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The viability of cryptocurrency in relation to the response of financial institutions and governments

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Cryptocurrencies represent an alternative method of managing today's financial world. Operating in the blockchain network, these alternative methods of finance provide disintermediation in a digital world where all users are anonymous. The existence of cryptocurrencies has been a threat to current financial institutions, and governments are trying to figure out how to manage their usability in everyday life.

The author has decided to pursue this topic to answer the question; What is the viability of cryptocurrency in relation to the response of financial institutions and governments? Research into the response of The United States, European Union, Switzerland, China, and South Korea provides sufficient information due to their status as leading regions in investment and daily trading of cryptocurrencies. The basis for answering the question will be supported by expert analysis and economic theory. Data of historical price, value, and other statistics will show the effect that the large stakeholders have had on the cryptocurrency markets.

The analysis provided will utilize the SWOT and PESTLE methodology in order to provide a well-rounded conclusion. The response that governments and financial institutions have made indicate that cryptocurrencies need to be supervised and controlled by authorities due to their nature as an anonymous peer-to-peer network method of making transactions.

What the author concluded from research and analysis is that cryptocurrencies are viable in today as a source of investment when classified as an asset, commodity, or service. They will remain viable if governments have regulated it according to their guidelines. What the response of financial institutions have shown is that cryptocurrencies cannot challenge the current legal tenders and therefore cannot become new standard for currencies. Lastly, the author finds that cryptocurrencies will have to concede central aspects of their core identity such as anonymity to be implemented into legal framework.
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1 Introduction

Cryptocurrencies are defined in Merriam Webster dictionary as: “any form of currency that only exists digitally, that usually has no central issuing or regulating authority but instead uses a decentralized system to record transactions and manage the issuance of new units, and that relies on cryptography to prevent counterfeiting and fraudulent transactions”. While not technically money, their value is tied to real world currencies which from the very beginning has placed them in a very precarious situation.

The cryptocurrency as we know it today might not exist had there not been the economic crash of 2008. What Mr. Nakamoto saw was the banking industry losing its core purpose and becoming an overtly greedy money-producing mechanism. Because the banks had lost sight of their boundaries and relative power, he felt that there had to be an alternative.

As a result, Bitcoin came to fruition in 2009 when Satoshi Nakamoto, whose true identity has never been revealed, launched the first blockchain network into the world. Alongside his new network, Nakamoto had published a book where he went into extensive detail explaining why cryptocurrencies are a superior choice and better solution to our current financial system. This book is called “Bitcoin: A Peer-to-Peer Electronic Cash System, hailed by the most fanatical of cryptocurrencies as a manifesto of sorts.

“What is needed is an electronic payment system based on cryptographic proof instead of trust, allowing any two willing parties to transact directly with each other without the need for a trusted third party” (Nakamoto 2009: 1).

The first issue that he identifies is the interference of financial intermediaries in nearly every transaction that has been made in our economy. There is always a third-party present when money is transferred or moved from point A to point B. This third-party is often a bank or other financial institution given the responsibility to regulate and provide surveillance to the economy. He explains that not only does this waste time, the added fees that are charged by these intermediaries are essentially an unwanted burden on us. The second thing Mr. Nakamoto identifies is that our current system requires the financial institution because there exists a fundamental lack of trust between two parties who do not know each other.
To combat this, Satoshi Nakamoto would see the end of the intermediation of financial institutions by building a network whereby the concept of “trust” can be skipped due to the very nature of the network itself. This network, called a blockchain, functions on a ledger-based system whereby all transactions are done peer-to-peer and recorded simultaneously throughout the chain. As a result, every transaction is recorded and documented in one unifying code, erasing any need for a third party to “validate” something that is seen to all. By skipping out the middle-man, the transaction speeds would be instantaneous and “fool proof”. These alternative forms of finance are tackling and attempting to reach “disintermediation”; the attempt to reduce the influence of an intermediary, therefore bridging the gap between a producer and consumer.

Mr. Nakamoto decided that Bitcoin should not resemble modern currencies, and instead have a “limited supply” of 21 million bitcoins. Nobody can predict the exact year that the last bitcoin will have been “mined”, but if the mining power stays relatively constant, the projected year is in 2140 (Bitcoinwiki.com 2018). He explains that bitcoin should resemble the same system that gold had previously enjoyed; a limited resource that will serve as the basis of value for other commodities. With the progression and exponential growth of technology, it is interesting that his intention was to revert to an idea like the gold standard.

While one could argue that the ideology and purpose of bitcoin alongside the blockchain network is admirable and inspiring, the way it has been enacted and implemented has left more to desire. The spread of an uncontrolled and ambitious market has been flooded with illegal activities. This is because all owners and users of cryptocurrency have the option to remain anonymous. Logically, the reputation of the entire technology has been damaged and stained to many.

This paper aims to address the viability of cryptocurrencies in relation to how it has been perceived by the largest stakeholders; financial institutions, governments, and academics. To arrive at a proper conclusion, there will be an analysis on the response of the United States, China, European Union, South Korea, and Switzerland on their stance on both the blockchain technology and the currencies that currently operate within the technology.
1.1 Methodology of research and its limitations

The primary focus of this thesis is to provide a holistic analysis for the viability of cryptocurrencies in relation to how it has been perceived and responded to by the largest stakeholders. These stakeholders are governments and financial institutions of regions where these coins are increasing in demand; United States, Europe, China, and South Korea. As it stands there is an abundant source of literature available in this topic, but the difficulty is that there is no unifying or outright central theme that all can agree on. Furthermore, the existence of bias should always be considered heavily, as well as the purpose of writing regarding this topic. Another layer adding to the difficulty of objectiveness is that the time-lapse between present day and the first cryptocurrency is merely 10 years. The last 10 years have showed extreme variance in the perception of digital currencies; therefore, the date of publication needs to be considered in relation with what happened that year in the crypto markets.

A great disservice to cryptocurrency and the blockchain technology is that there is no public spokesperson or figurehead providing answers to our questions. Mr. Nakamoto is an anonymous figure, and no one has taken the steps to take his role. The result is that the “crypto community” has split into different groups campaigning for different objectives. Meanwhile, governments and financial institutions have organized in a better manner and tackled cryptocurrencies with greater unity. Research in this topic shows there to be more objectivity from traditional finance-oriented author, and more subjectivity from a proponent of cryptocurrency. We can attribute this to the lack of an organization for cryptocurrency and its relatively young age. Nevertheless, the author of this paper recognizes that cryptocurrencies need to be approached with an open mind and that the current financial institutions are reluctant to let these new forms of finance take off independently.

Another limitation is the technological intricacies of blockchain. The author has taken time and effort to understand how it operates, but to truly comprehend how it functions means to understand it on a computational and engineering-oriented level. The author understands that while this is a limitation, the general user and researcher of cryptocurrencies is unlikely to understand this technology and its very miniscule details either.
The last true limitation of this topic is that each cryptocurrency has its own story, identity and core purpose. There are currently over 1,624 cryptocurrencies according to coinmarketcap.com with a total market cap of $313,345,441,440 as of May 28, 2018. It would be ludicrous to analyze each individual cryptocurrency for this reason. As a result, this paper will primarily focus on Bitcoin when discussing cryptocurrencies due to its overwhelming dominance in the cryptocurrency markets.

Figure 1 CoinMarket Cap showing trading volumes (Coinmarketcap.com)

1.2 Literature Review

The literature review consists mainly of journal articles, guidelines, and legislature provided by experts and stakeholders with knowledge in the topic. Furthermore, the author has decided to take datasets that detail how cryptocurrencies operate in theory by models, as well as historical data of pricing and other variables. To arrive at a suitable conclusion, the data and research gathered will take into account some of the largest cryptocurrency markets in the world; China, United States, European Union, Switzerland, and South Korea.

