Bitcoin: Shariah Compliant?

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This paper is just an opinion and expression on Bitcoin. It is by no way a final statement or fatwa on this issue. This paper was written to engage Shariah scholars and Muslim economists to try and collectively reach clarity on this matter. This is the second paper written on the subject of Bitcoin by the author. This is an updated research.

The views and opinions expressed in this research paper are those of the author only and do not in any way reflect those of the institutions to which he is affiliated.

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Assumptions made within this research paper are not necessarily indicative of any official positions held by the author. Conclusions have the possibility of inaccuracy.

Permission to conduct & publish research has been sought from senior teachers and scholars.

The intent of this paper is to stimulate discussion and research among scholars and students of knowledge.

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Abstract

The concept of money has been evolving across time. Goods, gold, silver, banknotes, electronic money have all played the role of money. The birth of blockchain technology gave rise to an innovative, decentralised peer to peer payment system called Bitcoin. This gives a glimpse of a futuristic cashless, digital economy. With all the excitement and boom of Bitcoin, the very essence of Bitcoin is still obscure. Is it money? Or a commodity? Or nothing at all? In this research, an interpretive and inductive method is adopted in analysing the primary and secondary sources of Islamic law to identify the principles of defining money in Islamic law. The various scholarly opinions are considered in respect to Bitcoin. Although the opinion that Bitcoin is not Māl (asset) at all has some weight, there seems to be a difference between Bitcoin and other derivatives. This paper reasons that Bitcoin does seem to be Māl (wealth) with Taqawwum (legal value), however, it does not possess Thamaniyyah (currency attributes). Furthermore, the associated risks with Bitcoin, the Maqāṣid al-Sharia framework are considered to determine whether Bitcoin fulfils the Islamic ideals of an Islamic economic function. Bitcoin falls short of fulfilling the principles of the preservation of wealth in Shariah. Bitcoin is further assessed in terms of the principles of Islamic moral economy. A key theme and objective of Islamic moral economy is embedded financing and investments linked to the real economy. Bitcoin and cryptocurrency investments do not serve the real economy and do not promote real growth of an economy. Thus, it was concluded that Bitcoin is not ideal as a long-term investment and neither should the Islamic finance industry consider its use in exchange unless there is a specific need to until a regulated and transparent framework is established. At this current time, Bitcoins are just another investment which are for individual profit maximisation. Nevertheless, returns on Bitcoin investment would be lawful and Shariah compliant according to this understanding. However, the global Islamic finance bodies and expert Shariah scholars are in the best position to offer the most accurate advice.
1. Introduction

The last decade has witnessed many events and developments in the financial world such as the global financial crisis, the economic reforms in China, the slump in oil prices and the global drift towards a cashless economy. The digitisation of the economy has innovated payment methods and revolutionised the concept of money. Nations would barter goods they had in surplus for goods they needed as early as 9000 BC. Grains and cattle were popular goods of barter. In 1200 BC, cowries – the shells of a mollusc – were used in China as money (Wray, 2012). Thereafter, bronze and cooper cowrie imitations were manufactured in China at the end of the Stone Age in 1000 BC (Davies, 2002). This is considered to be the earliest form of metal coins. Metal tool money such as knives and spade were also used in China. The first official currency was minted by King Alyattes of Lydia in modern day Turkey in 600 BC (Luo, 1999). The coins were developed out of lumps of silver and took the familiar circular form. This technique was duplicated and refined by the Greeks, Persian, Macedonian, and later the Roman empires. These empires used precious metals such as gold, silver and bronze whilst China used based metals (Luo, 1999). In 118 BC, the first documented type of banknotes came into existence in China, where leather money was being circulated in the form of one-foot-square pieces of white deerskin with colourful borders. From the ninth to the fifteenth century, China experienced the rapid growth of paper banknotes in circulation to the point that their value rapidly depreciated and inflation soared. In 1816, gold was officially made the standard of value in England. Although banknotes were in use prior to this, this was the first time that their worth had been tied to directly to gold. In 1860, Western Union developed e-money with electronic fund transfer via telegram. In 1946, John Biggins invented Char-It Card, the first credit card. European banks began offering mobile banking with primitive smart phones in 1999. Electronic money was further developed when contactless payment cards were issued in 2008 in UK for the first time. 2008 also witnessed the birth of Bitcoin: a cryptic peer to peer electronic cash system (Bank of England, 2014). This evolution highlights the global shift towards a cashless economy. Bitcoin is being touted as the alternative to fiat currencies and the manifestation of Keynes’ idea of an international currency not belonging to any single nation. However, the nature of Bitcoin is obscure due to an absence of legislation and regulatory framework. The Securities and Exchange Commission in New York has warned market participants regarding the
digital assets that they are subject to the requirements of the federal securities law. The Bank of England maintain that digital currencies remain very different from standard currencies such as sterling and the dollar because they “act as money only to a limited extent and only for relatively few people”. The Financial Conduct Authority plan to report findings on the impact of digital currencies later this year. The crux of the problem is that authorities are considering that digital currencies are behaving more like an investment than a simple payment method. However, bitcoin is becoming a more acceptable and popular form of payment: consumers can buy Dell computers with Bitcoin in the US as well as gift cards. Theatre tickets can be bought with Bitcoin in the London West End shows. Peach Aviation, a low-cost Japanese airline allows payment in Bitcoin. Furthermore, Bitcoins are being directly bought and sold on websites like eBay (Inman, 2017). Despite this usage, investors are speculating on it which in turn is creating its own endogenous risks. Speculation has led to Bitcoins to behave more like popular stocks and less like currencies. All this activity and investment has left the reality of Bitcoin vague and obscure in the conventional system let alone in the Islamic finance industry. As a result, the question of what is money and whether Bitcoin can be money is beginning to take centre stage in discussions. Thus, this paper considers the nature of Bitcoin, whether it qualifies as money in Islamic law. Thereafter, Bitcoin is analysed in terms of risk management, *Maqāṣid al-Shariah* and the principles of Islamic moral economy to determine whether Bitcoin is a suitable Shariah compliant investment.

### 2.0 The Philosophy of Money in Islam

Islam does not recognise money as a subject-matter of trade, except in some special cases. Money has no intrinsic utility; it is only a medium of exchange; Each unit of money is exactly equal to another unit of the same denomination, therefore, there is no room for making profit through the exchange of these units inter se. Profit is generated when something that has intrinsic utility is sold for money or when different currencies are exchanged, one for another. The profit earned through dealing in money (of the same currency) or the papers representing them is interest, hence prohibited.¹

Imam Ibn Taymiyyah (d. 728 H) states that the physical body of money is never the objective of acquiring money, rather, it is the counter-exchange which is the objective and benefit of money\(^2\). The owner of the money must spend or put labour to derive benefit from money. Alternatively, he can enter a partnership contract in a profit and loss sharing model. If the money is lent in the form of a loan, interest cannot be charged on it. Money is simply a unit of measurement. Thus, money is not a commodity in Islam. Its reward is not guaranteed, instead, it is contingent on the result of production from productive activity which generates surplus value\(^3\).

Imam Ibn Taymiyyah states in another place:

“When currencies and money are inter-traded with the intention of investment and profit, it opposes the very purpose of money and Thamaniyyah.”\(^4\)

Imam Ibn al-Qayyim (d.751 H) states:

“Money is never sought for itself; rather, it is used as a means to gain commodities. When money begins to be treated as a commodity and becomes the objective of transactions, the entire (economic) system will become corrupted and in crisis.”\(^5\)

Imam al-Ghazali (d.505 H) states:

“Allah Ta’ālā created dinar and dirham for circulation and to be an equitable and just standard between different assets. They are the means to all other assets; they are precious in themselves but not desired for themselves.”\(^6\)

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2 فَإِنَّ الْمَقمصُودَ مِنم الْمَثممَانِ أَنم تَكُونَ مِعميَارًا لِلْمَمموَالِ يَتَوَسَّلُ بِهَا إلَى مَعمرِفَةِ مَقَادِيرِ الْمَمموَالِ وَلََ يَقمصِدُ الَِنمتِفَاعَ بِعَيمنِهَا (مجموع الفتاوى ج 29 ص 472 ط مجمع الملك فيد)


4َّ فَمَتَى بِيعَ بَعمضُهَا بِبَعمضٍ إلَى أَجَلٍ قُصِدَ بِهَا الت ِجَارَةُ الْتِي تُنَاقِضُ مَقمصُودَ الثمنية (مجموع الفتاوى ج 29 ص 473 ط مجمع الملك فيد)

