value will be informed in the notes.

The two previous examples show that the proposal from the IFRS works, and it is possible to account cryptocurrencies under Inventories and Intangible assets. But after, he proposes three more examples.

3. The society search to get financing through a crowdfunding with bitcoins, giving a total of 100.000 euros.

Solution proposed: According to him, it should be an equity instrument registered at cost.

-----X-----

Counterparty (3)	€ 100.000
Capital in cryptocurrency	€ 100.000

-----X-----

(3) He doesn't specify to which account belongs the counterparty. But according to the IFRS, the counterparty should be an Intangible Asset in cryptocurrency. Now, if the cryptocurrency is going to be sold in the normal course of business, we could classify them as Inventories.

4. The society acquires 10.000 euros in Bitcoin. The intention is to realize payments to suppliers in the transactions trying to simulate credit cards, through the "payment tokens". At the moment of paying, the value of the bitcoins increases to 11.000 euros.

Solution proposed:

Acquisition

-----X-----

Other commercial effects in Cryptocurrency	€10.000
Counterparty Account	€10.000

-----X-----

Payment

-----X-----

Suppliers	€10.000
Other commercial effects in Cryptocurrency	€1.000
Other commercial effects in Cryptocurrency	€10.000
Benefits in cryptocurrency	€1.000

-----X-----

As we can see, in this case it doesn't apply any normative proposed by the IFRS committee. The bitcoins weren't classified either as Intangible assets nor as Inventories, proving the point already spoke in the introduction of this document. For not being well regulated, it gives free way to speculation of the accounting treatment, misleading the base of comparability that the financial statements under IFRS must accomplish.

We are going to analyze one more example.

- 5. The society has made a purchased of 100.000 euros. As a loyalty program with customers, the supplier gives to the society discount's coupons in Litecoins, with a value of 15.000. For the next purchase, the value has increased in 1.000 euros⁴.

Solution proposed:

First Purchase

-----x-----

Inventories	€80.000	
Advances to suppliers	€15.000	
Value added Tax	€20.000	
	Bank	€115.000

-----x-----

Second Purchase

-----x-----

Inventories	€16.000	
	Advances to suppliers	€15.000
	Benefits from cryptocurrencies	€1.000

-----x-----

In this case, cryptocurrencies weren't classified under Inventories directly, we used a bridge account to do the exchange in the second purchase.

⁴ The tax rate has been modified from the original example. We consider the tax rate from France (20%)

PART 3

-

THE PROPOSAL

CHAPTER 7 – PROPOSAL FOR ACCOUNTING CRYPTOCURRENCY

As mentioned previously, the uncertainty of the impact of cryptocurrencies in the market, along with its volatility, along with the intention of the enterprises at the moment of acquisition and the “patch solution” of the IFRS committee to account them, will impact directly in the comparability of the financial statements. Is that why that a proposal for a new way to classify cryptocurrencies could be interesting, making easier the job of the accountants and auditors at the moment of registration and the subsequent audit process.

A plausible option would be creating a normative for all the crypto assets. We need to remember that cryptocurrencies are one part of the existing universe of crypto assets. Not all crypto assets are cryptocurrencies but all cryptocurrencies are crypto assets.

The term crypto-asset is defined as a digital representation of value or contractual rights created, transferred and stored on some type of distributed ledger technology network and authenticated through cryptography (EFRAG , 2020).

One part of this new normative should focus on cryptocurrencies, where I would like to propose that only stablecoins that are “Fiat-Collateralized” and “Crypto-Collateralized” were accepted. Why? Because at the moment, those are the type of cryptocurrencies that are more regulated, that have a based in Fiat Money, and its volatility is reduced compared to other altcoins not classify as stabled.

Cryptocurrencies should maintain the definition given by the IFRS committee with some modifications:

- a. A digital or virtual currency recorded on a distributed ledger that uses cryptography for security.
- b. Not issued by a jurisdictional authority or other part.
- c. Does not give rise to a contract between the holder and another part.
- d. Collateralized with currency, foreign currency or commodities such as gold, oil, natural gas, among others.