The analysis of the status and identity of cryptocurrencies will be based on statements from experts and the usage of economic theory. Comparison of different arguments on the status of digital currencies will be addressed alongside ongoing drafts on its legality. The purpose of this data is to understand a reasonable future road for cryptocurrencies as it stands, not as it should be. Because each form of regulation attempts to classify these coins under a certain category, this dissertation is essentially attempting to find out if government's can incorporate cryptocurrencies into their financial policies. The paper also addresses the financial institutions stance and leverage in politics and the financial markets, because they have a great deal of influence in legislature.
2 Valuing Cryptocurrency

2.1 Cryptocurrency mining and hash rate

The technical methodology that partially determines the value is the hash rate / mining rate at which these currencies are mined at. The premise is that as more and more people with greater technological capabilities continue mining these currencies, the more difficult the algorithms that give the chance to obtain one become. Even with scarcity increasing, the value does not rise, but can even plummet. To combat this, many miners have joined together and created large “pools” where all the computer processing power is invested to, and each one gets a share relative to their output and energy consumption. Below is a chart depicting the path that Bitcoin will undergo assuming that rate of mining stays relatively constant until its last coin will be mined.

As the reader can see, the controlled supply of bitcoin will stagnate at around the 20 millionth bitcoin. The block height consequently is an inverse of the supply. The controlled supply chart does not present information on the difficulty, hash rate, or rate at which bitcoin is mined.
2.2 Market expectation

While the hash rate and mining efficiency determines the rate of bitcoin accumulation, the primary source for valuing cryptocurrencies is market expectation. The crypto markets have long been studied and researched to find any logical trends, with very little results. Because there has not been any clear indicator of how the crypto markets react to outside variables, coupled with the relatively short amount of existence, cryptocurrency prices fluctuate and change frequently daily. These prices are predominantly based on how the largest currencies relative to market share are valued. For example, Bitcoin and Ethereum have been the two giants whose prices in return have affected the prices of the rest of the coins. Even though there is no monopoly, the fact of the matter is that the largest currencies are the ones who shift the market itself.

What historical prices and trends have indicated is that the cryptocurrency exchanges go through frequent periods of bullish behaviour. A bullish market is one where prices and expectations increase over a short period. What happens afterwards some argue to be a “dip” “crash” or even “stabilization” in which prices go down hard and fast, recovering back to a comfortable medium within the next few days. Some view the bullish behaviour and its frequency as an indicator of insider-coordination within large “whales”, or pools of people owning bitcoin. As a result, some claim that the price of bitcoin to be manually controlled by these large coin holders. This in return has called for more involvement from authorities and supervision.

2.3 Supply of Bitcoin

Bitcoin aims to become the leading currency in the digital world and be compared to as the new “gold standard”. Like gold, the limited supply should reduce issues with inflation and historical value. However, unlike gold, bitcoin is not traded at high volumes and its liquidity as an “asset” is low. Furthermore, whilst the gold industry can control the rate at which it mines, bitcoin mining is based on a mathematical algorithm that operates at a specific rate. Therefore, bitcoin cannot respond to changes in demand by altering the amount that is accumulated. As a result, the price of bitcoin is volatile because even if the demand rises, the only way to increase supply accordingly is through selling it.
Figure 3 Timeline estimation of Bitcoin’s future supply by bitcoin.it/wiki (2018)

The linear line that represents plausible projected trends depicts that by the year 2140, the last bitcoin should have been mined. What we can derive from this is that the trend indicated a gradual rate of block height accumulation as time goes on. There is a certain number of bitcoins in each block, and it decreases as each block is mined. It is interesting to note that in the year 2018, we have already mined approximately 16.8 million bitcoins, around 80% of the total supply (Zuckerman 2018). The remaining 20%, or 4.2 million bitcoins will take more than 100 years to yield.

If the decrease in rate of mining continues, and we assume that there is a limited supply, shouldn’t bitcoin experience an increase in value as time goes on? This is where contemporary economic theory doesn’t apply anymore, and the expectations market shows its sway. This might explain why researchers and individuals with a strong background in economics are hesitant to immediately promote cryptocurrencies; economic theory and patterns are not applicable to these forms of finance. On the other hand, just as new technology and progress demands new ways of thinking and doing things, cryptocurrencies are revealing that maybe they aren’t meant to fit into current moulds.
2.4 Bitcoin circulation

The controlled supply chart above represents the different projected outcomes for obtaining all block heights, and the chart here shows the reality. Note that between July 2012 and January 2013, approximately 10.5 million or 50% of the bitcoins had already been mined. This graph shows the timetable of bitcoin supply and how much can be in circulation.

What we can derive from this is that Bitcoin circulation truly took off in 2010 and began to slow down after 2013. What we cannot see here is the difficulty associated with mining bitcoin, but we can infer that the decrease in rate of circulation can be associated partially with the hash rate; or its mining rate. The circulation does not necessarily affect the pricing, as we will see later in this section.
Figure 5 above shows that Bitcoin was a relatively cheap and arguably, an unknown virtual currency that only saw its popularity grow in 2017. The sharp rise in its price occurred in the span of around 3 months between October-December. It was quickly followed by a crash in the beginning of 2018. A fair argument could be made to state that the unrealistic and frankly, ridiculous rise in its price resulted in a bubble. This is not the first-time bitcoin has crashed; below is a short list of the largest crashes throughout its history.

Figure 6 August 17 2012- August 19 2012 (coindesk.com/price)
Figure 6 above represents the crash in 2012 occurred due to unknown circumstances, and prices did not increase to above $15 for the remainder of the year. While many might see this as a simple 6 dollar decrease in price, it needs to be taken into consideration relative to the market itself. Amounting to around a 57% decrease in “share price” is a crash in price. This was one of the first big crashes that Bitcoin experienced. Afterwards owners and people who follow the crypto markets became aware of how delicate the market is to sudden changes, even when there is no clear consensus as to what caused it.

Figure 7 above shows the bull market. Mt. Gox, a leading cryptocurrency exchange experienced the highest volumes of trading of all time. Subsequently, the servers slowed down and ultimately had to be shut down for 8 hours to “update”. The panic of server shutdown and the rise in price due to bullish behaviour led to a major crash. Many investors began panic selling because they saw the “server failure” as a sign of unsustainability or their money tied to an unreachable location, dumping their investment as fast as possible.
Figure 8 depicts how the Mt.Gox exchange began to halt withdrawals, leading to the most known crash in bitcoins current lifetime. There was never an explanation as to why withdrawals were halted. Panic selling ensued.

Figure 9 represents the most recent crash that most attribute to being the result of the crypto bubble having popped. Governments such as South Korea viewed this as an indicator of caution and instability.
2.5 Implications of historical prices

What we can derive from the historical data and some of the largest crashes of bitcoin is that the market is still young and fragile. Many opponents of cryptocurrency argue that these datasets prove how unstable and short lasting this alternative form of finance is. On the other side we have the proponents who claim that the cryptocurrency market is experiencing growing pains, therefore must often adjust and correct the pricing. Were the cryptocurrency market based on raw output, its value would be based on the number of users trading and mining relative to the hash rate. The pricing is more subject to change via outside forces and market expectations.