5 فَالْمَثممَانُ لََ تُقمصَدُ لِْ عميَانِهَا فَسَدَ أَممرُ النَّ اَوَمَفُسِهَا سِلَعًا تُقمصَدُ لِْ عَيمنَتهَا فَإِذَا صَارَتم فِي فَالْمَثممَانُ لََ تُقمصَدُ لِْ عميَانِهَا فَسَدَ أَممرُ النَّ اَوَمَفُسِهَا سِلَعًا (إعلام الْوقعين ج 2 ص 105 دار الكتب العلمية)

6 إذن خلقهم الله تعالى لتندابواهما الأيدي ونكوُنها حاكمين بين الأموال بالعَدْلِ ولِجمكَة أُخرى وَهِيُ النُّوسِلُ بَيْمَا إلَى سَائر الأَشياء لأبُو عِزٍظان في أنفسهما ولا غرض في أَغبِياهما وَنبدوهما إلَى سائر الأَحوال نسبة واحدة فمن ملكهما فكانه ملك كل شيء لا يكون ملك ثُوبًا فإنه ملك إلا الثوب (إحياء علوم الدين ج 4 ص 91 ط دار المعرفة)
2.1 Money in the Quran and Prophetic traditions

The Quran describes the role of money in the following manner:

“Do not entrust your wealth to the feeble-minded, which Allah has made to maintain you” (Quran 4:5)

The word used to describe wealth in this verse is Qiwam. This refers to something made to maintain, support and sustain others. This word reflects the true essence of money; money is a powerful means which Allah has created to upkeep and maintain the entire worldly system. It is the means to an end; not an end in and of itself. The end goal of money is to sustain one’s worldly affairs to facilitate focus on the Hereafter.

The primary sources of Islam have not defined any characteristic nor condition for money7. The Qur’an and Sunnah only refer to the prevalent money in circulation at the time: Dinar and Dirham. At the time of revelation, the bimetallic currency was in use. In fact, the two verses of the Quran (3:75) and (12:20) shows that the previous nations also used Dirhams or silver coins. Imam Abd al-Barr states that Muslims of the prophetic era used the Roman Dinars and Persian Dirhams (Shukri, 2007).

2.2 Money in Islamic history

Caliph Abdul Malik ibn Marwan introduced the first Islamic dinar and dirham in the year 76 Hijrah (Shukri, 2007). During the Mamluk dynasty (872-922 A.H/1468-1517 CE), Fulūs (copper coins) came into existence to use in small commercial transactions. Its purchasing power was very limited and was for common daily needs of life (Wan Kamal, 2006). In the Ottoman empire, money was further developed. The Ottomans produced the currency named Qaimah in the form of paper money. In 1914, the Ottomans officially declared that paper money was the only legal tender for the medium of exchange (Yaacob, 2013).

The above developments across the Islamic empires support the view that Islam has not defined currency, instead, it has left it to people to decide their currency. Ibn Taymiyyah states that the Sharia has not defined any

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7 وأما الدُرهمُ والدِينارُ فلم يُعرف لهما خَلْطًا طبيعًَ ولا شرعيًَ بل مرجعًا إلى العادة والإصلاح: وذلك لأنها في الأصل لا يتعلقان بالمقصود بـ: بل الغرض أن يكون مغبرًًا لم يتعاملوا به والدُراهمُ والدِينارُ لا ت自然而 لنفسهما بل هي وسيلةً إلى التعامل بها، وإذا كانت أثمتانًا: بخلاف سائر الأموال فإن المقصود الأتباع بها نفسها فإليها كانت مُفتوحة بالأمور الطبيعية أو الشرعية أو الوسيلة المخصصة التي لا يتعلق بها غرضًا بل بعادتها ولا بوصفها بها تحصل بها المقصود كبرًا كبرًا (مجمع الفتاوى ج 19 ص 252 ط مجمع الملك فيد)
specific condition nor definition for currency and money, and has instead left it to the ‘Urf and understanding of the people⁸. Hence, the Hanafi jurists state that assets or commodities become money and currency by Ta‘āmul (common usage) and Iṣṭilāḥ (common agreement) (al-Kasani). Imam Ahmad also opined that currency and money can be identified by the agreement of the people (Ibn Qudamah).

2.3 Money according to contemporary Muslim thinkers

The introduction of fiat currency witnessed a boom in writings and researches on money. Dr Asmatullah (2013) highlights the opinions of Islamic scholars on what is money. He presents three opinions on what Islamic scholars consider as money: one group of scholars consider gold and silver as real money. A second group of scholars only class minted coins as money regardless of the metal its composed of. A third group of scholars suggest that gold and silver are the real, accepted other forms of money, other items can also be considered as money upon fulfilling certain requirements. Although this paper does not consider nor discuss virtual currencies, an argument is presented on the prerequisites in Islam to consider something as money. Yaacob (2014) addressed another aspect to currency which Dr Asamatullah’s paper failed to address: the evolution of money. Yaacob (2014) discusses how the understanding of what is money has developed. In this paper, he highlights how paper money evolved from being a debt instrument to being an independent form of money. However, the most this paper considers in terms of evolution of money is fiat currencies. Similarly, Mani (1984) discusses the reality of paper money in his paper. The main contribution of this paper is the consideration of whether money has to be government backed to be considered as money. The paper proposes three views: the mineral view, the governmental view and the psychological view. This discussion assists my research to understand how digital currencies can be considered according to the different views. It is evident that the current literature is silent on the legal nature of cryptocurrencies. This is understandable as this is a new phenomenon which is still in its first decade. Thus, even conventional economists and practitioners are divided in their understanding of Bitcoin whether it qualifies as money. To date, no research has been produced from Islamic economists and Islamic finance practitioners on the Islamic legal nature on Bitcoin. Thus, this paper seeks to fill this gap in the body of knowledge and present an analysis on Bitcoin in light of Islamic law.

⁸ وأَمَّا الدِّرْمُهَمُ وَالدِّينَارُ فَمَا يُعْرَفُ لَهُ فِي الْمَصْمِلِ لِْ يَتَعَلَّحَ حَدٌّ طَبْعِيٌّ وَلََ شَرْعِيٌّ بَلْ مَرْجَعُهُ إلَى المعَادَةِ وَالَِصُمْطَّلاَحِ؛ وَذَلِكَ لِْ قُ الْمَمَسَّصُودُ بِهِ؛ بَلْ المَغَرَضُ أَنَّهَا يَكُونَ مِمَّامًا لَِْا يَتَعَامَلُونَ بِهِ وَالدَّرَاهِمُ وَالدَّنَانِيرُ لََ تُقمِصْدُ لِْنَفَمِهَا بَلْ هِيَ وَسِيلَةٌ إلَى التَّعَامُلِ بِهَا وَلِهَذَا كَانَتمْ أَثْمَانًا؛ بِخِلاَفِ سَائِرِ الْمَمْمِلُ الْمَصْمِلُ الَّتِي لََ يَتَعَلَّقُ بِهَا غَرَضٌ لَِْا يَحمصُلُ بِهَا الْمَقمصُودُ كَيمفَمَا كَانَتم. (مَجمُوع الفَتاِوَاتِ ج 19 ص 252 ط مَجمَع الملك فيد)
2.4 Types of Money Discussed in Fiqh texts

Islamic jurists state that money is of two types:

**Natural Money** (*al-thaman al-khilqi*) – money created to serve as a medium of exchange and naturally possesses monetary value. Gold and silver are natural money. Imam al-Ghazālī (d.505 H) refers to gold and silver as natural money which Allah The Almighty created for mankind to use as a standard and measure to price and valuate (al-Ghazali, 2011).

**Artificial and customary money** (*al-thaman al-‘urfi*) – money adopted as a medium of exchange whereby the monetary value is extrinsic to the money. Commodity money and fiat currencies are common artificial and customary forms of money.