The nature of the cryptocurrency should be maintained:

- a. It is capable of being separated from the holder and sold or transferred individually, and
- b. It does not give the holder a right to receive a fixed or determinable number of units of currency.

On the other hand, if Cryptocurrencies are being held for the course of the business, they should continue being accounted as Inventories, under the IAS 2, as we previously saw.

The problem of accounting cryptocurrencies as Intangibles Assets, is that the IAS 38 only counts with two ways to measure, the method of cost and the method of revaluation. None of these methods allow to measure the cryptocurrency at fair value, not allowing to recognize the profit or the loss.

When we use the cost method, the cryptocurrency is taken to cost less the accumulated impairment. As the cryptocurrencies have an undefined life, it wouldn't be amortized.

The IAS 38 allow the intangible assets be measured, after the initial recognition, using the revaluation model as an accounting practice. But this only should happen in an active market of cryptocurrency. We know this market is still developing, and not all the cryptocurrencies are equally negotiable (Arias, 2022).

The definition of Intangible Asset once again is "an identifiable **non-monetary** asset without physical substance". In the case of the crypto-currencies, even if they are non-monetary, their main objective is to work as a monetary asset.

They present the same movement as shares in the market. The purpose of creating cryptocurrency was having digital currency, but as it is not considered as cash, it could be based on cash, being suitable to apply IAS 21, where this normative could be applied in three cases:

- a) **In accounting for transactions and balances in foreign currencies**, except the ones that are linked to the IFRS 9 Financial Instruments.
- b) In translating the results and financial position of foreign operations included in the financial statements either by consolidation or by the equity mode.
- c) In translating an entity's result and financial position into a presentation currency.

This, in the case the cryptocurrency is collateralized with foreign currencies.

In the case that the cryptocurrency is collateralized with the currency of the own country where the accounting process is being held, at the year-end, it would be necessary to recognize directly the profit or losses to accounts of profit and losses respectively using the **fair value method**.

The investors must know the risks at the moment of investing in cryptocurrencies, thus accept the possible profit and losses generated by this type of currency.

CONCLUSION

Through all this document, we analyzed what are the cryptocurrencies, how they work, what regulations are implicated and we proposed a plausible way to improve it.

To summarize, under the IFRS normative, cryptocurrencies should be accounted as Intangible Assets under IAS 38 if the companies hold them for general purposes.

If the purpose is to hold them for the normal course of the business, they should be accounted under IAS 2, Inventories.

The cryptocurrency market is in continuous developing and changing, that's why any entity has decided to propose a final method to account them, which is completely understandable, given the cases in the past where no cryptocurrency project was sustainable during the time.

We can agree that numerous factors must be regulated, we know cryptocurrency keeps working in a grey area, giving space to commit fraud, money laundering and other types of crimes. Along with that, the creation of fiscal paradise, contributing to tax evasion and tax elusion.

Another factor that needs to be regulated urgently is the anonymity which work the cryptocurrencies. Accountants work with the base of transparency, supporting each transaction with legal and acceptable documents.

It would be interesting if the idea of triple-entry could be fully developed, where we could see numerous benefits (Vasquez, 2021), such as:

- Better data quality
- Less fraud
- Enhanced financial reporting quality
- Timeliness of data
- Embedded control of transactions
- Increased in the trustability
- Transparency
- Real time reporting.

If this is going to be implemented, it could be a challenge for the profession, especially for the elderly, that don't adapt to changes as easily as the youngest.

Also, we must consider that this project is full of limitations, given the constant development of the cryptocurrency market and also because creating new requirements and normatives could take years, and probably the whole system of blockchain and cryptocurrencies could change all over again. Also, because not many professionals have done papers with practical cases of how to account cryptocurrencies under IFRS. The cases that I could find weren't accounted under IFRS, not being suitable for the actual research.

But, as this research has its limitations, it also opens the path to future ones, such as how the triple-entry system could impact the accounting and auditing profession, the impact of cryptocurrencies in the environmental accounting, and the social and environmental responsibility of the enterprises with the pollution that could create cryptocurrencies. Studies have shown the enormous quantity of electricity they need to be created and exchange.

We can be sure of one thing, the world is in constant development in a considerable speed, we live in the world of the automaticity, instantaneity, and laws, normatives and regularization are going to be one step behind.