3 General perspectives on viability

The viability of cryptocurrencies is tied to its purpose. The purpose is based on how it is classified in each country. Because there is no consensus on agreeing how it should be approached, arguments on its future are based on how it will fit into the economy. This boils down to how economic theories align with cryptocurrency in general. The argument over cryptocurrency is not in its technology, but in its ideology and place in the world.

An economist with libertarian views might see Bitcoin as the future of money and an indicator of the progression and evolution of the financial industry into a more “free” and “capitalist” model. A Marxist might see the value in digital money because it unshackles itself from the constraints of intermediaries, therefore making it a fair and equal option for the masses. However, most economies in the world operate under some sort of capitalist model with a large focus on state control and other counter-measures that dissuade the economy into “freefall”. Based on this method of operation, Bitcoin poses a threat to the existing structures. It should come as no surprise that traditional economic researchers and intellectuals might find cryptocurrencies absurd in comparison to our current legal tenders.

3.1 Bitcoin as fiat money

Melissa L. Pattinson explains in her book; “Buying into Bitcoin, An Austrian Analysis of the Virtual Currency’s Sustainability”, the disadvantages and problems with bitcoin. She explains that a traditionally Austrian economic perspective does not find bitcoin to be legitimate because it fails Ludwig von Mises’ famous Regression Theorem (Pattinson
2011: 9). Ludvig von Mises’ Regression Theorem states that money isn’t a product or service, but instead is a way to get something of value. Because the “supply” of money exists by the amount in circulation and doesn’t exist because it is only a means to an end, there is no set price for it. What ends up happening is that because people accept money for goods and services, others will as well. Bitcoin fails the Theorem due to two main reasons:

1. Cryptocurrency has no commodity value
2. Does not have exchange value because it did not have value prior to being used as money

Coinciding with this is the argument that Bitcoin is “essentially a fiat currency” (Pattinson 2011: 8). A fiat currency is any currency that has no intrinsic value. Her stance on the matter is simple, bitcoin shouldn’t be considered a viable path for future financial institutions because of its core features.

A counter statement to this is that the current economic system functions through the usage of fiat money; all government issued currencies have been credited as legal tenders, but they are based on the faith and credit of the economy. These currencies used to be tied to a physical commodity; gold, but since the decoupling of the US dollar from gold in 1971, are essentially without a physical counterpart. The key difference here is that Bitcoin was created out of nothing, whilst government issued currencies had their origins in physical assets.

Furthermore, Pattinson argues that much of the inherent downsides of bitcoin are in its function; losing the original database of the user’s bitcoins would mean losing the bitcoins themselves, seeing as they cannot be accessed anymore. She goes onto criticize the “fool proof” system of the blockchain, citing the IP address tracing done by US government officials on a black-market website called SilkRoad, which utilized bitcoins to trade. Pattinson also states that because virtual currency is relatively untraceable, non-taxable, and is popular among the grey market, its reputation has mixed results.

The argument is based on an Austrian economic perspective and conflicts with the EU’s official stance on accepting bitcoin and other forms of cryptocurrency, which will be discussed later in the paper. Her concluding words are; “Because it has no foundation in
correct monetary theory, Bitcoin is not sustainable and is unlikely to survive in today’s economy” (Pattinson 2011: 22).

3.2 Disintermediation

Assuming that financial disintermediation was a good thing, all is still not crystal clear. Isaac Pflaum and Emmeline Hateley co-wrote a dialogue called: “A bit of a problem: national and extraterritorial regulation of virtual currency in the age of financial disintermediation”.

“for the potential benefits of disintermediation in financial services to be realized, regulatory authorities in the United States and elsewhere must address the risks posed by the regulatory gap that will be created by cutting out the middlemen.” (Pflaum & Hateley 2011: 1194).

To paraphrase; the 3rd party that currently operates as a financial institution such as a bank can be taken out of the equation, but the trench created needs to be filled by safety measures. What further escalates the issue is that not all owners of bitcoin have a bank account. Assuming cryptocurrencies would be accepted similarly to dollars, one would need a “safe” where to store the coins. Currently there is the digital wallet, which is nothing more than an encrypted location in the blockchain network where the individual’s “balance” is stored. This location is not tied to the person’s private information and losing the password or code to the digital wallet means permanently losing access to that account.

However, Pflaum and Hateley do give Bitcoin merit by mentioning of its abilities in remitting to developing countries, due to its fast speed and next to no transaction cost. Unfortunately, this can be risky because the funds can end up being used in funding terrorism, illicit drugs, and other activities in the black market. The authors explain that even the Financial Crimes Enforcement Network (FinFec) and Securities and Exchange network (SEC) are “ill-equipped to deal with the disruptive potential of Bitcoin (Pflaum & Hateley 2011: 1199). This is primarily due to the nature of the blockchain and its new technological capabilities; it is simply too new and too unknown to navigate.

There has been precedence for implementing an alternative way of making transactions, with some even become highly popular and legal. One of these cases is Paypal, a worldwide online payments system for online money transfers. It is an alternative to traditional payments such as checks and money orders. In 2002, Paypal initiated its IPO and as a
result is an actively traded stock in the New York Stock Exchange. There are grounds for comparing the roadmap that digital currencies are currently undergoing to the historic path that Paypal took.

3.3 Consensus today

Currently in 2018, the status of digital currencies has been rocked back and forth by an ideological tug of war. One side is the economic thinkers with strong foundations in classic economic theories. They abide by the principle that all theories should be realized equally in the real world and are therefore disappointed by this alternative form of finance. The status of bitcoin and other cryptocurrencies as fiat currency hinders its legitimacy. Furthermore, many might see the surge of digital crypto markets as nothing more than an attempt to disrupt the status quo of currently operating financial markets. Lastly, the fact that much of active trading and spread of content within the blockchain network occurs within an illegal network for products and services that otherwise would not be obtainable, stains its reputation.

On the other side countering the traditional economic thinkers are institutions and stakeholders who wish to see a shift in the global market’s foundations. “Risky” investors, proponents of the blockchain technology, and certain governments (to be discussed later in the paper) have faith that they are early adopters of a new era of finance. Instead of comparing new technology to the structures of the past, many proponents see a progression that solidifies the digitalization of our world. Libertarian ideologies and full-fledged capitalists have put their stakes in believing that bitcoin is here to stay.

Cryptocurrency can still be a viable source of investment if the investor is willing to take on extra risk on top of the market volatility. The case for its existence can only strengthen as more officials and influencers can validate its usage, which it currently lacks severely. Its potential outcome should be compared similarly to gambling whereas small investments with little loss can prove to be beneficial. The paper will go into more detail explaining how different stakeholders and regions have received this new digitalized financial system and market.
4 Response of Governments and Financial Institutions

4.1 Big Banks

The response of the big banks has mainly been a defensive one focused on maintaining the current status quo. Cryptocurrencies and the blockchain network could ideally replace the current financial system by erasing the need of the intermediaries. An ideal scenario for the banks would be to implement the crypto-technology into their current system, absorb the markets, and expand their operations. However, cryptocurrency operates without centralized control, and likely its community would detest the “opportunity” that banks would provide. Big banks have not ruled out cryptocurrency yet, and what remains to be seen is how these two financial mediums will coexist, if possible.