One of the key differences between the two is the source of monetary value (*Thamaniyyah*) i.e. who and what primarily assigned it as money. Natural money has intrinsic *Thamaniyyah* and customary money has extrinsic *Thamaniyyah*. Gold and silver innately possess *Thamaniyyah* by which people consider them as stores of value and are ready to exchange goods in lieu of gold and silver. What is interesting to consider is that besides their unique properties, gold and silver have nothing unique about them to signify the attribute of *Thamaniyyah*. Nevertheless, across time, humans have naturally valued gold and silver which led them to use it as currency. It is as if the *Thamaniyyah* is placed by Allah into the hearts of humans for gold and silver and thus, *Thamaniyyah* has become a permanent description of gold and silver. Besides gold and silver, artificial and customary money such as commodity money and fiat money do not innately possess *Thamaniyyah*. Although commodity money has intrinsic value, it does not have *Thamaniyyah*. Humans naturally do not perceive commodities as a medium value and *Thamaniyyah*.

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9 Commodity money refers to those assets which intrinsically has value and serve another function but become an acceptable and popular medium of exchange. This was an accepted form of money in Shariah.

10 Commodity money are assets used as money that also have intrinsic value in some other use. In other words, it can serve as money as well as commodity due its intrinsic value. Salt, animals, shells, grains etc. are forms of commodity money. Commodity money is an acceptable form of money in Shariah when people attribute *Thamaniyyah* to a commodity.

Fiat money gets its value from a government order (i.e. fiat). That means, the government declares fiat money to be legal tender, which requires all people and firms within the country to accept it as a means of payment. Unlike commodity money, fiat money is not backed by any physical commodity. By definition, it does not have intrinsic value. Hence, the value of fiat money is derived from the relationship between supply and demand. Most of the world’s paper money is fiat money. Fiat money is also an acceptable form of money in Shariah after the government assign a note, coin or electronic money value and *Thamaniyyah*. 

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بحوث في قضياء قاضية معاصرة للمفتي تقي عثمان ط دار القلم
of exchange, rather, they are the subject of an exchange. On the other hand, fiat currencies do not have intrinsic value to serve a function nor do humans naturally consider them to possess Thamaniyyah, instead, an extrinsic force adds the notion of Thamaniyyah to fiat currencies which is then perceived by the masses. Thus, money can be divided into the following:

1) **Al-Thaman al-Khilqi** (gold and silver) – intrinsic Thamaniyyah and intrinsic value allowing it to be used for other purposes such as jewellery.

2) **Al-Thaman al-'Urfi** (customary money)
   
   A) Commodity money – has intrinsic value allowing it to be used for other functions but does not have intrinsic Thamaniyyah.
   
   B) Fiat money – No intrinsic value and therefore does not provide any considerable function besides being a medium of exchange. Neither does it have intrinsic Thamaniyyah.

Commodity money is an asset used as money that also has intrinsic value. In other words, it can serve as money as well as a commodity due to its intrinsic value. Salt, animals, shells, grains etc. are forms of commodity money. Commodity money is an acceptable form of money in Shariah when people attribute Thamaniyyah to a commodity.

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Most of the world’s paper money is fiat money. Fiat money is also an acceptable form of money in Shariah after the government assign value to a note, coin or electronic money and Thamaniyyah.

Thaman, commonly translated as price, is a broad term used to describe any medium of exchange in a sale regardless of what the medium is: currency, assets or a debt. Every sale contract requires a Thaman for...
validity. However, not every Thaman is currency or money. In other words, the trait of Thamaniyyah is not in everything used when paying for goods.

Ibn Taymiyyah (d. 728 H) states that the Shar‘ah has not defined any specific condition nor definition for currency and money, and has instead left it to the ‘Urfa and understanding of the people. Hence, the Hanafi Fuqahā’ state that assets or commodities become money and currency by Ta’amul (usage) and Iṣtilāh (common agreement). Imam Ahmad (d. 241 H) also opined that currency and money can be identified by the

فيدخل فيه وهو في المعني الأول المكيلات، والمؤذنات، والعدنيات المتقاربة، والنفوذ دون الأغناط لعدم إمكان ترثه بالذمة.

ويندخل فيه معنى النفوذ المتفرع والمكيلات، والمؤذنات والاغناط، غير الnelleبية، كالجواب وأنثبار (درر الحكم شرح مجلة الأحكام ج 1 ص 235 ط دار الجيل).

كما أنه إذا كان النفوذ دونه معدوداً كثيفاً أو مكيلات أو مؤذنات، أن يملكه المصارع يوضع أو يغبر عوض (درر الحكم شرح مجلة الأحكام ج 1 ص 235 ط دار الجيل).

فجأة في إعفاء من فلوذ الباطن في هذه المادة (إذا لم يذكرن النفوذ) أنه إذا يبيع المال، ففي النفوذ خصبة أو حكاها (فليس باطل) فإن ما يعلم المصارع لا يثبت المشاكي الكبيرة: لأن النفوذ لنفسه ليزن من أركان البنغ وهو المال فلائد بدون هذه المعاوضة بين (الدنار) (درر الحكم شرح مجلة الأحكام ج 1 ص 235 ط دار الجيل).

وأما الأثر وينذكر لنا يعطى وخفى بمنفسة بين مرجعية إلى الجلالة والإطلاع: وذلك لأنه في الأصل لا يتقبل المفسود به بن المشرع أن يكون نافراً بما يتعالونون بالنفس والصناديق لا تفسد نفيسة بن هي وسيلة إلى المعتقل بها، وإذا كانت آمنة: بصرف سبب الأموال فإن المفسود الأتفاقي ولا يتسامى: فليست مقدارة من الأمر الطبعي أو المشرعي، والوسيلة الفعلية التي لا يتقبل بها عرض لا يمكن لها ولا يجوز بها المفسود، (جمعة المفتاوي ج 19 ص 252 ط مجمع الملك فيد).

وأما المثير في يُخْرَبُ رأس مال الشركة؟ ذكره في كتاب الشركة وجعله كالخروض وذكر أنه مفسوده حال الأمراء: فإن كان بتعالون به فخمه والسهم، النفوذ بالشركة بها وإن كانوا لا يتعالون به فخمه والسهم، ولا يجوز فيها الشركة (بدائع الصنائع ج 6 ص 59 ط دار الكتب).

وأما الخروض هنا غير مصمود من الذهب والفضة، فالمفرد في الشركة، الأصل والجمع الصغير باختصار الخروض فلا يشترى من مال الشركة والضارة، وجعله في صف الأصل كالأثمان لأن الذهب والفضة لمن يئلا المنافقة، والأسفي الحرام: فلما ذكر xu中介机构غ يفضل بعض مخصصات، لأي السبب لا يصرف إلى شيء، خلارانيا والمعترف به الغرض، فإن موضوع جرى التعامل، به فهو ومن، ولا يفسد، كفاياته، الخروض في تحجج السهم، والعمل جوار الشركة والاضطرابية. (سبيس المفتاوي ج 3 ص 317 ط إصدارة)

فإن المغيرات في الغرض في كل بلد، جرى التعامل بالأسف بالملاذ بإبازر كنفدوش لا يجمع بالخروض ونصح الشركة به، (سبيس المفتاوي ج 3 ص 317 ط إصدارة)
agreement of the people\textsuperscript{15}. When something becomes currency or money in Shariah, the rulings of Zakat, currency exchange, Ribā and other such rulings apply to the currency.

The legal consequences of being Thaman (price)\textsuperscript{16}:

1) When transacting, the Thaman (price) becomes a debt upon the buyer.
2) It is not necessary to own the monetary amount and price (Thaman) at the time of transaction.
3) A transaction is not nullified with the non-delivery of the Thaman.
4) Thaman can be re-negotiated after a transaction except in a ṣarf and Salam contract.

