

# CRYPTOCURRENCY AS AN ALTERNATIVE CURRENCY IN MALAYSIA: ISSUES AND CHALLENGES

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**Abstract:** Fintech (or financial technology) is the current driving force behind innovations in the financial services industry. One of the most debated innovations is cryptocurrency, or digital currency, which uses blockchain technology to make a direct electronic payment between two people possible, without going through a third party (like a bank) or expensive intermediaries in order to save costs. This “future money” is pressurising central banks to manage the looming threat of redundancy as it overshadows “fiat currency” in a world of infinite fintech possibilities. Bitcoin, being the first decentralised cryptocurrency, will be the focus of this research. This digital currency is not produced by minting money in an unlimited supply, but through a virtual “mining” process designed to control the supply of “money” and make it more valuable. The increasing pace in financial innovation is pushing regulators to make a change in the way they define money and what money can be. Traditionally money is used to serve as a medium of exchange, legal tender for repayment of debt, standard of value, unit of accounting measure and a means to save or store purchasing power. Bitcoin may not fulfill all the functions of money but its scarcity value, anonymity (or pseudonymity), transparency, and autonomy from the government, make it attractive to users who are speculators, traders, merchants, consumers and netizens disenchanted with fiat money. Despite the alluring features of Bitcoin, it is not spared from potential abuses such as webcrimes, tax evasion, fraud, online black markets, money laundering and terrorism financing. In this paper, a forensic examination of Bitcoin’s benefits and risks will help regulators decide whether to adopt cryptocurrency and provide an appropriate framework to regulate it based on other jurisdictions’ approach. This paper recommends that Malaysia should fully embrace cryptocurrency due to global trends - the Islamic Development Bank is developing Shariah compliant contracts using blockchain technology; China is leading the drive to develop its own national cryptocurrency to complement fiat money; and a Shariah-compliant cryptocurrency has already entered the market backed by gold (Onegram). Financial and regulatory architectures in Malaysia should accommodate these changes to remain relevant. In addition, future research is recommended focusing on developing a Shariah compliant national cryptocurrency that is unique to Malaysia.

**Keywords:** fintech, blockchain technology, cryptocurrency, cryptography, Bitcoin, digital asset, webcrimes, national cryptocurrency, Shariah compliant cryptocurrency, gold backing.

## Introduction

The world we live in today is deeply embedded with and enabled by a web of information and financial technology. It is fast-paced and everything is required to be instantaneous. We are existing in a civilisation where the mantra “information is power” and “speed spells success” continue to control our body and mind. The faster one gets information, the more “enlightened” one becomes, not in the spiritual sense, but in the virtual sense. The new generation of youths (the Millennials and Generation Z), is experiencing everything in the virtual world with its infinite possibilities. The real world is seen to be restrictive in their “tasting of life” due to physical boundaries. Likewise, in the financial world, business is increasingly transacted in the virtual universe. It is impossible to stem the tide of change – “we are now entering into a globalised borderless digital world where the knowledge pyramid is being inverted. By 2020 there will be two (2) billion millennials, the majority of them from OIC countries. These two billion tech-savvy young millennials understand big data and know the many potential uses of data analytics, social media and social network based on trust. The traditional way of doing business may become irrelevant or obsolete.”<sup>1</sup>

We have seen fintech driving a new way of raising funds or seed capital through crowd funding. Due to a high incidence of abuses related to this innovative fund raising method, Malaysia has introduced regulations to supervise this market through its capital market regulator, the Securities Commission of Malaysia. Malaysia is experiencing another financial innovation (specifically monetary innovation) that involves the use of cryptocurrency (Bitcoin, Altcoin, Ether and all its derivatives) as a medium of exchange in virtual transactions.

Consumers today want a cashless economy through digital currency. They want a faster and hassle-free payment system for various reasons including the dissatisfaction with fiat currency and the need to cut out expensive middlemen/intermediaries (like banks). The current “mining” and “circulation” of Bitcoins (as the first decentralised cryptocurrency in 2009) is reported to be a game changer and is taking the world by storm. Bitcoin adoption and usage are increasing everywhere. Some futurists predict that cryptocurrency will eventually replace gold; it will also replace the US Dollar as the world’s reserve currency; and the price per Bitcoin will eventually increase over a thousandfold to reach \$1 million per coin due to their relative scarcity,<sup>2</sup> combined with their superior production value and utility. This phenomenon could pose a threat to central banks’ monetary and exchange rate policies, and by introducing a competitive currency it could end the state’s monopoly over money.<sup>3</sup>

Due to the rise of Bitcoin and other cryptocurrencies, the authors embark on a critical examination of this decentralised digital currency and its blockchain

technology with distributed ledgers. The pros and cons of adopting Bitcoin as an alternative currency will be explored in several sections of this article. The first section discusses the traditional role of money and the issues and challenges of adopting cryptocurrency as an alternative currency in Malaysia; the second section will undertake a forensic examination of Bitcoin creation, trading or usage, its benefits, and the risks related to cyber security and cybercrimes and other offences (tax evasion, fraud, online black markets, money laundering and terrorism financing); the third section presents a comparative study of Bitcoin regulations in selected jurisdictions and the new regulations being put in place by Europol,<sup>4</sup> Interpol and the Basel Institute to protect Bitcoin exchanges and users from money laundering risk; and finally the conclusion and recommendations.