Alice Ross and Aliya Ram co-wrote an article in the Financial Times titled; “Big investors have yet to invest in Bitcoin” where they addressed the conundrum that many investors are facing; cryptocurrencies such as Bitcoin show promise but are not regulated. Furthermore, Initial Coin Offerings (ICO), much like Initial Public Offerings (IPO) have increased in popularity and aim to validate the digital platform. Large investment banks such as Merryll Lynch have even considered adding these coins to their portfolios by asking investors;

“Merryl Lynch asked institutional investors in September, […] long bitcoin was the most popular choice, […] the answers were no reflection on the investors’ own portfolios, […] there are still significant regulatory hurdles for asset managers that want to buy bitcoin” (Ross & Ram 2017)

Perhaps not to the surprise of many, derivates have even entered the crypto markets. With the long bitcoin call being the most popular choice, the belief is that there will be a price increase in the future. This was the case in 2017, when bitcoin exploded after the second half of the year. What we see here is an indicator of “dipping your feet into the water” to test the nature of the investment, but not committing yourself to it fully. One could argue this to be due to the unknown nature of digital currencies, or due to discrepancies in legislature. According to the authors, many investors are using “loopholes in traditional markets to get exposure to bitcoin”, proving that there is demand for it. Steven Englander, a currency specialist at Rafiki Capital of the Hong Kong hedge fund, believes
that central and commercial banks should be interested in cryptocurrencies as they are a niche market for people who have an interest in parallel currencies.

Sadly, the greatest anchor on the surge and rise of cryptocurrency is on its reputation and its scandals surrounding illicit activities and the ever so popular black market. Due to the nature of the technology around blockchain and cryptocurrencies, black markets such as Silk Road can operate in the TOR-network enabling and committing highly illegal transactions. Bitcoins could be considered “blood-coins" similarly to “blood diamonds” in that their origins might have traces of highly inhumane activities. This in return has discouraged investors from even considering investing here because the banks are highly sceptic of the sector saying it is “riddled with criminals and fraudsters” (Arnold 2017).

Martin Arnold quoted UK Finance on the Financial Times by saying:

“No regulatory regime is yet in place for virtual currencies. Firms’ own risk appetites will determine to what extent they engage with any firms engaged in virtual currencies” (Arnold quoting UK Finance 2017).

Even though banks have been known to take highly risky investments and essentially gambled on money with derivatives, these terms have been on their playing field. Cryptocurrencies are a whole new platform where individual investors dare to take risks, not entire banks. For example, banks like Metro Bank and other large British banks have left cryptocurrency investors no choice but to relocate their funds to regions such as Gibraltar and Poland, where regulation is less strict.

There is merit in saying that banks have been observant to note that there is potential with this market, should it find a way to coexist alongside current currencies. On the other hand, some banks such as J.P Morgan find any adopters of such currency to betray and risk their careers. Richard Waters, a Financial Times author, described how Jamie Dimon, the chief executive of J.P Morgan had “Sent prices down 10 per cent on Tuesday when he called the currency a fraud and threatened to sack anyone at his bank caught trading it” (Waters 2017).

Even with the risk of investors at large companies jeopardizing their position, there is a real incentive to not be left behind current trends and opportunities. Miles Johnson wrote an article on the Financial Times called “Wall Street finds it harder to dismiss bitcoin” where he explains the phenomenon called “FOMO” or Fear of Missing Out. This term,
as simple as it is, describes how people are willing to take uneducated and unnecessary decisions simply because they do not want to be left behind others. Fear of missing out also has an effect inversely on the prices of bitcoin; when people panic sell, everyone else thinks they should too.

To the outliers and anomalies within investors, bitcoin is already a part of their portfolio.

"Bitcoin appears to have graduated to even being discussed as a fully-fledged asset in some of the more rarefied offices of Wall Street and the City of London" (Johnson 2017)

Once again, here this investment is viewed as an asset, therefore being added to their portfolio similarly to stocks and other money market instruments. It is not being compared to current government issued currencies by investors, resembling the same attitude that banks have.

As it stands, currently the parameter that bitcoin reaches out to are the risky investors. On the flipside, investment banks are not as eager:

"we don’t want our clients to go near this stuff, but we will have to find a way to make it available if they keep asking" (Johnson quoting a London based private banker 2017).

Huw van Steenis, global head of strategy at Schroders and a member of the World Economic Forum’s fintech group, identified 3 key questions that must be answered before banks can breathe a sigh of relief.

1. Will the banks be weakened by new entrants?
2. Will banks become less important as lending might change forms?
3. Could banks lose control of payments if digital currencies that are kept private were to take off?

If the questions above have answers that satisfy banks; their future will not be endangered, the decision on how to proceed comes next. This presents us with a few follow up questions:

1. Would the banks try to adopt cryptocurrencies, or would there be a schism between the two?
2. What if the blockchain technology could be adopted without adapting its currencies?

The response of the Big Banks, notably in the United States, has been collectively antagonistic towards cryptocurrency. There is no agenda to promote investor’s and employees of the companies to consider diversifying their portfolio with these investments. The most obvious reason is the conflict of interest between these two financial platforms and how they threaten each other’s survival. However, the derivatives market and certain risky investors have gone ahead and took initiative, without full support from banks. The banks are aware of the importance of listening to their customer’s who experience “fear of missing out”, making them aware that there is a niche market for this. In summary, while banks are hesitant to give any thought to cryptocurrencies and see it as a threat to their existence, there are cases of risky investors within investment banks who fill a niche role and have involved themselves in the industry.

4.2 China

The significance that China has and will have for the future of cryptocurrencies is unsurmountable. This is largely due to the rise of China as an economic leader in the world. Even with a restricted market, China can allow these digital currencies greater growth and expansion than in most western countries. The blurry lines between regulation of cryptocurrencies and its adoption are why large factory sized mining operations conducted business in China. These mining factories take advantage of cheap fixed costs such as electricity, rent, and lighting. Unsurprisingly, China has become the largest “miner” of currencies such as bitcoin in the world.

Even with bitcoin mining being as popular as it is in the Chinese region, not all is well. The state authorities now are contemplating how or if they should implement this technology further. What they want is a consensus from the proponents of cryptocurrencies than can:

“address whether cryptocurrency is a currency/store of value or a payment system or a hybrid of both. They should also be prepared to explain if and when these products should be treated like securities or commodities or prepaid access.” (Middlebrook 2014: 27).
China’s government will continue to limit the potential of these digital markets until there is stability and regulation. Financial regulators are aware of its prospects and possible gains in the future but take precautions in order minimize risk. Therefore cryptocurrencies are listed as a “virtual commodity” instead of what their original purpose is. This domino effect continued as financial institutions were banned from trading it, whilst private citizens could own it. Baidu, the Google of China, immediately went to remove the option to use bitcoins to pay for security services, as Hill pointed in out in his Forbes article: “Bitcoin in China: The Fall-out From Chinese Government Banning Real World Use”. (Hill 2013). China’s stance emits the notion that while they are open to the future of it, right now they want to play it safe and keep it under strict guidelines and out of the banks reach.

With China taking a “one step forward, two steps back” approach, the value of currencies such as Bitcoin has been affected by their response. 2013 was an eventful year altogether, when BTC China overtook the previously largest cryptocurrency exchange, Mt. Gox, as number one. Incredible as it is, China’s markets took the reins on crypto exchanges even when directly causing its price to plummet. The next decisive agenda was to ban ICO’s (Initial Coin Offerings), which caused another aftershock to the crypto markets: “leading to a fall in the value of some cryptocurrencies of as much as 20 per cent” as Huw van Steenis pointed out in a Financial Times article called “The penny drops for central banks on cryptocurrency” in 2017.