Characteristics of Thaman:

1) Benefit from Thaman is derived by spending. It serves no other purpose whilst in one’s ownership \textsuperscript{17}
2) Thaman is used as a standard for pricing \textsuperscript{18}
3) Thaman is used as a medium of exchange to acquire assets with intrinsic value \textsuperscript{19}

2.5 The Concept of Ta’āmul and Īṣṭīlāḥ for Establishing Currency

Ta’āmul refers to common usage. Īṣṭīlāḥ refers to mutual concurrence. The term Ta’āmul is synonymous to ‘Urf and ‘Ādah\textsuperscript{20}. Ta’āmul is established when the usage of something becomes dominant and becomes the standard\textsuperscript{21} in affairs and dealings.
Išālāh (mutual concurrence) is a similar concept to Ta’āmul. Imam Abū Hanīfah (d.150 H) and Imam Abū Yūsuf (d.182 H) were of the opinion that a commodity can be considered as money upon the agreement of only the two transacting parties. Whereas, Imam Muhammad (d.189 H) viewed that for commodities to be considered currency and money, general and widespread Išālāh is required for commodities to be money and currency. Thus, according to Imam Muhammad (d.189 H), only when commodity has public acceptance will it be regarded as money. Mufti Muhammad Taqi Uthmani states that the preponderant position is that of Imam Muhammad. Thus, Išālāh can only be activated and deactivated by the public and not by the transacting parties alone.
Besides Dinar and Dirham, other assets which became a currency without the intervention of a state did so upon Ta’āmul and Iṣilāh\(^{25}\). In historical times, assets and raw metals were commonly used in daily chores and affairs. Therefore, assets and raw metals which served other purposes in daily life would not be regarded as money until Ta’āmul (usage as money) transpired\(^{26}\). Ta’āmul and Iṣilāh were the indicators of something transforming from ‘Urūḍ (assets) to Thaman (money). Ta’āmul is a natural process which takes time to establish. A habit is formed after an industry, area or market deal with something as money over a given period of time, establishing a Ta’āmul. Some of the apparent indicators of Ta’āmul are:

- The zāhir and apparent understanding of such assets is that it is money.
- People regard them as money extemporaneously.
- The first description or definition that comes to mind of such assets is of money.
- Thamaniyyah becomes their second nature and innate trait.
- The obvious form of payment becomes these assets.

However, money which was coined and released by the government, was money from its inception. A natural process of Ta’āmul was not required as people regarded that asset as money upon circulation\(^{27}\). The government establish Ta’āmul and ‘Urf by legislation. Thus, Mufti Taqi Uthmani indicates that an ‘Urf can be established with legislation\(^{28}\). Minted coins served no other purpose but as a medium of exchange from inception due to the ‘Urf being implemented and imposed by the government. In such an instance, the natural process of Ta’āmul and forming a habit is fast tracked by legislation.

Assets which become money and are given the quality of Thamaniyyah upon Ta’āmul can also be deactivated as money once they are withdrawn or no longer used as money\(^{29}\). The Thamaniyyah being removed from such items reverts them back to assets and raw metals\(^{30}\). This can be understood in commodity money which continue to serve their primary function upon being withdrawn and out of circulation.

\(^{25}\)َنَّهُ عِنمدَ ذَلِكَ وَجمهُ الْمَوَّلِ وَهُوَ ظَاهِرُ الْمَذمهَبِ أَنَّ الثَّمَنِيَّةَ تَخمتَصُّ بِالضَّرمبِ الْمَخمصُوصِ لِْلَََ يُصمرَفُ إلَّي شِيماءٍ آخَرَ ظَاهِرًا إلَّأَّنم يَجمرِيَ التَّعَامُلُ بِاسمتِعممَالِهَا

\(^{26}\)وَتَحمقِيقُهُ أَنَّ صِفَةَ الثَّمَنِيَّةِ فِي المفُلُوسِ لَيمسَتم بِصِفَةٍ لََزِمَةٍ وَلََهُوَ ثَابِتٌ بِأَصملِ المخِلمقَةِ بَلم يُعَارِضُ اصمطِلاَحَ النَّاسِ (الْبسوط ج 12 ص 183 المعرفة)

\(^{27}\)وَإِذَا بَطَلَتم الثَّمَنِيَّةُ فَلِعَومدِهَا عُرُوضًا تَتَعَيَّنُ بِالتَّعميِينِ. (العناية ج 7 ص 21 ط دار الفكر)

\(^{28}\) (وَيَتَعَيَّنُ بِالتَّعميِينِ إنم كَانَتم لََ تَرُوجُ) لِزَوَالِ الْمُنَا هَا فِي الْمَصملِ هِيَ سِلمعَةٌ، وَإِنَّمَا صَارَتم أَثممَانً قَمَتَض ِي لِلثَّمَنِيَّةِ، وَهُوَ الَِصمطِلاَحُ، وَهَذَا؛ لِْبِالَِصمطِلاَحِ فَإِذَا تَرَكُوا الْمُعَامَلَةَ بِهَا رَجَعَتم إلَى أَصملِهَا (تبيين الحقائق ج 4 ص 141 ط إمدادية)
The Thamaniyyah (monetary element) in Dinar and Dirham can never be deactivated or removed, as that is intrinsically and innately instilled in these precious metals by Allah.\textsuperscript{31}

2.6 Money in Conventional Economics and Finance

To complement the understanding of money, the following discussion gives a very brief and cursory view of money in conventional economics and finance.

Secular jurists and economists may differ in the specifics of money as they are concerned with different aspects of money. Thus, Ludwig von Mises in The Theory of Money & Credit highlights the different objectives of jurists and economists.\textsuperscript{32} He states that jurists seek the definition of money to determine how monetary liabilities can be discharged, as money is a medium of payment to a jurist. He argues that economists may not adopt this point of view as their concern is the advancement of economic theory.

Mankiw states,

"Money is the set of assets in the economy that people regularly use to buy goods and services from other people."\textsuperscript{33}

McEachern (2012) states,

"Any commodity that acquires a high degree of acceptability throughout an economy becomes money."\textsuperscript{34}

Groth (2012) mentions,

"In economics money is defined as an asset (a store of value) which functions as a generally accepted medium of exchange, i.e., it can in principle be used directly to buy any good. A note of IOU (a bill of exchange) may also be a medium of exchange, but it is not generally accepted and is therefore not money. Generally accepted mediums

\textsuperscript{31} قَالَ: (وَلَََ تَنَمَّعَقِدُ الْمُفَاوَضَةُ وَالمعِنَانُ إِلََّ بِالدَّرَاهِمِ وَالدَّنَانِيرِ وَتِبمرَيمهِمَا إِنم جَرَى التَّعَامُلُ بِهِ ثَمَانًا ثَمَنُ الْمَشميَاءِ وَبِالمفُلُوسِ الرَّائِجَةِ) ، أَمَّا الدَّرَاهِمُ وَالدَّنَانِيرُ فَلِْ خِلمقَةٌ وَوَضمعًا وَلََ خِلاَفَ فِي ذَلِكَ. 

أَما التَّعَامُلُ مَجمرَى الضَّرمبِ عَمَلاً بِالمعُرمفِ فَأَلمحَقمنَاهُ بِهِمَا عِنمدَ التَّعَامُلِ. 

(الَختيار ج3 ص14 ط دار الكتب)

\textsuperscript{32} Von Mises, L., The Theory of Money & Credit, Yale University Press


\textsuperscript{34} McEachern, W. (2012), Economics A Contemporary Introduction, South-Western, Cengage Learning
of exchange are also called means of payment. So money is characterized by being a fully liquid asset. An asset is fully liquid if it can be used directly, instantly, and without any costs or restrictions to make payments."

Economists tend to define money by the functions that money serves. These functions are:

1) Store of value
2) Unit of account
3) Medium of exchange
4) Standard of deferred payment

1) Store of value
A store of value is an item that people can use to transfer purchasing power from the present to the future. In other words, it is something that is expected to retain its value in a reasonably predictable way over time. Gold or silver that was mined hundreds of years ago would still be valuable today. But perishable food would quickly become worthless as it goes bad. So, gold or silver are good stores of value, but perishable food much less so.

2) Unit of account
A unit of account is the yardstick people use to post prices and record debts. It is the thing that goods and services are priced in terms of, for example on menus, contracts or price labels. In modern economies, the unit of account is usually a currency, for example, the pound in the United Kingdom, but it could be a type of good instead. In the past, items would often be priced in terms of something very common, such as staple foods (‘bushels of wheat’) or farm animals.

3) Medium of exchange
A medium of exchange is an item that buyers give to sellers when they want to purchase goods and services. A medium of exchange is anything that is readily acceptable as payment. Something that people hold because they plan to swap it for something else, rather than because they want the good itself.

4) Standard of deferred payment

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Starr, R.M, Money: In Transactions and Finance, Department of Economics University of California, San Diego
Agarwala (2007), Principles of Economics, New Delhi: Excel books
Money serves as a standard of payment contracted to be made at some future date. It facilitates borrowing and lending activities.

These functions are all closely linked to each other. For example, an asset is less useful as a medium of exchange if it will not be worth as much tomorrow — that is, if it is not a good store of value. Indeed, in several countries where the traditional currency has become a poor store of value due to very high rates of price inflation, or hyperinflation, foreign currencies have come to be used as an alternative medium of exchange. For example, in the five years after the end of the First World War, prices of goods in German marks doubled 38 times — meaning that something that cost one mark in 1918 would have cost over 300 billion marks in 1923. As a result, some people in Germany at the time began to use other currencies to buy and sell things instead. To make sure sterling does not lose its usefulness in exchange, one of the Bank of England’s objectives is to safeguard the value of the currency. Although the medium of exchange needs to be a good store of value, there are many good stores of value that are not good media of exchange. Houses, for example, tend to remain valuable over quite long periods of time, but cannot be easily passed around as payment.