### **Can Cryptocurrency be the Future of Money in Malaysia?**

The universally accepted four functions of money were famously analysed and summarised by William Stanley Jevons in *Money and Mechanism of Exchange* (1875) in the following couplet: “Money’s a matter of functions four; A Medium, a Measure, a Standard, a Store.”<sup>5</sup> The traditional role of money as we know it today is defined as anything of value that serves as a generally accepted medium of financial exchange; a legal tender for repayment of debt; a standard of value; a unit of accounting measure; and a means to save or store purchasing power. Legal tender means any official medium of payment recognised by law that can be used to extinguish a public or private debt, or meet a financial obligation. Legal tender can only be issued by the national body that is authorised to do so, such as the US Treasury in the United States, the Central Bank of Malaysia or the Royal Canadian Mint in Canada. Each country has its own money that is used as a medium of exchange within that country such as the US Dollar and the Malaysian Ringgit.

The global monetary system that most countries adopt and are accustomed to is based on a fiat system or “fiat money.” With the dismantling of the Bretton Woods system by President Nixon in the 1970’s, fiat money took over “representative money” (such as the gold standard) as a legal tender for repayment of debt. Since then, modern money is no longer backed by a stable commodity like gold.<sup>6</sup> Instead governments now issue money by fiat (government order). Today, legal tender means that the money is backed by the full faith and credit of the government, and the public has enough confidence and faith in the money’s ability to serve as a storage medium for purchasing power. In other words, the fiat system is based on a government’s mandate that the paper currency is legal tender for making financial transactions.

With the recent emergence of Bitcoin in 2009, a plethora of reports suggest that digital currencies are the “future of money.” Bitcoin is a cryptocurrency

that comes close to being the first alternative “money” or currency. However, if it fails to fulfil the four functions of money it cannot be money as defined by existing monetary systems. Going by the old definition of money, Bitcoin must overcome the first barrier: to get endorsement from the central bank to give it the “legal tender” status; Bitcoin will not be able to play the role of future money or be adopted as an alternative currency unless the authorities can change their current perception of money. Money in this case needs to be redefined to accommodate technological advances. Expanding further on the role of the alternative currency, the following questions are relevant: will it stand in competition with existing currency, or play a complementary role? If a “national cryptocurrency” is developed (as China is experimenting with) and regulated to complement existing currency, will the government intervention be acceptable to existing users considering the fact that they will be losing their autonomy; or will they see it as a benefit where they can get the best of both worlds (real money and virtual money)? Bitcoin proponents distinguish themselves from centralised fiat money through the benefits that Bitcoin users enjoy, like having real economic value, trading freely on unregulated open markets, and beyond the control of any government or other institution. Are users ready to give up these benefits of Bitcoin and be regulated by central banks or governments? Regulators will need to weigh the pros and cons before introducing a national cryptocurrency.

Due to Bitcoin’s elusive features or characteristics, some economists have explained Bitcoin and other digital currencies’ position as lying somewhere between currency, commodity and financial asset; it is also defined as a speculative asset that can be used as a medium of exchange.<sup>7</sup> Regulators have applied these descriptions to legally define Bitcoin, and in the majority of cases Bitcoin is always treated as a commodity, financial or trading asset (with tax implications that increase their transaction costs), but rarely as money or currency (with the exception of Japan and Australia). What Bitcoin can turn out to be really depends on the approach by regulators and the jurisdictions’ legal definition of it. Most countries are reported to be generally cautious about recognising Bitcoin as legal tender. The United States, for instance, has declared that “Bitcoin, unlike a dollar, has no physical form, is not legal tender, and is not backed by any government or any legal entity, and its supply is not determined by a central bank.” The Danish central bank clearly stated that, “Bitcoins are not money in a proper sense as there is no issuer behind them. Instead Bitcoins display the characteristics of a commodity to which users attach value. Unlike precious metals such as gold and silver, Bitcoins have no actual utility, bearing closer resemblance to glass beads.”<sup>8</sup> This declaration is in sync with the main critiques of Bitcoin “that there appears to be nothing tangible backing the currency.” But the proponents would say that in reality “Bitcoin is backed by its high production cost.”<sup>9</sup> A statement

was also released by the Central Bank of Malaysia (CBM) on 3 January, 2014 that “The Bitcoin is not recognised as legal tender in Malaysia. The Central Bank of Malaysia does not regulate the operations of Bitcoin. The public is therefore advised to be cautious of the risks associated with the usage of digital currency.”

For Bitcoin to be accepted as an alternative currency, it would also need to develop a large consumer market. Looking at the data from a recent survey conducted in Malaysia by Bitcoin startup Luno,<sup>10</sup> there appears to be an increasing use of Bitcoin as a popular form of “money.” Even though the survey has shown investors in Malaysia are increasingly turning to digital currencies, the major drawback to Bitcoin adoption in Malaysia is the lack of regulation. The CBM has spoken up on this and claimed that when a government sanctions the digital currency, a much wider population would inevitably take a greater interest in it and in turn expand the market. If central banks were to take cognisance of the growing interest in digital currency, then it should develop an appropriate legal and regulatory framework to govern cryptocurrency and protect consumers from cybercrimes.