China has been maintaining a defensive stance even though they have the capabilities to lead this new technology to unseen heights. The primary reason for this is that China exercises an authoritarian state capitalistic model with incremental reform and emphasis on growth through exports. China’s leaders want to manage the economy from the top-down and ensure that plans coincide with the government’s path. Technology such as blockchain can provide a boost to China, but only when it can fit into their ideology. The conundrum arises when we consider how the ideology that Mr. Satoshi Nakamoto spread conflicts and quarrels with China’s planned capitalistic model. Digital currencies are reluctant for state interference and third-parties parties in general. Furthermore, China as of 2017 has the second largest unbanked population in the world (Yang 2016 referencing World Bank 2016). The problem lies in that Bitcoin does not require a bank account to access, therefore the millions of “unaccounted” cryptocurrency owners could form their own market that is separate from official bank accounts. In such a controlled country, the
possibility of a split in the type of market would create too large a gap for authorities to manage.

The response of China towards cryptocurrency has proven that while it does not fully support or approve of its widespread utilization, they have not completely ruled it out of the equation. The qualms that the Chinese have against cryptocurrency are largely based on a difference of ideology and currently the incompatibility to regulate it. Deciding that these coins are not currency but rather a commodity prevents large Chinese banks from adopting it as a contender to the renminbi. They have gone as far as banning initial coin offerings (ICO’s) so that the market cannot expand its boundaries further. On the other hand, they are quite aware of its prospects and the widespread and highly professional mining operations that are conducted in large factories in certain regions of China. These mining projects are the reason why bitcoin is the most “mined” or “harvested” cryptocurrency in china, as well as the world. The fact of the matter is that China has not turned its gaze from this new technology and are merely putting certain counter mechanisms to decrease its growth in order to figure out a proper way to possibly integrate it. Unfortunately, from the perspective of cryptocurrency enthusiasts and investors, it would mean to abide by Chinese expectations of economic theory and giving up anonymity and free market expectations.

4.3 South Korea

Before the crypto boom took off in late 2017, the South Korean government had already banned Initial Coin Offerings in September. According to J. Kwon in CNN Tech; “The country is home to three of the world’s biggest bitcoin exchanges. On any given day, South Korea accounts for as much as 20% of all bitcoin trades around the world.” (Kwon 2017). This was back in December of 2017, when the demand for trading crypto was so high that local traders in South Korea came up with the term “Kimchi Premium”; the premium paid for Bitcoin by 15-25% over global prices (Kwon 2017).

The government of South Korea does not share the same sentiment and were worried about a possible crash. As a result, a special “task force” was formed that would research and study these digital currencies. Furthermore, South Korea has banned “some activities linked to digital currencies, including the trading of bitcoin futures. It’s also reviewing whether to tax virtual currency profits and transactions.” (Kwon 2017).
Politically, the South Koreans also fear that these currencies are potential sources of investment for North Korean armament. There has been discussion on the possibility of North Korea also mining cryptocurrencies. However, because there is very little proof of the relationship between cryptocurrency and North Korean military prowess, this paper will not delve into this matter.

In January 2018 the South Korean government issued regulations that banned the usage of anonymous bank accounts and names when trading cryptocurrencies. Cynthia Kim wrote an article on Reuters called “South Korea to ban cryptocurrency traders from using anonymous bank accounts” in 2018 describing the measures the authorities were willing to take:

“Starting Jan. 30, cryptocurrency traders in South Korea will not be allowed to make deposits into their virtual currency exchange wallets unless the names on their bank accounts matches the account name in cryptocurrency exchanges, Kim Yong-beom, vice chairman of the Financial Services Commission told a news conference in Seoul.” (Kim 2018).

The authorities in Seoul find this “crypto-obsession” that has the whole population in bitcoin mania to be a source of possible worry. Cha Myunghyun is the CEO of CoinOne, a major cryptocurrency exchange in South Korea, who understands the stance of the government, but also doesn’t think it will outright ban the trading. “It’s inevitable for the government to be concerned with cryptocurrency. But extreme measures such as the shutdown of exchanges would be going too far against the global trends,” (Ramirez quoting Myunghun, 2018).

Cha and his fellow peers follow the sentiment that the harsh reaction by the government is largely due to a lack of knowledge about the industry. South Korea has a similar approach as China in that they are banning ICO’s and want all cryptocurrency users to be non-anonymous. What the current set of events shows is that the South Korean government has begun to restrict and regulate the cryptocurrency markets and exchanges in order to lessen any possible crash. However, they are not banning the daily trading and existence, just tightening the grip on the market. The response is that they are willing to incorporate it, but it must be on their terms and guidelines.
4.4 USA

The response of the United States government on the status of bitcoin has been passive. USA has yet to classify it according to their legislature, instead treading on a grey and murky territory as Kaplanov explains;

“Bitcoins fall within a gray area under U.S. law in which they are not necessarily outlawed but still give rise to contractual obligations. Therefore, they should be treated like a local or community currency under the law—receiving full authority as a medium of payment under contract law, requiring taxation on income” (Kaplanov 2012: 150).

Stephen Middlebrook has argued that cryptocurrency could take the same route as PayPal, whose success story was mentioned earlier in this paper (page 14-15). While maybe not the most optimal, there is at least a clear path to be taken.

“Cryptocurrency as money transmission. This seems to be the current direction based on recent actions by FinCEN and the states. It is unclear that this route is optimal, but for those entities that can comply with federal and state money transmitter requirements, this option provides a safe haven. One example of a payments innovator that used this option to enormous benefit is PayPal.” (Middlebrook 2014: 28).

Given the possibility that the United States would accept the usage of bitcoin in a larger scale, there needs to be a few ground rules established to proceed. The primary thing that the cryptocurrency proponents should do is:

“address whether cryptocurrency is a currency/store of value or a payment system or a hybrid of both. They should also be prepared to explain if and when these products should be treated like securities or commodities or prepaid access.” (Middlebrook 2014: 27).

How does the United States regulation view cryptocurrencies in relation to the purchasing power and influence of the American dollar?

“According to the F.B.I “it is a violation of federal law for individuals, […] or organizations, […] to create private coin or currency systems to compete with the official coinage and currency of the United States,” (Guadamuz & Marsden quoting the FBI 2015).”
Currently because Bitcoin is not considered a currency in American law, it is able to exist. However, the premise of the existence of crypto markets and its currencies is to challenge our current financial system and its physical legal tenders. This will prove to be a problem. If neither side is willing to compromise, the stalemate will simply keep existing. The fate of cryptocurrency in the United States will depend on the lobbyists and influence of Wall Street on American politics. Should investment banks and the American stock exchange welcome the existence of these assets, a swift and quick regulation by the American government would ensue. On the contrary, if the negative feedback by large stakeholders such as JP Morgan continue, politicians in Washington might decide to end the fate of bitcoin before it even shoots off.

Lastly, the United States government needs to distinguish the boundaries of cryptocurrency on a federal and state level. If the responsibility of creating a framework is left to the states, the result would be much like how gambling is treated in legislature. This would be a severe setback for the longevity and usability of cryptocurrencies in the United States. It would be in the interest of all stakeholders that legislature be drawn up at a federal level instead.

4.5 European Union

The European Union has managed to set things in motion regarding the implementation of cryptocurrency in legislature. While some could say this to be because of a generally positive reception of this technology in Europe, it is also likely because the EU needs to respond quickly to avoid bureaucratic problems. Furthermore, the European Union has not prohibited or limited the mining operations like China, and there is a growing market here that is establishing a long-term production for these currencies.