The balancing of production and consumption takes place in the market, where the different producers meet to exchange goods and services by bargaining together. The function of money is to facilitate the business of the market by acting as a common medium of exchange.

The Characteristics of Money

Economists have identified six characteristics that allow money to serve its functions, with the most importance being acceptability. The characteristics of money are36:

1) Acceptability — Money must be widely accepted as a medium of exchange.
2) Divisibility — Money must be easily divided into small parts so that people can purchase goods and services at any price.
3) Portability — Money must be easy to carry.
4) Scarcity — Money must be relatively scarce and hard for people to obtain.

5) Durability — Money must be able to withstand the wear and tear of many people using it.
6) Stability/uniformity — Money’s value must remain relatively constant over long periods of time.

Types of Money

Economists have categorised money in the following types:\37:

1) Commodity Money
Commodity money are items used as money that also have intrinsic value in some other use. In other words, it can serve as money as well as commodity due its intrinsic value. Gold, silver, salt, animals, shells, grains etc. are forms of commodity money.

2) Fiat Money
Fiat money gets its value from a government order (i.e. fiat). That means, the government declares fiat money to be legal tender, which requires all people and firms within the country to accept it as a means of payment. Unlike commodity money, fiat money is not backed by any physical commodity. By definition, it does not have intrinsic value. Hence, the value of fiat money is derived from the relationship between supply and demand. Most of the world’s paper money is fiat money.

3) Fiduciary Money
Fiduciary money depends for its value on the confidence that it will be generally accepted as a medium of exchange. Unlike fiat money, it is not declared legal tender by the government, which means people are not required by law to accept it as a means of payment. Instead, the issuer of fiduciary money promises to exchange it back for a commodity or fiat money if requested by the bearer. As long as people are confident that this promise will not be broken, they can use fiduciary money just like regular fiat or commodity money. Examples of fiduciary money include cheques, bank notes, or drafts\38.

\38 https://quickonomics.com/2016/09/different-types-of-money/
4) Electronic Money

This refers to money that is transmitted via the internet, computer networks, or other electronic systems. In an electronic money system, no money actually changes hands, but rather a system of debits and credits is used to make exchanges.

Electronic money, or e-money, is any electronic payment media—any material, device, or system that conducts payment via the transfer of electromagnetically stored information. E-money may be “currency” in that it can be stored in a physical “wallet” like a smart card or token, but it generally exists as account data on some electronic storage device. Credit cards fit under this definition of e-money. Banks already create e-money as part of their normal lending process, when they issue loans by crediting the deposit accounts of the borrowers (or the receiver of the loan proceeds)\(^{39}\).

The FCA define electronic money as:

“Electronic money (e-money) is electronically (including magnetically) stored monetary value.”\(^{40}\)

What does Legal Tender Mean?

The Bank of England describes legal tender in the following manner\(^{41}\):

*Legal tender has a very narrow and technical meaning, which relates to settling debts. It means that if you are in debt to someone then you can’t be sued for non-payment if you offer full payment of your debts in legal tender.

What is classed as legal tender varies throughout the UK. In England and Wales, legal tender is Royal Mint coins and Bank of England notes. In Scotland and Northern Ireland only Royal Mint coins are legal tender.

Throughout the UK, there are some restrictions when using the lower value coins as legal tender. For example, 1p and 2p coins only count as legal tender for any amount up to 20p.

There are many acceptable payment methods which aren’t technically legal tender. This is why the term ‘legal tender’ has little use in ordinary everyday transactions. Most shops accept payment by debit or credit card, and


\(^{40}\) https://www.fca.org.uk/firms/electronic-money-regulations

\(^{41}\) http://edu.bankofengland.co.uk/knowledgebank/what-is-legal-tender/
some accept cheques and contactless payments. These are safe and convenient ways to pay, despite not being classed as legal tender.

The same is true for Scottish and Northern Ireland banknotes. Seven banks in Scotland and Northern Ireland are authorised to issue banknotes. These notes make up the majority of banknotes in Scotland and Northern Ireland and legislation is in place to ensure that noteholders have a similar level of protection as they would for Bank of England notes. Despite this, Scottish and Northern Ireland banknotes are not classified as legal tender anywhere in the UK. Equally, Bank of England notes are not legal tender in Scotland and Northern Ireland.

Whether you pay with banknotes, coins, debit cards or anything else as payment is a decision between you and the other person involved in the transaction.

In addition, shops are not obliged to accept legal tender. If you hand over a £50 note to pay for a banana in your local grocery store, the staff are within their rights to choose not to accept it. Likewise for all other banknotes – it’s a matter of discretion.

3.0 The Fiqhi (juristic) Components for Currency

This section analyses the components required for any item or asset to be considered a currency.

3.1 Māl (Wealth)

The primary component for any counter value or consideration is Māl. An accepted definition of a transaction among Muslim jurists is ‘an exchange of Māl in consideration of Māl’ (al-Marghinani). Any consideration in a commutative contract must be Māl. If the consideration is not Māl, the contract is void (bāṭil). Therefore, the first fundamental requirement for money is that it must be Māl. Scholars differ in their understanding of Māl.

Linguistically, Māl in the Arabic language refers to anything which can be acquired and possessed; whether it is corporeal (‘ayn) or usufruct (manfa’ah); examples of this include gold, silver, animals, plants and the benefit derived from assets such as living in homes, riding vehicles etc. (Wohidul Islam, 1999). Something which cannot be possessed, cannot be considered as Māl linguistically. For example, birds in the sky, fish in the water, trees in forests are not Māl in terms of the Arabic language as they are not in any person’s possession (al-Zuhayli, 1985).
After the codification of Islamic law by various schools, the term *Māl* was coined to denote different technical meanings and concepts. Thus, jurists from different schools differed in their understanding of *Māl*. Wohidul Islam (1999) categorises the definitions of *Māl* into two definitions and understandings: The Hanafi understanding and the majority understanding.

If we consider Wohidul Islam’s (1999) categorisation, it becomes clear that even among the Hanafi jurists, different definitions of *Māl* are found. However, when closely examining the definitions, the variance is not due to a difference in the nature of *Māl*, but simply due to the different ways of expression (Wohidul Islam, 1999).

For example, some of the common definitions are:

1. *Māl* is what human instinct inclines too and which is capable of being stored for the time of necessity (Ibn Abidin, n.d.).
2. *Māl* is that which has been created for the goodness of human beings. *Māl* brings with it scarcity and stinginess (Uthmani, 2014).
3. *Māl* is that which is normally desired and can be stored up for the time of need"(Majallah, 2012).

According to the Hanafi jurists, *Māl* is "what is normally desired and can be stored up for the time of need". This definition denotes that the two key criteria for defining *Māl* in the Hanafis' view are "desirability" and "storability". The first criterion clearly links *Māl* to its linguistic root *mayl*, which means inclination or desire. Mufti Taqi Uthmani describes desirability as something which is beneficial. However, Shaykh Salah Abul Hāj states that the condition of desirability excludes undesirable articles of trade such as humans etc. 

Ibn ‘Ābidîn (d.1252 H) presents another definition of *Māl* as “something created for the benefit of man which people hoard and aspire”. Imam al-Lacknawi (d.1304 H) has a similar discussion on *Māl*. 

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42 فيقيق: ما يميل إليه طبع الإنسان: خرج لحم المائة، والإنسان الحر. (مذكرات في فقه العاملات ص 12)

43 لأنَّ المَالَ ما يَمْيِلُ إِلَيْهِ الطَّبَعُ وَيُدْخَلُ لِوَقْتٍ الحَاجَةِ أَوْ مَا خُلِقَ لِلْفَضْلِ لأُهُودُ يَبْيَضُ فِيهِ السُّبُحُ وَالشَّجَنَةُ اه (منحة الخالق ج 5 ص 277 ط سعيد)

In terms of storability, Ibn ’Ābidīn (d.1252 H) states that this condition excludes *Manfa’ah* (usufruct)\(^5^\) as *Manfa’ah* is *Milk* (something that comes into your ownership) not *Māl*. In other words, *Manfa’āh* is something which comes into one’s ownership as a result of trading *Māl* and is the usufruct of the *Māl* and not *Māl* in itself.