China has embraced the change in a novel way. It is now the first country in the world to develop and run its own national digital. The Central Bank of Malaysia should learn from China and develop its own cryptocurrency as the above study by Luno shows a rising awareness of alternative currencies in Malaysia. It was reported that 47.4 percent of Malaysian cryptocurrency investors have bought Bitcoins and other “altcoins,” against 52.6 percent who have only bought Bitcoins. Malaysian investors cited investment (44.7 percent), followed by speed, affordability and convenience (16.3 percent), and trading/speculation (15.1 percent) as the main reasons for buying Bitcoins. Investors are somewhat confident in Bitcoin as an investment tool, with 48.8 percent responding that they trusted the digital currency, against 19.7 percent who said they did not. Nearly 90 percent of investors said they would buy more Bitcoins if the government regulates it. Insufficient regulation is also believed to be holding back start-ups and the growth of financial technology.

The rightists and proponents of Bitcoin have claimed that there are valid reasons for governments or regulators to hold a conservative non-committal approach towards cryptocurrency as an alternative currency. Firstly, cryptocurrency could raise a significant challenge to central banks’ control over the important functions of monetary and exchange rate policy. It could pose a threat to their status quo and the fiat currency system as Bitcoin is decentralised.<sup>11</sup> Emergence of competitive currencies could end the state’s monopoly over money. Secondly, considering trading is done freely on unregulated open markets, Bitcoins are beyond the control of any government or other institution. This makes them less susceptible to seizure by law enforcement as there is no specific person to arrest or office

to raid.<sup>12</sup> Thirdly, there is also a fear that it will erode consumer confidence in fiat currencies as customers increasingly prefer to trade using cryptocurrency.<sup>13</sup> Fourthly, widespread use of cryptocurrency would also make it more difficult for statistical agencies to gather data on economic activity, used by governments to steer the economy.<sup>14</sup> Statistical agencies' ability to influence the price of credit for the whole economy would also be hampered. Could Bitcoin ever establish itself in any serious way as an alternative currency without regulation? This question is discussed below.

## **Forensic Examination of Bitcoin Risks and Benefits**

Today the millennials advocate a monetary system of the future that is less dependent on politicians or bankers for its supply of money. They also want more financing options, greater access to financing for small entrepreneurs, and more fairness and greater transparency, which they view to be lacking in the present fractional reserve system. Bitcoin offers attractive alternatives and, most importantly, Bitcoin does not depend on the monetary policy of a virtual central bank. According to the USA Congressional Research Service Report (2015), users get their supply of Bitcoins in three ways.<sup>15</sup> "First, a user can exchange conventional money (example dollars, yen and euros) for a fee on an online exchange (example Okcoin, Coinbase and Kraken). The pricing of Bitcoin relative to other currencies is determined by supply and demand. The exchange fee falls with the size of the transaction, ranging from 0.5 percent for small transactions down to 0.2 percent for large transactions. Second, the user can obtain Bitcoins in exchange for the sale of goods or services, as when a merchant accepts Bitcoin from a buyer for the sale of his product. Third, the user can acquire new Bitcoins by serving as a miner and applying his or her processing power to successfully verify the validity of new network transactions."<sup>16</sup> The purchased or mined Bitcoins are thereafter stored in a digital wallet on the user's computer or at an online wallet service. However, there are risks involved in digital storage, as cryptocurrency stored in digital wallets can be lost permanently due to malware or data loss or even destruction of the physical media.

In relation to the creation of currencies, there is a stark difference between minting money and mining Bitcoin. In centralised banking and economic systems such as the US Federal Reserve System, corporate boards or governments control the supply of currency by "minting" or printing units of fiat or paper money. The government can create more fiat currency at no cost. This ability to create money with an unlimited supply makes fiat money vulnerable to hyperinflation and debt default, which is said to have directly contributed towards a growing discontentment and distrust in the current monetary system. Bitcoin and its derivatives on the other hand use decentralised control and are autonomous. In

this aspect, they offer a self-regulating digital currency. New units of the currency are “mined” using enormous amounts of computing power and once created they are stored in a virtual wallet. The mining process of Bitcoin however did not escape criticism from environmentally conscious people who are concerned with the enormous amount of energy that goes into cryptocurrency mining.

The increasing popularity of Bitcoin and cryptocurrencies generally can be attributed to the offering of attractive potential benefits to users and the removal of artificial barriers imposed by current financial institutions. There is no erosion of purchasing power due to inflation. It allows for true peer-to-peer payments anywhere in the world. Compared to traditional banking, it allows minimal transaction fees and processing time. Payments between pseudonymous parties also ensure financial privacy and non-reversible transactions. The non-reversible transactions also prevent chargebacks and fraud. Trading is done through exchanges with no central authority to validate it.