The approach that the EU has taken is to start with an open mind and consider the possible outcomes of coins such as bitcoin. In 2014, the European Banking Authority (EBA) published an analysis and opinion concerning the risks of virtual currencies if they are not regulated. What they found was that while the legality of digital currencies is murky, there are merits to its existence. Their analysis was completed by utilizing a tool “which can build EU legislation concerning cryptocurrency in the future” (Nahornia, Leonova & Skorokhod 2016: 116). Even without a clear roadmap for cryptocurrency, the European Union is attempting to construct a rigid framework for it.
Iryna Nahornia, Kristina Leonova, and Vladyslava Skorokhod co-wrote *Cryptocurrency in the context of development of digital single market in the European Union* and stated that: “Despite the fact that the concept of Bitcoin lacks clear legal framework, the EU regulatory bodies tend to agree that Bitcoin is legal” (Nahornia, Leonova & Skorokhod 2016: 116).

What we see here is an attempt to find a compromise and solution for the existence of cryptocurrency within or separate of the financial markets. Great results in 2018 were met when the European Commission formally drafted a list of changes to be amended to directives 2015/849 and 2009/101 in the following manner:

**II. Regulation of virtual currencies**

Virtual currencies are a marginal phenomenon at present, but it is possible that they will become increasingly important. At the same time, it is clear that they can be misused for criminal purposes. The Commission therefore proposes to make virtual currency exchange platforms and custodian wallet providers subject to some of the same reporting obligations as traditional financial service providers. In this framework, national FIUs should be able to associate virtual currency addresses with the identity of the owner of virtual money.

These are mentioned in Amendment 5 recital 6 and Amendment 6 recital 7, with justification explained as so:

“Whilst it is desirable to lay down rules to prevent the use of virtual currencies for money laundering, the European Union should not necessarily do so in such a way that endorses the use of such currencies”.

These amendments are not meant to define the purpose and classification of cryptocurrencies, but rather make them subject to the same laws and regulations as “traditional financial service providers”. In comparison to other regions such as North America and Asia, this is a great step forward that should set precedence.

The European Union has quite the challenge in finding a suitable and reasonable middle-road for cryptocurrency since there are 28 countries within the union, all with their own opinion of this matter. Success of cryptocurrency in Europe means that there is a single
market in the region, otherwise issues of legality and classification arise, making it too difficult to trade across borders.

4.6 Switzerland

While the European Union has been contemplating effective ways to regulate and control the possible cryptocurrency markets, Switzerland has proactively campaigned and made steps to become a leading influencer and base for all digital currencies. Johann Schneider-Ammann, an economics minister in Switzerland told financial times that his country aims to be a "crypto-nation" (Financial Times, 2018). FINMA (Swiss Financial Market Supervisory Authority) made a press release on the 16th of February 2018 where they published their “ICO Guidelines”. As Initial Coin Offerings have become increasingly popular as a source of raising money, Switzerland wants to become the place where ICO’s can thrive.

What makes Switzerland proactive in the cryptocurrency market is that while it recognizes the absence of solid regulation in the market for digital currencies, they have initiated a categorization for future ICO “tokens”. Tokens are the coins that are paid out from initial coin offerings, which they divided into 3 categories. These categories should encompass all current and future tokens.

The figure in the next page represents the Swiss vision of how cryptocurrencies to be classified within three prominent categories. These three categories are based upon the usability, purpose, and overall value that they bring. It is important to note that not all countries or individuals think of cryptocurrencies as being innately different from one another, while some such as the Swiss government find there to be great contrasts within the crypto markets.
FINMA will base its determination as to whether tokens qualify as securities on the following legal definitions. Securities in the sense of the Financial Market Infrastructure Act (FMIA) are standardised certificated or uncertificated securities, derivatives and intermediated securities (Art. 2 let. B FMIA), which are suitable for mass standardised trading, i.e. they are publicly offered for sale in the same structure and denomination or are placed with more than 20 clients, insofar as they have not been created especially for individual counterparties (Art. 2 para. 1 FMIA).

In contrast to other large stakeholders such as United States or European Union is the fact that the Swiss have formally decided to rule out cryptocurrencies (payment tokens in their framework) from being a security.
“Given that payment tokens are designed to act as a means of payment and are not analogous in their function to traditional securities, FINMA will not treat payment tokens as securities. This is consistent with FINMA’s current practice (e.g. in relation to Bitcoin and Ether).”

The Swiss have identified that there are various “legal opinions” on the status of cryptocurrencies as securities, and should the status of these tokens change, FINMA would “accordingly revise its practice”. (FINMA 2018).

Once the token has been placed under a certain classification, its legislature will fall under existing regulation. For example, should a token be considered a security, it will follow the securities regulation. The Swiss government take very seriously the implication of issuing new tokens and have included the Applicability of the Anti-Money Laundering Act (AMLA) in the same guidelines. The purpose of the AMLA is to protect the financial system from financing terrorism and money laundering, and anyone who provides, manages, or issues methods or means of payment services is subject to the AMLA. Below is a chart that the FINMA provided in the Guidelines that depicts the rationale behind the classification of different tokens and their status as a security, or non-security.

![Figure 11 Classification of Tokens in Switzerland (Finma ICO Guidelines 2018)](chart)
The approach that Switzerland has taken represents a pragmatic yet welcoming at the same time. The legislature and regulation that has existed before the surge of cryptocurrencies is not likely to alter for these tender's. Instead the token's will adjust according to Swiss rules. Banking and financial legislature in Switzerland has always been strong and stable, therefore it should be an incentive for ICO’s to be established there. What this means for investors is that if they abide by the Swiss rules, they will enjoy a competitive and positive market, which is exactly how the Swiss want to be viewed as.

5 Analysis of Cryptocurrency in today's environment

The author of this paper has chosen to utilize the SWOT and PESTLE analysis methodology to successfully examine what cryptocurrencies can and cannot offer for the world, and with what cost. The SWOT analysis enables the reader to understand the basic premise of what cryptocurrency has to offer and provides an overview from a non-nation-oriented perspective. The PESTLE analysis also deems itself valuable because it takes into account the outside forces that are affecting cryptocurrency’s status. It must be mentioned that these two tools of analysis are meant to offer perspective from a worldwide standpoint, because every country and region has its own stance on this. The author recognizes this and felt it best that both methods of analysis should be represented each as one large chart. The alternative was to make a chart of each country separately, which the author felt to be too repetitive and structurally straining. Furthermore, looking into cryptocurrency today means to understand how quickly and unpredictably its status can change. Therefore, it is best to analyse these currencies from a concrete standpoint; these are features that are integral to its functionality.

Important to remember is the fact that because the cryptocurrency “climate” is so unpredictable and reactive, the analysis provided investigates cryptocurrencies from the first half of 2018, basing its opinion purely from this time-period. This needs to be emphasized because the analysis has data and critical aspects that could possible be removed or altered in the near future.
5.1 SWOT Analysis

**Strengths**
- Peer-to-peer network
- Transaction speed
- Blockchain Technology
- Disintermediation

**Weaknesses**
- Lack of regulation
- Tarnished image
- Increasing transaction costs
- No central figurehead or spokesperson / community fragmented
- Oversaturated by new currencies and initial coin offering's

**Opportunities**
- Digital payment system
- Replace current legal tenders
- Can be beneficial to third world countries
- Similarity to gold standard era

**Threats**
- Current financial system
- Government regulation
- Grey and black market funding
- Susceptible to bubble

Figure 12 SWOT Analysis of Cryptocurrency

5.1.1 Strengths

As was discussed in the introduction of this paper, the key strength and differentiation that cryptocurrency has to offer is the utilization of its blockchain technology, operating in a peer-to-peer network. Blockchain technology can offer a more secure and efficient platform for any network that requires daily usage. Marco Iansiti and Karim Lakhami wrote a journal article on the subject of blockchain in the Harvard Business Review saying that;

"With blockchain, we can imagine a world in which contracts are embedded in digital code and stored in transparent, shared databases, where they are protected from deletion, tampering, and revision. In this world every agreement, every process, every task, and every payment would have a digital record and
signature that could be identified, validated, stored, and shared. Intermediaries like lawyers, brokers, and bankers might no longer be necessary. Individuals, organizations, machines, and algorithms would freely transact and interact with one another with little friction. This is the immense potential of blockchain.” (Iansiti and Lakhami 2017)

The widespread adoption of such a system would transform our daily lives from the ground up. As it so happens, cryptocurrencies are the first large scale “product” that operate in this technology. On the other hand, blockchain does not need digital currencies to function, therefore the strength of cryptocurrency lies in the platform it utilizes. Without blockchain, bitcoin would not be as appealing.