Thus, in a rental contract, one gets ownership of the *Manfa’ah* and not the *Māl* (leased item) which is providing the *Manfa’ah*. Thus, intangibles which can be stored and retrieved are different to *Manfa’ah*. The former will be *Māl* whilst the latter is not *Māl* according to the Hanafi legal theory.

Storability simply means that something can be retrieved for use later. Thus, thin air, an odour or scent, a passing thought in one’s mind are not ‘storable’. The jurists put this condition for *Māl* because only storable items can be retrieved and used, and the entire purpose of *Māl* is usage.

Although some Hanafi jurists have stated that *Māl* must be a physical entity, Mufti Taqi Uthmani dispels this argument and states that the Quran and Sunnah have not explicitly defined *Māl*, rather, Shariah has left it to the understanding of people. Furthermore, he argues that some *Furu’* (substantive laws) in the Hanafi school discuss intangibles as *Māl*. He thereafter quotes the *Fatāwā* of late Hanafi jurists which consider electricity and gas as *Māl* despite being intangible. Thus, intangibles can also be *Māl* on condition they are desirable and retrievable. It is not necessary for intangible *Māl* to remain after using, it may be an intangible which is consumed and depleted upon usage. The condition of perpetuity is not required in physical *Māl* either, hence, food is *Māl* despite being used by consumption.

The Shafi’i jurists have included usufruct in the definition of *Māl*. Al-Zarkashi states that, "*Māl* is what gives benefit, i.e. prepared to give benefit", and he continues to say at mal can be material objects or usufructs (al-Zarkashi). al-Suyuti states: “The terminology *Māl* should not be construed except as to what has value with which it is exchangeable; and the destructor of it would be made liable to pay compensation; and what the people would not usually throw away or disown, such as money, and the likes” (Wohidul Islam, 1999).
From among the Hanbali jurists, al-Kharqi states that Māl is something in which there exists a lawful benefit (Wohidul Islam, 1999). Al-Buhuti elaborates on this definition and states that something in which there is not benefit in essence, such as insects, or where there is benefit but it is unlawful in Islam, such as wine, cannot be considered as Māl.

### 3.2 Taqawwum

Another requirement for Māl itself to be exchangeable and tradeable is that it must be Mutaqawwim (possess legal value) for transaction to be legally sound (ṣaḥīḥ)⁴⁶. Mutaqawwim refers to an item or subject being lawful to use in Shariah⁴⁷. Therefore, Ali Haydar states that the criteria for any item to be tradeable and exchangeable are:

1) Tamawwul
2) Taqawwum⁴⁸

Tamawwul refers to anything used as Māl. Taqawwum refers to the item being lawful in Shariah as a result of being considered valuable.

**Notes:**

⁴⁶ وَيُشَرَّطُ أَيضاً لِعَدَمِ فَسَادِ المبَيعِ أَنَّهُ يَكُونَ الثَّمَنُ مَالًَ مُتَقَوِٰمًا وَهَذَا الشَّرْطُ لِيَسْتَحْكِمُ مِنْ شُرُوطِ الْعَفَايَادِ الْبَيْعِ فَشَرَاءُ مَالِ يَمْتَنَعْ مِنْ ثِقَالِهِمْ بِمَالٍ مُتَقَوِٰمٍ (رَدُّ الْمُحَاذَرِ) (مَدْرِسَةُ الْجَالِدِ) (مَدْرِسَةُ الْجَالِدِ)

⁴⁷ فِيشَرَّطُ في الْالْكَالِمِ أن يكون متقو، لَكَثْ بِيْتِهَا بَيْنَ الْالْتَكْصِبِ. وَفِيشَرَّطُ في الْالْتَكْصِبِ أن يكون متقو، لَكَثْ بِيْتِهَا بَيْنَ الْالْتَكْصِبِ.

⁴⁸ الفَثْرِيُّ: أَلْتَكْبِرُ مَا يَبِحُ الْتَكْصِبُ بِشَرْعٍ.
3.3 Thamaniyyah

Thamaniyyah refers to money having two critical functions:

1) Independent standard of value
2) Unit of account

The first function of Thamaniyyah is to enable money to independently price and valuate goods. The currency is not valued against something else in its market of operation. The entire objective of currency and money is to be a means to facilitate transactions with ease without having to refer to any other benchmark or index. It is a common and widespread reference of value which does not require a further benchmark to understand its operational worth in a market or industry. If money constantly required benchmarking in a local and domestic market, this would undermine the entire function of currency.

In addition, for something to be an independent standard of value, it necessitates that it has stability and widespread acceptance. Money is an entire system and Intizām. The system of money has been established to bring stability in our worldly life and to be of benefit to man. It is a standard and measure for value. Hence, in ancient times, money was weighed in a scale, reflecting the very essence of money – a means to balance and bring order in the world. Thus, Allah states:

“Do not entrust your wealth to the feeble-minded, which Allah has made to maintain you” (Quran 4:5)

Therefore, if money does not have stability and is plagued with gross uncertainty and severe volatility, it loses its primary role and function. Something unstable cannot bring stability to others.

The second function of Thamaniyyah is to be a unit of account. This refers to being a primary reference point and yardstick for people to use to post prices and record debts. It is the thing that goods and services are priced in.
As discussed previously, the characteristic of Thamaniyyah singles out currency from all other assets. An asset which has Thamaniyyah will be currency. Thamaniyyah (monetary value) is the key element in an asset which qualifies it to serve as currency and money.

It is these three features in currency which define money in Islamic law. These three features are similar to what conventional economists define as the functions of money.

4.0 Analysis of Bitcoin

4.1 Defining Cryptocurrencies

Cryptocurrencies are also known as virtual currencies and at times, as digital currencies. Allen & Overy define virtual currencies as:

“A virtual currency is a digital representation of value that can be digitally traded and functions as a medium of exchange, a unit of account and/or a store of value, but does not have legal tender status in any jurisdiction. It is not issued or guaranteed by any government, and fulfils these functions only by agreement within the community of users of the virtual currency. It is distinct from fiat currency or “real currency”, which is the physical money that makes up a country’s legal tender, and distinct from e-money, which is a digital representation of fiat currency.”

The European Central Bank describes virtual currencies as:

Virtual currencies are defined by as a digital representation of value that is neither issued by a central bank or public authority nor necessarily attached to fiat currencies, but is used as a means of exchange and can be transferred, stored or traded electronically. In contrast to fiat currencies, virtual currencies are not legal tender but are nevertheless accepted by members within a virtual community as a medium of exchange and as a unit of account. Virtual currencies must also be distinguished from electronic money such as PayPal or Ven. In electronic money schemes the link between the electronic money and fiat currency is guaranteed through some legal foundation and funds are shown in the same unit of account (U.S. dollar, Euro, etc.). Virtual currency

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schemes create an independent unit of account, which only exists in a digital form (Bitcoin, Litecoin, Ripple, etc.), which can be used as an alternative to fiat currency, or may be converted to fiat currency\(^{51}\). At the current moment\(^{52}\), cryptocurrencies are not backed up by a government nor a central bank.

### 4.2 Literature on Bitcoin

Academic literature on Bitcoin and cryptocurrencies is limited in relation to other areas in the economics and finance industry. This is primarily due to Bitcoin being a new phenomenon which is still in its first decade. Despite extensive exploration, academic papers addressing the research question of this paper could not be located. This shows the need to research this question and demonstrates how this research will add to the body of knowledge. Therefore, this literature review covers literature which enhances understanding of Bitcoin and assists in developing the underlying arguments in the research.