The blockchain mechanism of Bitcoin makes a direct electronic payment between two people without going through a third party like a bank or other intermediaries, thereby reducing transaction costs. The increased privacy enjoyed by Bitcoin users is due to its reliance on the principles of cryptography (communication that is secured from the view of third parties) to validate transactions and govern the production of the currency itself. Critics have argued that Bitcoin is not as anonymous as it claims to be, but it is more appropriately described as pseudonymous. This is due to the potential traceability of its permanent and complete historical record of Bitcoin amounts and encrypted identities for all transactions on the Bitcoin system, which can help in tracing money laundering, corruption, terrorist financing and other associated crimes. Thus, depending on one’s perspective, the attribute of the Bitcoin network can either be a virtue or a vice.

There are also a number of factors that might deter widespread use of Bitcoin, specifically, as mentioned earlier, Bitcoin is not endorsed by any government as legal tender, and thus fails to function as money. Bitcoin also does not enjoy the fiat currency’s network externalities; the price volatility of Bitcoin itself discourages its use as a medium of exchange; and the uncertainty of Bitcoin’s network security will discourage its wider use. Users will be exposed to a host of risks since the creation, trading or usage of virtual currencies including Bitcoins are not authorised by most central banks or monetary authorities (not a legal tender), and without any regulation and insurance scheme. In the list of potential risks, banks highlight problems such as losses arising out of hacking. In 2013 there was a massive hacking against the most popular Bitcoin exchange (Mt Gox) where 850,000 Bitcoin valued at over \$400 million were stolen and Mt Gox subsequently declared bankruptcy. Unlike traditional financial products that have

strong consumer protections, there is also no source of customer recourse available for cryptocurrencies. If Bitcoins are lost or stolen, there is no intermediary with the power to limit consumer losses. Thus, in terms of customer protection, there is inadequate security and an absence of an established consumer protection framework to protect users as most regulators seem reluctant to supervise this segment. This could lead to loss of customer confidence in a system which is trying to carve out a niche for itself.<sup>17</sup>

News reports often highlight the general financial volatility surrounding Bitcoins. The volatile price behaviour seems to suggest that the market for Bitcoin is currently being driven by speculative investors. The perceived growing demand for Bitcoin may not be due to increased transactions by traditional merchants and consumers but due to speculation. The value of Bitcoins is also not tied to an underlying fundamental such as gold, or the perceived basic soundness and stability of an economy and its governing institutions. Moreover, the low liquidity of Bitcoin makes it a high risk investment. All these risks have yet to be managed and so far there is no effective way to hedge the associated risks of volatility and low liquidity of Bitcoin.

The other issue that can affect the acceptability of Bitcoin as an alternative currency in Malaysia is its compatibility with Shariah. According to Imran Hosein, a renowned scholar on Islamic finance, there are six properties of money in Islam: 1) Money is either precious metals or food; 2) Money is abundant and widely available; 3) Money is durable and does not spoil or corrode; 4) Money has intrinsic value; 5) Money exists in creation and is made valuable by God; 6) Money functions as a medium of exchange. Bitcoin does not fulfill most of the properties of money in Islam and is therefore considered to be incompatible with Shari'ah. Bitcoin has also been criticised by the Danish Central Bank for being devoid of actual utility as it is backed by a commodity to which users attach value instead of being backed by precious metals such as gold and silver. But, do Bitcoins share the same characteristic with fiat money in being a currency with no intrinsic value? This issue will require further research and so will be discussed elsewhere.

## **Comparative Study on Bitcoin Adoption and Regulations**

Many countries have made a stand on the legality of Bitcoin and issued plans to regulate the digital currency. The wide spectrum of regulations include countries that have banned and restricted digital currency, and those who have explicitly allowed its use and trade. Countries like Bangladesh, Bolivia, Ecuador and Kyrgyzstan have made a clear-cut and decisive stand on it — Bitcoin is illegal. Malaysia has not been spared from this tsunami of financial technology. Malaysia is reported to be one of the most recent countries to take part in the fintech



revolution. It is reviewing its current regulatory guidelines on digital currency in order to be relevant in 2020. Although the majority of countries do not make the usage of Bitcoin itself illegal, its status as money appears to vary with differing regulatory implications. Many jurisdictions are still at the stage of defining Bitcoin as either “regular money” or “property” or “commodity” or “intangible assets”, which tends to attract other regulations (like taxation, licensing fees) which have the tendency to increase transaction costs. The table below shows a wide variation of Bitcoin acceptance and treatment from country to country, wherein the strictest Bitcoin regulations do not necessarily mean a ban.