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TABLE OF FIGURES

Figure 1: The blockchain system (Source: PWC)..... 14

Table 1: Blockchain v/s Traditional Network (Vasquez, 2021)..... 15

Table 2: IFRS vs US GAAP (own creation) 23

GLOSSARY

1. Cryptocurrency: Encrypted digital money.
2. Bitcoin: First stable cryptocurrency that appeared in 2009. Created by Satoshi Nakamoto.
3. Altcoin: All the cryptocurrencies that are based in Bitcoins and or Ethereum.
4. Stablecoin: Cryptocurrencies with its value are pegged or tied to another currency, commodity, or financial instrument, aiming to provide an alternative to the high volatility that the most popular cryptocurrencies present
5. Shitcoin: Pejorative term that make reference to the altcoins with little to no value or a digital currency that has no immediate, discernible purpose.
6. Cryptowallet: protected file to store private keys and keep crypto safe. It allows users to send, receive and spend cryptocurrency.
7. IFRS: International Financial Reporting Standards
8. IAS: International Accounting Standards
9. US GAAP: United States Generally Accepted Accounting Principles
10. Single entry: Unilateral accounting entry to keep financial information.
11. Double entry: Accounting system where every financial transaction has an equal and opposite effects in at least two different accounts. It is based in the principle of
$$\text{Assets} = \text{Liability} + \text{Equity}$$
12. Triple entry: Proposal of the double entry adding a blockchain system.

TABLES OF CONTENTS

- ANTI-PLAGIARISM STATEMENT 4**
- ABSTRACT 5**
- ACKNOWLEDGMENT 6**
- TABLE OF CONTENTS 6**
- INTRODUCTION 7**
- PART 1: LITERATURE REVIEW- 9**
- TECHNICAL AND REGULATORY FRAMEWORK 9**
- CHAPTER 1 – CRYPTOCURRENCY 10
 - I. The very beginning 10
 - II. Cryptocurrency in the present 11
 - A. Altcoins 11
 - B. Stablecoins 11
 - C. Types of Stablecoins 12
 - D. Shitcoins 12
 - III. Acquisition of cryptocurrencies 13
- CHAPTER 2 - BLOCKCHAIN TECHNOLOGY 14
 - I. Blockchain 14
 - II. Blockchain vs Traditional Network 15
 - IV. Types of blockchain 15
- CHAPTER 3 – IFRS AND ITS RELATED NORMS TO CRYPTOCURRENCY 16
 - I. IAS 2- Inventories 16
 - II. IAS 7- Statement of Cash Flows 17
 - III. IAS 13- Fair Value Measurement 17
 - IV. IAS 21- Effects of Changes in Foreign Exchange Rates 18
 - V. IAS 32- Financial Instruments 18
 - VI. IAS 38- Intangible Assets 19
- CHAPTER 4 – CRYPTOCURRENCY AND IFRS 20
 - I. Definition of Cryptocurrency 20
 - II. Nature of the Cryptocurrency 20
 - V. Inventories 20
 - VI. Cash 21
 - VII. Financial Asset 21
 - VIII. Disclosure 21
- CHAPTER 5 – CRYPTOCURRENCY AND US GAAP 22
 - I. Definition of cryptocurrency 22
 - II. Cryptocurrency as Cash or Cash Equivalent 22
 - III. Cryptocurrency as a Financial Instrument 22
 - IV. Cryptocurrency as Inventory 23
 - V. Cryptocurrency as commodity 23
 - VI. Cryptocurrency as Intangible Asset 23
 - IX. Cryptocurrency treatment-Comparative Table between IFRS and US GAAP 23
- PART 2 - RESEARCH PROBLEM 24**
- CHAPTER 6 – ACCOUNTING CRYPTOCURRENCIES 25

I. Practical Case	25
PART 3 - THE PROPOSAL.....	29
CHAPTER 7 – PROPOSAL FOR ACCOUNTING CRYPTOCURRENCY	30
CONCLUSION	32
BIBLIOGRAPHY.....	34
TABLE OF FIGURES	36
GLOSSARY.....	37
TABLES OF CONTENTS	38