Nakamoto (2008) – the pseudonym of the supposed inventor of blockchain technology and bitcoin - was the first to author a paper on Bitcoin. This paper’s most important contribution was the introduction of blockchain technology to the world - the underpinning technology of Bitcoin. This paper demonstrates the benefit of the blockchain in eliminating inefficiencies in existing financial markets resulting in faster, lower-cost transactions as well as increased liquidity, transparency and security. However, this paper falls short of discussing the monetary nature of Bitcoin and rather focuses on the technology behind Bitcoin. Furthermore, as Nakamoto invented blockchain and bitcoin, his paper cannot be free from bias. Baur et al. (2015) attempted to address the question of whether Bitcoin is a currency or an asset from a conventional perspective. The paper presented analysis of transaction data of Bitcoin accounts to show that Bitcoins are mainly used as a speculative investment and not as an alternative currency or medium of exchange. Although this paper asserts that Bitcoin can be used as a medium of exchange, it does not address the nature of Bitcoin, rather, the focus is purely on the current usage of Bitcoin. Interestingly, they concluded that Bitcoin is neither precious commodities with intrinsic value nor fiat currency backed by a monetary authority, rather, they are hybrids of commodity and fiat currency. This hybrid idea is a new concept they proposed with their research. What they mean by a hybrid is that Bitcoin plays a dual role of commodity as well as currency. Whilst these papers fail to address the currency element in Bitcoin, the paper by Barber et al. (2012) attempted to address how Bitcoin can be a better currency than fiat currency. This

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\(^{52}\) This is according to the time of writing this which is April 2017.
paper highlights the different features of Bitcoin which make it a good candidate for a long-lived stable currency. Let alone an Islamic jurisprudence and economic analysis, this paper fails to offer any legal or economic discussion on the nature of Bitcoin. The paper by Evans (2015), ‘Bitcoin in Islamic Banking and Finance’ can be considered to be the primary academic work addressing the role of Bitcoin in the Islamic finance industry. This paper suggests that the underlying technology of Bitcoin can conform with the prohibition of *Riba* (usury) and incorporate the principles of *maslaha* (social benefits of positive externalities) and mutual risk-sharing (as opposed to risk-shifting). However, this paper falls short of describing the legal nature of Bitcoin whether it is money in Islamic law or something else. Ammous (2016) challenged the idea of Bitcoin being money by analysing Bitcoin from the economic functions of money. His paper analysed five cryptocurrencies’ monetary supply growth, credibility and stability to evaluate whether these currencies have a viable monetary role as a medium of exchange, store of value and unit of account. He concluded that while all cryptocurrencies can theoretically serve as a medium of exchange, they are inherently too unstable to be used as a unit of account. Of the five, only Bitcoin could potentially serve as a store of value, due to its strict commitment to low supply growth, credibly backed by the network’s distributed protocol and very large processing power. Thus, conventional researchers are split in their understanding of Bitcoin. To date, no research has been published on how Bitcoin would be perceived under Islamic law.

### 4.3 Overview of Bitcoin

Bitcoins are cryptocurrencies which are developed by cryptography. Cryptography is the practice of creating algorithms designed on difficult computational assumptions. The underlying software is Blockchain: digital blocks with information inside with cryptographic security surrounding it keeping the information secure (Van Wyk, 2013). In addition, Bitcoin is a decentralised currency - it is not tied to any country. This means that Bitcoin is not under the control of any central bank and nor can it be minted. Bitcoin does not rely on any centralised clearing house or third party to verify money supply and transaction. Rather, it is built on a decentralised network of computers toward the singular purpose of validating and clearing transactions on the Bitcoin Network. The distributed and decentralised network allows each individual user to verify the validity of individual transactions and the system, as a whole, through the cryptographic protocols and the transaction history of the Bitcoin Network. All this data is stored by each user on a distributed ledger known as the Blockchain. Blockchain - a distributed ledger - is stored locally on the computer hard drive of every user running a full version of the Bitcoin software (Scholer, 2016).
The ledger records the history of every transaction sent and confirmed on the Bitcoin Network, including information included as a part of those transactions. Information is added to the Blockchain through the proof of-work “mining” process. Users running a special mining variant of the Bitcoin software expend great amounts of computing power to win the right to add another block to the Blockchain, which is accompanied by a reward of bitcoins (Lewis, 2013).

Although it has been often reported that Bitcoin is an anonymous payment system, the Blockchain is a transparent record of all transactions between users on the Bitcoin Network. Users on the Bitcoin Network are identified by the digital addresses (i.e., hashes of their public keys) that they control, and such digital addresses serve as their pseudonyms on the Blockchain. Thus, Bitcoin is based on a peer-to-peer distribution model as opposed to a client-server model (Lewis, 2013).

Bitcoin solved the ‘double spending problem’ without using an intermediary – there is only ever the payer and the payee, which makes it literal digital cash. Bitcoin accomplishes this by a publicly distributed ledger of transactions across a peer-to-peer network. That means a record is kept on all transfers so that the same Bitcoin can’t be spent by the same person twice. Since this ledger is distributed, there’s no single central authority keeping it. As a result, no third party regulates the ledger; there is no government, bank, or any one person or organization for that matter that can control it. Thus, an intermediary like a bank is not required to validate payments.

4.4 Uses of Bitcoin

Bitcoin is being accepted in a growing number of online and offline stores as a form of payment. Other Bitcoin users benefit from Bitcoin as a short-term investment by taking advantage of the price fluctuations. Thus, people are buying low and selling high for a profit. Others benefit from Bitcoin as a long-term investment hoping that the price inflates over a number of years (Van Wyk, 2013). Baur et al. (2015) states that there has been a dramatic increase in Bitcoin users over time from 720,705 users as at the end of 2011 to 6.7 million users as at the end of 2013. The largest group of users by share of Bitcoin and user numbers are hybrid from 41% in 2011 to 47% in 2013. Hybrid users consist of merchants and consumers who hold Bitcoin to purchase goods and services. The second largest user are investors who hold 30.22% of all Bitcoins as at 2013 end despite being the smallest group by user numbers. The fact that such users remain dominant strongly suggests that Bitcoin is mainly a
vehicle for investment rather than for trade. Thus, Baur et al. (2015) argue that Bitcoin falls short of being money as the extreme volatility compromises Bitcoin being a store of value and a unit of account. However, volatility alone is not a sufficient argument to disprove something as a currency. Fiat currencies in the past have also suffered extreme volatility. For example, Zambian kwacha fell 42% against the U.S. dollar in 2015 as copper, which accounts for 70% of the African nation’s exports, dropped to a six-year low (Bloomberg, 2015). The Belarusian Ruble experienced a 41.8% drop against the U.S. dollar in 2015, falling from 11,900 Belarusian Rubles to the U.S. dollar on Jan. 1, 2015, to 18,569 on the same day in 2016 (EADaily, 2015). The Argentine peso had suffered a 2015 drop of roughly 35% against the U.S. dollar as of Dec. 24 (Financial Times, 2015). Brazil struggled with headwinds including budget woes, concerns about China’s economy and high inflation. Amid these woes, the real dropped 33% against the U.S. dollar in 2015 (Bloomberg, 2016). Mozambique, a nation in southern Africa, struggled to cope with the effects of a decline in exports of sugar, coal and cotton. Economic growth in the nation suffered because of the drop-in shipments to other countries, and amid these difficulties, the metical fell 32% in 2015 (Bloomberg, 2016). Therefore, volatility is not a strong argument to dismiss Bitcoin as a currency. Volatility can be explained by the fact that Bitcoin is still in its infancy and people are speculating on its future.

4.5 Current Opinions in the Finance Industry

The International Monetary Fund (IMF) considers the question of virtual currencies (VCs) qualifying as money with the following:

VCs fall short of the legal concept of currency or money. While there is no generally accepted legal definition of currency or money, the following may be noted:

- The legal concept of currency is associated with the power of the sovereign to establish a legal framework providing for central issuance of banknotes and coins. Currency refers to the unit of account and the medium of exchange denominated by reference to that unit of account, prescribed by law. In the strict sense, currency refers to the banknotes and coins that are issued by a central authority (for example, the central bank) that has the exclusive right to do so. Currencies are given the status of legal tender under the state’s legal framework, which generally entitles the debtor to discharge monetary obligations with the currency through its mandatory acceptance within the relevant jurisdiction. As such, the value and credibility of a sovereign currency are intrinsically linked with the ability of the state to support that currency.
The legal concept of money is also based on the power of the state to regulate the monetary system. As a legal matter, the concept of money is broader than the concept of currency, and includes not only banknotes and coins but also certain types of assets or instruments that are readily convertible into such banknotes and coins (for example, demand deposits). While money can be created by private parties (for example, banks) as well as central banks, it must generally be denominated in a currency issued by a sovereign authority, and must be intended to serve as a generally accepted medium of exchange within that state (Procter 2012).

In terms of the economic understanding of money, the IMF states:

At present, VCs do not completely fulfill the three economic roles associated with money:

- **High price volatility of VCs limits their ability to serve as a reliable store of value.** VCs are not liabilities of a state, and most VCs are not liabilities of private entities either. Their prices have been highly unstable (see Figure 2), with volatility that is typically much higher than for national currency pairs. Both prices and volatility appear to be unrelated to economic or financial factors, making them hard to hedge or forecast (Yermack, 2013).