<b>Country/Jurisdiction: USA</b>
<p><b>Legality (legal)</b></p> <ul style="list-style-type: none"> <li>In September 2015, the US Commodity Futures Trading Commission (CFTC) defined Bitcoin as a “commodity” subject to the existing legislative regulations. (The Bitcoin community viewed this as an act of legislation and incorporation of cryptocurrency into the existing legal framework).</li> </ul>
<p><b>Regulations</b></p> <ul style="list-style-type: none"> <li>Bitcoin operations are being controlled in the same way as traditional currencies by the government.</li> <li>According to the final “Regulation of the Conduct of Virtual Currency Businesses” (officially published by the New York State Register on 24 June 2015), all Bitcoin companies must apply for a licence in order to comply with the set out conditions. They are also obliged to follow strict KYC (Know your customer) and AML (Anti-money laundering) rules. (The Bitcoin community interpreted the document as an intrusion into the emerging free cryptocurrency market. Several companies left New York state immediately after the publication of the regulations)</li> </ul>
<p><b>Tax Treatment</b></p> <ul style="list-style-type: none"> <li>In March 2013, the Internal Revenue Service considered virtual currency as “property liable to federal taxation”; and</li> <li>Professional miners are subject to the “self-employment tax”.</li> </ul>

### Country/Jurisdiction: China

The official attitude towards Bitcoin in China varies.

#### Legality

- Bitcoin's legal status is not equal to fiat currency.
- In July 2016, China developed a law that would reportedly give Bitcoin the status of a "civil rights object" equalling it to personal belongings, property, bank deposits and other objects of private property. It will therefore provide owners of Bitcoin with legal protection in case of theft.

#### Regulations

- On 5 December 2013, the People's Bank of China made its first step in regulating Bitcoin by prohibiting financial institutions from handling Bitcoin transactions.
- Bitcoin however is not forbidden for private use. Trading Bitcoins by individuals is legal in China. Citizens may sell and buy bitcoins between each other as well as make deals with foreigners. They are allowed to pay with digital currencies to merchants who accept them.
- It was reported in June 2017 that the People's Bank of China has developed a prototype cryptocurrency that could end up in circulation in the near future.
- In September 2017, China shut down Bitcoin exchanges. This decision did not mean the end of cryptocurrencies as China is developing its own national cryptocurrency (yet to be named) which would be under the control of the People's Bank of China.
- It would be introduced alongside China's primary currency the *renminbi* (also called the Yuan).

No mention of Tax treatment.

### Country/Jurisdiction: Australia

#### Legality (legal)

- In August 2016, the Senate Economics Reference's Committee's inquiry into digital currency recommended Bitcoin along with other cryptocurrencies to be recognised as "regular money".

#### Regulations

- In its earlier stand, the government agency Australian Transaction Reports had published a report stating that "electronic, online and new payment methods" are increasingly used by terrorist groups. The document suggests a further tightening of cryptocurrency regulations in the country.
- However it softened its stand in October 2015, when an Australian governmental report assured that the emerging payment systems such as Bitcoin will be regulated "in a graduated way".

- Now Australian bitcoin businesses are obliged to submit detailed customer reporting and inform the law-enforcement authorities about suspicious deals.

#### **Tax Treatment**

- The current rules of the Australian Taxation Office attribute to Bitcoin the status of “intangible assets” rather than money, making it subject to goods and services tax (GST).
- Bitcoin businesses can also be liable for the tax if they receive payments in Bitcoin.
- Meanwhile, in March 2016 it was announced that the authorities will seek to introduce legislation on digital currencies and address the double taxation by exempting Bitcoin from GST, to be developed at end of year.

### **Country/Jurisdiction: Japan**

#### **Legality (Legal)**

- Japan officially recognises Bitcoin and digital currencies as money.
- Virtual currencies are recognised as “asset-like values” that can be used in making payments (March 2016).
- Japan is issuing licences for exchanges with regulations.

#### **Regulations**

- Bitcoin exchanges are placed under the authority of the Japanese Financial Services Agency (FSA). They are required to:
  - register with the Agency;
  - have a minimum capital of Yen 10 million;
  - submit annual financial reports; and
  - undergo auditing by certified accountants so as to help prevent money laundering and drive out of business smaller enterprises that are incapable of protecting customer funds.
- At the same time, a set of rules was also adopted to fight money laundering and protect customers of digital currency exchanges.

#### **Tax treatment**

- Currently, people in Japan who buy Bitcoin have to pay an 8% “consumption tax.”
- It is levied every time a Japanese citizen purchases Bitcoins with yens through a Japanese exchange because this Bitcoins fall under the definition of “imported goods.”
- However, Bitcoins can be bought on foreign exchanges and “smuggled” into the country, thus avoiding taxation.

<b>Country/Jurisdiction: Iceland</b>
<p><b>Legality (Legal)</b></p> <ul style="list-style-type: none"> <li>• Iceland became one of the few states to legally forbid trading operations with Bitcoins. Its central bank states that “it is prohibited to engage in foreign exchange trading with the electronic currency bitcoin, according to the Icelandic Foreign Exchange Act.” However, this did not prevent the birth of a local cryptocurrency- “aurocoin”, whose creator bears the pseudonym Baldur Friggjar Ooinsson, a name derived from Scandinavian mythology. Besides, Iceland remains a significant Bitcoin mining centre.</li> <li>• On 12 March 2017, the central bank amended and relaxed its rules.</li> </ul>