Transaction speeds are another aspect provided by the blockchain, increasing the velocity at which “money” can be transferred between two points. Traditionally intermedation occurs when money is wired through because it must be approved and qualified by a bank or other financial institution, who take a small fee for this as well. These speeds are subject to the limitations of peer-to-peer networks, which fortunately have great functionality under larger workloads.

The decision to call disintermediation a strength is a personal choice by the author who realizes that not everyone sees it this way. It is a strength because the shortening of money transfers, communication, and extra third parties is found to increase efficiency and decrease costs. Furthermore, the author finds that any company or organization that attempts to place the direct seller closer to the buyer to be a positive thing.

5.1.2 Weaknesses

The most prominent and public problem that has been tarnishing the image of cryptocurrency is the prevalent and widely utilized TOR-networks who conduct highly illegal business and use cryptocurrency as method of payment. The reputation that bitcoin has carried out in the past is slowly improving, but that does not change the fact that the platform and attributes that cryptocurrency provides are ideal for the black market. Anonymity, difficulty in tracing source, and digitalization can be used for the wrong
purposes. This has been the primary argument from governments that require a great deal of changes to the network itself before it could be implemented in a correct manner.

Going alongside the bad reputation, the lack of regulation within the cryptocurrency network is further pronounced when it becomes clear that there is no central figured head or spokesperson. Satoshi Nakamoto for all intents and purposes is just an alias without an identity. A fragmented community that suffers from legitimacy will have problems achieving satisfactory legitimacy in the eyes of the public and the governments. This is further highlighted by the lack of any effort to compromise or discuss potential changes to be made for crypto. As effective and efficient the blockchain network is, it too has its limitations.

The last 5 years have shown us that when it is placed under intense workload, the transaction speeds decrease by a large amount. The effect of this in the past has been that certain exchanges have temporarily shut down their servers or informed of issues in the stability, causing quick and sudden price dips. Increase in daily trading and userbase means that the block chain platform needs more resources to function at the same level, which in return has caused the transaction price to rise. Originally there were no transaction costs because the userbase was so low, and transaction speeds were as ideal as can be. It is ironic that the popularity of crypto-trading means that exchanges have begun to require transaction costs and the transaction speeds have slowed down; the very things that the blockchain aimed to get rid of.

The next big weakness of cryptocurrencies is the oversaturation of its market by too many new entrants. As was mentioned in the very beginning of this paper, there are over 1,624 cryptocurrencies currently circulating in hundreds of exchanges. The surge in rate of initial coin offerings gives rise to unnecessary tokens. As is evident from the chart below, the total market capitalization of all “others” is only 20%. Granted, it has increased greatly since 2016, and Bitcoin has lost market cap, but it seems that this is because of injecting new coins into the market and not because the previous coins have increased in trading value and volume.
What also seems quite evident here is that with the decrease in Bitcoins’ market dominance in terms of capitalization, the increasing availability for new ones can cause price fluctuation and market capitalization for existing ones. Ripple, much like its name implies, seems to go through rippling effect where it will see great demand, only to afterwards dwindle down. The author believes this to have a negative consequence to the cryptocurrency market, because long-term valuation of any existing cryptocurrency cannot be based upon historical data with precision. Furthermore, this chart also highlights just how dominant the few big cryptocurrencies truly are.

5.1.3 Opportunities

Progressing further into digitalization through block chain is highly plausible, and cryptocurrencies could very well tag along for the journey. It is very possible that cryptocurrencies can change our current financial system from the ground up. What these digital
currencies can offer is a more transparent network that puts the buyer and seller closer to each other. These opportunities are assumed to be possible should their status be improved into mainstream usage.

A primary opportunity for cryptocurrencies is to be a long-term solution in an increasingly digital era. As we see payment methods and transactions becoming faster, shorter, and more efficient, digital currencies can meet this demand.

The possibility that a new gold standard would arise from the utilization of these digital coins could provide much needed stability in currency valuation. While a ridiculous thought in the current day and age because of cryptocurrencies’ price volatility, it could be an outcome given time and awareness of blockchain. The author believes that the deviation from the gold standard was one of the principle examples of the financial system losing sight of its purpose.

5.1.4 Threats

Cryptocurrencies in 2018 have many hurdles to cross. The primary threat are existing financial institutions and their foundations. Because there has been no indication of flexibility from the proponents of cryptocurrency, banks and other institutions are reluctant to co-exist or adopt these new tokens. Governments prefer stability and long-term strategy, something cryptocurrencies cannot currently provide.

The position of the current financial system has its roots deep in our everyday lives. Most of us do not question the practices and edicts, but rather have accepted them as is. Long term planning for many involves financial obligations, and as such it would be quite a transition moving to a cryptographic standard. In addition, the government regulation required for implementing cryptocurrencies into our everyday life are a threat to the core values they represent.

The stubborn nature of crypto-communities has led to the development of a highly professional yet illegal black market. The vendors that operate through anonymity provide a marketplace for funding in terrorism, drug trade, and other cases where human and animal rights are violated severely. The author would like to point out a fair comparison that could be argued between the similarities that a blood diamond shares with digital currencies; the end user does not necessarily realize or know the origins of their asset.
The last big threat that the author argues for is the imminence of a bubble, or the susceptibility of cryptocurrencies in forming one. What the second half of 2017 showed through charts is that the value of coins such as Bitcoin and Ethereum sky rocketed into unreasonable heights, only to be met by a crash in the very end of 2017. The speculative market was fuelled by investors expecting to get rich quick, and as such a bubble was formed. Future bubbles can form again, especially when the expectations market is the dominant variable that determines cryptocurrency value.

5.2 PESTLE analysis

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Figure 14 PESTLE Analysis of Cryptocurrency
5.2.1 Political

The political factors that play a role in cryptocurrency are dependent on the region. What we can mostly see from throughout the world is that certain countries such as Switzerland are optimistic and willing to build around cryptocurrency, while countries such as China are more hesitant to give more fuel to the growth of the markets unless the state has more authority over it. In the middle ground we find the European Union and the United States, both whom struggle with figuring out the legal framework for it by trying to construct it around federal level. South Korea has had a mixed reception with these currencies because the government has begun to tighten the grip on its control, even when trading has been very active in the Korean peninsula. What the political structure needs is proper taxation, classification, and regulation.

The political landscape is hesitant to make reforms for a widely speculative and unruly digital asset. Cryptocurrencies themselves carry a slightly political message with promoting disintermediation and greater individual privacy. Governments that many regard as authoritarian are less likely to adapt or adopt cryptocurrencies, while governments that are seen as promoting policies that support individuality are more likely to be flexible in the matter. Ultimately cryptocurrencies have no real political support from any large political faction throughout the world because they are still seen as unstable and highly risky to invest in. The outliers in politics might make a case for cryptocurrency, but it is also fairly obvious that the status of cryptocurrencies is not something many care to campaign for.