Table 1: Countries with the Strictest Bitcoin Regulations<sup>18</sup>

Malaysia’s neighbour, Singapore, also took the same stance in September 2013 through its central bank (Monetary Authority of Singapore) by warning investors to “be wary” of Bitcoin and announcing that it would not regulate digital currency at all. In January 2014, the Inland Revenue Authority of Singapore issued a series of tax guidelines according to which Bitcoin transactions may be treated as barter if they are used as a payment method for real goods and services. Businesses that deal with Bitcoin currency exchanges will be taxed based on their Bitcoin sales. Thailand is reported by the media to be the first to make strong statements about Bitcoin’s legal status; using the word “illegal” repeatedly to denounce Bitcoin trading and its use in exchange for goods and services. It was however rebutted by some quarters that the news was misreported and/or exaggerated as they believe that “Thailand maintains a healthy Bitcoin scene with at least two exchanges, Bitcoin and Coinmill still operating.” The UK has gone a step further by announcing in 2014 that it has commissioned its Treasury to do a study of cryptocurrencies, and what role, if any, they can play in the UK economy.

China is reported to be developing its own national cryptocurrency through its national bank, the People’s Bank of China, to complement its primary currency (*Renmibi* or *Yuan*). It is already testing prototype transactions with some of its own commercial banks, and this would make China the first country in the world to develop and run its own national digital currency. The State of Palestine and Russia have previously embarked on the same path as China. These countries are aware of the potential benefits to be gained by developing a national digital currency.<sup>19</sup> Firstly, the cost of transactions would be reduced and financial services will be made more accessible to people who are unconnected to conventional banks. Secondly, the confidentiality yet easily traceable blockchain transactions have the potential to decrease the rates of fraud and counterfeiting and help governments to weed out corruption. Thirdly, it would make the currency easier

to obtain, which would increase the rate of international transactions and in turn allow for more trade and faster economic growth. In the case of Palestine, this would address the issues of scarce money-printing facilities in the area, with a digital currency reducing their dependency on the Israeli government.

The Central Bank of Malaysia (CBM) earlier on adopted a hardline approach towards cryptocurrency. In 2014 it explicitly said that Bitcoin is not recognised as legal tender in Malaysia.<sup>20</sup> It also at that time did not plan to regulate the operations of Bitcoin.<sup>21</sup> It has further advised the public to be cautious of the risks associated with the usage of such digital currency. However, it should be noted here that the Malaysian regulator did not explicitly ban or outlaw its use nor say Bitcoin or cryptocurrency is illegal. Upon analysis, the above statement by CBM on Bitcoin is open to various interpretations. Does it imply CBM's non-acceptance of Bitcoins altogether as an alternative currency or is it open to other types of alternative currency using blockchain technology? Although Malaysia does not recognise Bitcoin as legal tender, does it intend to relegate the status of Bitcoin to that of a new payment settlement mode instead of new money? In Malaysia, cryptocurrency transactions are currently tax free, as digital currencies are not considered assets or legal tender by the authorities. By asserting that they do not have plans to regulate Bitcoins, can one assume that CBM is waiting to see what other regulators will do before coming up with its own appropriate regulatory framework? Perhaps one can anticipate more changes to be introduced by CBM "to rein in Cryptocurrencies."

At the time of writing, a notable move was made by the Central Bank of Malaysia in November 2017 to regulate Bitcoin exchanges in Malaysia, which appears to show a softened approach towards cryptocurrency, recognising it to be the "new norm" and that the CBM "cannot be oblivious to these developments."<sup>22</sup> The Governor of CBM has announced at the Third Counter-Terrorism Financing Summit 2017 in Kuala Lumpur, that all parties acting as exchanges will be treated as "reporting institutions", requiring them to provide detailed information on buyers and sellers of such currencies.<sup>23</sup> This move is to prevent the abuse of the system for criminal and unlawful activities and ensure both the stability and integrity of the financial system and consumer protection.<sup>24</sup> These preventive measures would include conducting risk assessments; application of customer due diligence; submission of suspicious transaction reports (STR) and cash threshold reports; and maintenance and retention of records of transactions.<sup>25</sup> Industry players in fintech welcome the move as a means to ensure that the technological developments in cryptocurrencies and their underlying blockchain technology are not hampered. Malaysia's most recent regulatory stance is reported to be in step with Australia, China and Japan (although countries like Japan are issuing licences for exchanges as well). In the same month, Malaysia's securities

regulator has revealed it is planning a regulatory framework for cryptocurrencies and will work closely with the country's central bank to craft regulations for the secondary market trading of established cryptocurrency and digital assets.<sup>26</sup> This announcement has contradicted the central bank's earlier decision to ban the trading of cryptocurrencies, made a month ago!

Lastly, will CBM explore the possibility of developing a Shari'ah-compliant cryptocurrency, as Malaysia has a dual financial system, and by 2020 two billion millennials will come from the OIC countries? All these questions will only be answered with time and through further research to determine the prospects of Malaysia adopting cryptocurrency as an alternative currency to complement and not compete with existing currency (Ringgit Malaysia); and for Malaysia to build its own unique national cryptocurrency which is Shari'ah compliant.

## Conclusion

Technological advances combined with dramatic economic and social changes are creating conditions for the emergence of new, virtual forms of money and credit. Bitcoins and other digital forms of money have the potential to create more efficient and more global economies and societies; but on the other hand it could entail negative consequences as "tomorrow's new forms of money could make it easier to engage in anti-competitive behavior; exacerbate exclusion and inequality; foster economic volatility; facilitate criminal activity; and even undermine the effectiveness of macroeconomic policy."<sup>27</sup> In the face of this global phenomenon of widespread adoption of cryptocurrency, there is justification for regulators to be concerned over the potential financial, legal and security risks that users will be exposed to. But at the same time, the growing popularity of this borderless digital currency cannot be ignored. Regulating this digital currency is likened to a double-edged sword: just as there are great benefits in bringing technological advances to the finance industry, there are also cyber-security risks which need greater regulation to protect consumers from cyber-crimes. Greater regulation of cryptocurrency (Bitcoin, etc) in the form of new legislations and guidelines must not stifle but should stimulate productive innovation as the latter helps drive down costs and improve the quality of service to consumers. Regulators must thus balance out two competing interests: public security versus productive innovation. The challenge here is to have a regulatory framework that satisfies both interests. It is projected that with the onslaught of technological advances, there will be a major shift in our perception of money. The old definition of money may not be relevant for long. This change in mindset could usher in a "financial revolution" in the next 10 to 15 years and a dismantling of the old

order. Newer forms of money could emerge and central banks need to be ready for this change by designing a new legal and regulatory architecture to remain relevant. Change is the only constant in life and fintech is the game changer and the future is already here.

Given the above risks and benefits of cryptocurrency adoption, it is recommended that Malaysia scrutinise their financial regulatory guidelines and see how they can be adjusted to welcome the fintech revolution:

- Firstly, a dual currency system should be introduced in Malaysia whereby a specially designed national cryptocurrency would co-exist and complement fiat money (Malaysian ringgit).
- Secondly, the national cryptocurrency should be placed under the control of the Central Bank of Malaysia for greater oversight of the financial system. The transactions should be made speedily and cheaply, even across borders. This would be in line with the goal of central banks around the world to replace cash with electronic payments.
- Thirdly, the concept of a dual financial system, as legally recognised by the Central Bank of Malaysia Act, 2009, should be extended to digital currencies, where Shari'ah compliant cryptocurrency would be offered alongside conventional cryptocurrency.
- Fourthly, the Shari'ah compliant cryptocurrency should be backed by gold, as gold is historically more resilient than any fiat money, particularly in times of economic instability. Regulators should examine Onegram,<sup>28</sup> a recently launched Shari'ah compliant cryptocurrency, and produce our own unique Shari'ah compliant national cryptocurrency.
- Fifthly, regulators need to design a new legal and regulatory architecture or reform existing financial architectures to accommodate new forms of money and payment systems as fintech is the prime mover for financial institutions to modernise.
- Lastly, greater regulation of cryptocurrency in the form of new legislations and guidelines should be balanced out in such a way that productive innovation would not be stifled. The regulatory framework should satisfy both interests: public security and productive innovation.

## Notes

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1. Vicary Abdullah Daud, 'Fin-tech-the future is already here,' *Islamic Banker*. Available at: <https://www.islamicbanker.com/articles/fintech-the-future-is-already-here>. (Accessed on: 1 June 2017).
2. Bitcoin and most other cryptocurrencies are designed to have a fixed supply. It aspires to be amongst the scarcest commodities in the known universe, and their scarcity value could be much greater than gold, silver, or any physical commodity. Bitcoin proponents tag 2045 as the year when the last Bitcoin will be mined. Rafe Hurst, 'The Value of Cryptocurrency,' *Medium*. Available at <https://medium.com>. (Accessed on: 4 July 2017).
3. The Bank for International Settlements (BIS), jointly owned by the world's leading central banks, are very concerned that Bitcoin could disrupt the ability of central banks to exert control over the economy, as well as issue money. This hypothetical challenge could reduce the functions of a central body and eventually may obviate the need for a central body entirely for certain functions. Emily Frost, 'The Impact of Bitcoin on Central Banks,' *International Banker*. Available at <https://internationalbanker.com>. (Accessed on: 6 June 2017).
4. The European Union's law enforcement agency Europol announced the establishment of a working group on money laundering with digital currencies in 2016. This is a tripartite partnership with the International Criminal Police Organisation (INTERPOL) and the Basel Institute on Governance. Kevin Helms, 'Europol starts Group to study cryptocurrency launderers,' *News Bitcoins*. Available at: [News.bitcoin.com](https://news.bitcoin.com). (Accessed on: 12 Sept 2016).
5. Milnes Alfred, *The Economic Foundations of Reconstruction* (London: Macdonald and Evans, 1919), 55.
6. The US dollar used to be backed by gold from 1900-1971 (with the exception of during World War 1), meaning its value was legally defined by a certain weight of the metal. That ended in 1971, when Richard Nixon shocked the world by breaking the link to gold and allowing the dollar's value to be determined by trading in the foreign exchange markets.
7. Doug Henwood, 'Is Bitcoin the Future of Monet,' *The Nation*. Available at <https://www.thenation.com>. (Accessed on: 1 Jan 2017).
8. Ibid.
9. This is due to the fact that Bitcoin is produced via a virtual "mining" process,