5.2.2 Economic

The economic aspect of cryptocurrency discusses its status in our world. Some argue it to lack the features that make it a potential candidate to current legal tenders, namely the reference to it being fiat money. On the other hand, currencies such as bitcoin are being compared to gold, because there will be a limited supply in circulation. In addition, the author recognizes that its usability in the digital network is superb, but its inability to be in physical form might be an issue. Because a large percentage of the human population does not have daily access to computers or devices that allow the user to access their digital workspace, they would find it very difficult to manage their finances. Unfortunately, this cannot be alleviated because if cryptocurrencies were to be made physical
money, they would essentially become similar in status to current legal tenders. This is exactly what they are not supposed to be and go against their idea.

The economics of cryptocurrency cannot be predicted for certain, and its valuation is based most notably on the expectations market. As a result, the research and economic theory behind cryptocurrency is still underdeveloped due to its relatively short span of existence. Cryptocurrencies wish to be seen as a limited resource that will become scarcer and more difficult to obtain as it nears its last “mineable” coin. In addition, this should scale the value and price of these digital assets according to its supply, and the demand of the market.

5.2.3 Social

The social aspect of cryptocurrency is interesting to discuss, because the ideal user is anonymous, therefore the social networks would be very different from what we imagine. In the ideal crypto-world, each user has an encrypted user-id and their location would be untraceable. However, the reality is that this is a utopian perspective because in today’s societies, one’s digital footprint is only growing, not shrinking.

The little representation of the crypto-community has contributed to a negative and uncoordinated roadmap where we see segmentation occur depending on each currency. Coins such as Bitcoin Cash have been created to fix the “shortcomings” that Bitcoin has, with many users having originally used bitcoin. The author finds this to be an erratic and reckless way to represent cryptocurrencies.

5.2.4 Technological

The greatest aspect, as mentioned in the SWOT analysis, is the technological framework and foundation that cryptocurrencies are based on; block chain technology. The accessibility and scalability of the block chain means that cryptocurrencies can thrive in their platform. What the author found is that server stability is crucial for cryptocurrencies to be traded and used daily. This means that resources in building larger servers and new mining factories will directly influence the traffic that cryptocurrency experiences.
Cryptocurrencies are also the ambassadors of the blockchain technology, a technology that will find itself useful in any network requiring peer-to-peer connection. Supply chain management, medical record database, and other functions that have large databases could and should find ways to implement aspects of blockchain into their current operating network. It is the blockchain technology that provides all technical and pragmatic uses of cryptocurrencies.

5.2.5 Legal

Legal framework for cryptocurrency is unevenly developed worldwide, with certain regions apprehensive and dismissive, while others flexible and optimistic. It is difficult to define the legal standard that cryptocurrency needs to have, and the author suspects that within the next few years it will become evident where cryptocoins will have a future, and where they will be outlawed. The legality will be affected by the political disposition of the target country, as well as the predominant economic theory that steers the countries markets. Most important is to settle the jurisdiction of the classification of cryptocurrency. If they were to be lawfully stated as an asset, commodity, or service, could their legitimacy see support from the law. The author realizes that each classification makes it behave and operate differently and chooses to abstain from classifying it personally. This is because the author believes that it is not the exact classification that matters, rather that it gets classified.

5.2.6 Environmental

While no natural resources are “mined” in the process of accumulating cryptocurrencies, there is a real cost to the environment. Large mining factories are built which in return draw a great deal electricity to operate and function properly. These mining factories utilize computer components that are made up of expensive metals and minerals such as nickel, gold, and aluminium. The ideal location for mining cryptocurrencies is in a region where electricity is cheap, and the climate is cooler than average in order to decrease heating issues that occur from the mining. Furthermore, the noise level that these factories create is incredible high because the fans that spin in unison create a “jet-engine” like sound. This is not ideal for local communities or wildlife habitats because it disrupts the ecosystem and region as a whole. Lastly, the expiration and life span of
these electronic parts is finite, and recycling it is complicated. As a result, the broken and omitted equipment often goes straight to the trash or gets thrown into large wastelands.

6 Future road

Cryptocurrencies are striving to outlive the current financial system and as Mr. Nakamoto had hoped, replace them with a completely cryptographic and digital network. There are many variables to consider, all creating a fork in the road for crypto. The zero-sum game nature of cryptocurrency means that it will face a path with many dead ends. By looking back in history can a realistic expectation and projection for cryptocurrency’s future be made.

Within the last 10 years of its existence, cryptocurrency has facilitated and grown a market for something that has no innate value. Furthermore, this market has matured and gone through numerous hardships to keep developing. The growth and status of the cryptocurrency exchanges has initiated governments and financial institutions to look ahead to the future of finance. The fact is that governments recognize the possible viability and offering that crypto’s have, but the current climate is not hospitable enough.

The author estimates that cryptocurrency standards and legislation will find convergence in a worldwide scale once the largest stakeholders have come to an agreement together. Without a unified agreement, cryptocurrency will remain in a grey territory whereby its legality varies from region to region. The future road of cryptocurrency will be decided by governments and other large institutions. The classification of cryptocurrencies still remains a mystery, with the most probably options being as an asset, commodity, or service.

Why cryptocurrencies cannot and will not enjoy the status of legal tenders as a currency is because governments and large banks are not willing to see large scale changes or reforms to the current financial system. If Bitcoin were to become a digital asset, suddenly it would not threaten the dollar or the euro anymore because it wouldn’t directly compete in the same market.

The author believes that cryptocurrencies will remain in our daily lives, growing in users daily, but will not threaten the survival of current legal tenders. Instead, cryptocurrencies will be classified as an asset or commodity, and remain a choice of investment.
7 Conclusion

Cryptocurrencies have stirred the finance world by provoking a thought; is the current framework and foundation truly the best option? Originally created to represent as a solution to the shortcomings of current financial institutions, digital currencies operating in the block chain have created a peer-to-peer network that operates completely in the digital world. The most popular currency is Bitcoin, and over a thousand have followed since.

The purpose of this paper is to find out what the viability of cryptocurrencies are in relation to the response of governments and financial institutions. The response of governments throughout the world has been different, but financial institutions such as large banks have been reluctant to coexist with these new currencies. To large financial institutions such as investment banks, cryptocurrencies are a threat that challenges their own existence because of disintermediation. All governments discussed in this paper have allowed their citizens to trade and own cryptocurrency, but also have tightened the grip in varying degrees as a response to its volatility.

The future viability is dependent on if cryptocurrencies will be properly classified and regulated. A viable cryptocurrency in today’s world means that it does not provide anonymity, can be taxed accordingly, and will not replace current legal tenders. Cryptocurrencies will find a suitable classification that will solidify their position and prove their viability.

The author believes that cryptocurrencies can indeed by viable in today’s world should they abide by upcoming regulations and changes. The lack of a central figurehead for the crypto-community will result in both parties finding a common middle ground, whereby a compromise skewing more towards the requirements of governments will occur. The author also expects certain core values of cryptocurrency to be changed in order to align their purpose more in accordance to the authorities. The core values that cryptocurrencies will give up are anonymity and surveillance in return for a digital asset with levers and locks in place to hold the market together. Furthermore, the cryptocurrency market will grow and gain more adopters once it becomes streamlined to government policies, but it will not challenge the status of today’s legal tenders such as the American dollar.
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