- which takes exponentially more computing power each time a new cache of Bitcoin is mined. Mining not only requires specialised hardware, but electricity to run and cool that hardware, which has received numerous criticisms from environmentally conscious action groups. But proponents regard this as an opportunity cost. Rafe Furst, 'The Value of Cryptocurrency,' *Linkedin*. Available at: <http://www.linkedin.com>. (Accessed on: 5 July 2017).
10. Liza Visser, 'How Malaysians Use Bitcoin,' *Luno*. Available at: <https://www.luno.com/blog/en/post/malaysians-use-bitcoin>. (Accessed on: 5 July 2017).
  11. The decentralised control is related to the use of Bitcoin's blockchain transaction database in the role of a distributed ledger. This cuts out the middlemen or financial intermediaries like the banks.
  12. Andy Greenberg, 'Cryptocurrency,' *Forbes*. Available at: [Forbes.com](http://Forbes.com) (Accessed on: 4 July 2017).
  13. Tuur Demester, 'How Bitcoin compares to Fiat Currency's House of Cards,' *Bitcoin Magazine*. Available at: <https://bitcoinmagazine.com/articles/bitcoin-compares-fiat-currencys-house-cards-1422055261/>. (Accessed on: 4 July 2017).
  14. Gareth Murphy, a senior central banking officer cautioned that virtual currencies pose a new challenge to central banks' control over the important functions of monetary and exchange rate policy. Gareth Murphy, 'Decentralised currencies impact on Central Banks,' *Bitcoins News*. Available at: <https://www.rte.ie/news/business/2014/0703/628309-bitfin-conference>. (Accessed on: 4 July 2017).
  15. Maureen Edward and Michael Edward, 'Bitcoin: Questions, Answers, and Analysis of Legal Issues,' *Congressional Research Service*. Available at: [www.Crs.gov](http://www.Crs.gov) (Accessed on: 10 August 2016).
  16. Craig K. Elwell, M Maureen Murphy and Michael V. Seitzinger, 'Bitcoin: Questions, Answers, and Analysis of Legal Issues.' Available at: <https://www.perkinscoie.com/images/content/1/4/v2/14218/R43339.pdf>. (Accessed on: 10 August 2016).
  17. In January 2015, Bitstamp, a large European Bitcoin exchange, suspended services after a security breach involving the loss of 19,000 Bitcoin, valued at \$5 million.
  18. Lyudmila Brus, 'Total Control: Top 5 countries with Strictest Bitcoin Regulation,' *Coinfox*. Available at: [/news/reviews/6163-total-control-top-5-countries-with-strictest-bitcoin-regulation](http://news/reviews/6163-total-control-top-5-countries-with-strictest-bitcoin-regulation). (Accessed on; 27 April 2017).
  19. Tom Ward, 'China becomes First Country in the World to test a National Cryptocurrency,' *Future Society*. Available at: <http://futurism.com>. (Accessed on: 5 August 2017).
  20. Bank Negara Malaysia, *Central Bank of Malaysia Notices and Announcements: Statement on Bitcoin* (Kuala Lumpur: Bank Negara Malaysia, 2017).
  21. John Southurst Coindesk, 'Malaysian Central Bank has no plans to regulate Bitcoin,' *CoinDesk*. Available at: <https://www.coindesk.com>. (Accessed on: 2 February 2017).
  22. Risen Jayaseelen and Cecilia Kok, 'Bank Negara reins in Digital Currencies,' *Business News*. Available at: <https://www.thestar.com.my>. (Accessed on: 27 November 2017).
  23. The Central Bank of Malaysia will designate persons converting cryptocurrencies

- into fiat money as reporting institutions under the Anti-Money Laundering, Anti-Terrorism Financing and Proceeds of Unlawful Activities Act 2001. Melissa Goh, 'Malaysia to enforce cryptocurrency regulation in 2018,' *ChannelNewsAsia*. Available at: [www.channelnewsasia.com](http://www.channelnewsasia.com). (Accessed on: 12/ September 2017).
24. The Malaysian Insight, 'Bank Negara to enforce cryptocurrency regulations in 2018,' *The Malaysian Insight*. Available at: <https://www.themalaysianinsight.com>. (Accessed on: 9 December 2017).
  25. Ibid.
  26. Sujha Sundararajan, 'Malaysia's Securities Watchdog Plans Cryptocurrency Regulators,' *Coin Desk*. Available at: <https://www.coindesk.com>. (Accessed on: 10 December 2017).
  27. The Organization for Economic Co-operation and Development, 'The Future of Money,' *OECD*. Available at: <https://www.oecd.org/futures>. (Accessed on: 9 September 2017).
  28. It was launched on 2 May 2017. Each coin is backed by one gram of gold. Onegram is currently marketed as an asset class that increases in value, not just from the price of gold but also from the amount of gold that backs each coin, which increases with each transaction. It is claimed to make Onegram a forever increasing valuable asset.