- **The current small size and limited acceptance network of VCs significantly restricts their use as a medium of exchange.** Without legal tender status, a VC is accepted only when two parties agree to use it. Despite the very rapid growth of VC-based payments, the number and volume of transactions in VCs remain small. Indeed, the current total market value of VCs is about US$7 billion. By contrast, U.S. currency in circulation is US$1.4 trillion, while U.S. money supply (M2) is about US$12 trillion.

- **As of now, there is little evidence that VCs are used as an independent unit of account.** In other words, rather than being used to measure the value of goods and services directly, they instead represent the value in fiat currency based on the VC exchange rate. Retailers who accept payment in VCs will quote prices in fiat currency, with the price in VC based on the exchange rate at a particular point in time.

The Bank of England

The extent to which an asset serves the various roles of money varies from person to person and over time. In theory, digital currencies could serve as money for anybody with an internet-enabled computer or device. At present, however, digital currencies fulfil the roles of money only to some extent and only for a small number of

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people. They are likely at present to regularly serve all three purposes for perhaps only a few thousand people worldwide, and even then only in parallel with users’ traditional currencies. The remainder of this section first examines how widely digital currencies are used before assessing this usage against the three functions outlined above.

Although the views of the IMF and Bank of England are generic to virtual currencies, most virtual currencies and in particular Bitcoin, were produced as currency to be independent of any central authority, transferable electronically, more or less instantly, with very low transaction fees\(^4\). Therefore, the fact that virtual currencies have an anti-central authority element to it, the opinions of the IMF and the Bank of England which represent central authority may not reflect reality.

### 5.0 Risks and Challenges for Bitcoin

The following risks are considered to provide a better understanding of Bitcoin.

#### 5.1 Security risk

Since the very nature of Bitcoin is cryptic, the lack of regulatory safeguards and complex technology, it becomes attractive to hackers and fraudsters as there is an extra layer of secrecy within the industry protecting their identity (He et al, 2016). As a result, one of the largest bitcoin exchanges has been hacked and 30,000 customers’ data has been compromised in early July 2017 (Business Insider, 2017). Graham (2017) reported that $32 million worth of a cryptocurrency similar to bitcoin had been hacked. The news of hacking dropped the price of ether, from $235 to $196. In fact, in 2014, $350 million was stolen in cyber theft when Tokyo’s MtGox exchange was hacked. Data released by Reuters shows that a third of bitcoin trading platforms have been hacked in the period from 2009 to 2015. In contrast, in the same period, from 6000 operational US banks, only 67 experienced a data breach and cyber theft, roughly 1% of US banks. Fear among investors and users can bring severe volatility and insecurity into the entire industry. The risk is compounded by that the fact there is no current tool to absorb the loss (Reuters, 2016).

#### 5.2 Technological risk

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\(^4\) [www.coindesk.com/information/what-is-bitcoin/](http://www.coindesk.com/information/what-is-bitcoin/) (accessed 17\(^{th}\) April 2017)
Disruption to the systems and hardware which provide the power and storage space to the cryptocurrency industry can result in losses for bitcoin holders (He et al, 2016). These disruptions pose significant risk to Bitcoin and cryptocurrencies especially as they are not backed and secured by any central authority.

5.3 Money laundering risk

The anonymity and decentralised nature in Bitcoin can provoke money laundering. The Bitcoin user’s identity is simply alphanumeric identifiers composed between 27 and 34 characters. Furthermore, they are temporary as users are encouraged to change create new addresses for every transaction. This anonymity can facilitate money laundering. Therefore, any organization or industry which considers using Bitcoin as a currency must consider and factor in advanced anti-money laundering (AML) protocols (PwC, 2014).

5.4 Volatility risk

Bitcoin is considered a bubble waiting to burst. A bubble occurs when there is a difference between the actual value and market price. The actual value of Bitcoin is obscured and the valuation can be based on anything such as its ease of use, the energy used to mine, where it can be used or its technology. This obscurity has reflected in the volatility of Bitcoin. The volatility has increased speculation resulting in Bitcoin investors to hoard and hold Bitcoin instead of spending it, making Bitcoin illiquid and further inflating the bubble (Heintze, 2014). From the inception of Bitcoin until April 2011, the price of one Bitcoin sat below $1. Thereafter, it gradually increased before increased interest sent the value soaring in the last quarter of 2013 past $1240 (PwC, 2014). Thus, the practicality of using a currency with such volatility is highly risky and against the preservation of wealth maxim in Sharia.

5.5 Data risk

If a Bitcoin user stores the Bitcoins himself, he can lose access to the Bitcoins permanently by losing the private key. Once the private key is lost, there is no password reminders and no refunds due to its decentralised nature. Therefore, Bitcoin users must make multiple backup copies of the private keys offline to protect the access to their Bitcoins (Consumer Advisory, 2014).
5.6 Transaction risk

Errors in transactions cannot be reversed. Unlike credit cards, consumers have no right to reverse the charges if something goes wrong. As a related matter, a decentralised system places the risks associated with the failure of a transaction on the users of the system. This approach differs fundamentally from a centralised payment system where the central authority would assume this risk.

When using virtual currencies to pay for goods or services, if you don’t enter the recipient’s 64-character public key perfectly, you will send the funds to the wrong person. If you’re not using a hosted wallet provider (a service that helps manage your private keys), there’s no mechanism for stopping the payment or getting the money back. And if you do use a hosted wallet provider, the provider may disclaim responsibility for helping you get your funds back (Scholer, 2016).

5.7 Intermediary risk

Intermediary risk refers to the risks related to cryptocurrency wallet providers, exchange platforms and payment processors. Since these intermediaries are not regulated, customers using such intermediaries are particularly vulnerable (He, 2016).

5.8 Regulatory challenge

An uncertain regulatory environment makes it difficult to operate and use Bitcoin in certain jurisdictions. Furthermore, the lack of regulatory framework hinders new product development and service provision in Bitcoin as the uncertainty makes such an endeavor high risk. The lack of regulation only increases the potential of Bitcoin being used for black market exchanges, tax evasion, money laundering and terrorist financing.

Cryptocurrencies in general pose a challenge to regulators as virtual currencies combine the properties of currencies, commodities and payment systems. This has led to multiple classifications and impacted their legal and regulatory treatment and regulating agency. For example, the US tax authority classified virtual currencies as ‘property’ for taxation, whilst the Treasury Department classified virtual currencies as ‘value’ (He, 2016). Furthermore, if China or any large economy with largest markets for Bitcoin trading ban Bitcoin, the price of Bitcoin would crash. Hence, any regulatory changes can severely impact the world’s bitcoin industry.
5.9 Structural Deflation risk

The fixed and finite supply of Bitcoin can lead to structural deflation like the gold standard. Typically, money demand grows in line with the growth of the economy. When the supply of money is nearly fixed, continued money demand growth leads to structural deflation. However, in principle, cryptocurrencies other than Bitcoin could be designed to allow an expansion in money supply, for example in line with transaction volumes, thus helping to overcome their deflationary bias in a growing economy.

5.10 Competition

Another risk posed to Bitcoin is competition. Since Bitcoin is not legal tender and not bound to any jurisdiction, cryptocurrencies are subject to demand and supply forces. Therefore, Bitcoin faces competition from other cryptocurrencies just like investments face competition from competitors. The market share for bitcoin can reduce if other cryptocurrencies offer faster transactions, complete anonymity, greater storage space.

5.11 Bitcoin Scalability Risk

Another risk to Bitcoin is scalability and the failure of bitcoin participants to come to an agreement to manage scalability. The blockchain needs to be able to handle much higher transaction volumes than it is currently handling. At the moment, Bitcoin transactions take from 20-40 minutes to process, therefore, its highly inefficient for merchants who would consider accepting Bitcoin payments (Lielacher, 2017).

5.12 Monopoly risk

Monopoly risk is the fear of one centralised Bitcoin mining operation gaining over 50% control of the blockchain. If any one mining operation gains more than 50%, it could reverse transactions and control trading. A 51% attack involves manipulation of the blockchain itself rather than the protocol that facilitates communication between users and miners. Each block added to the blockchain describes the transactions verified in roughly the previous 10 minutes. Miners compete for the privilege to write the next block and receive a mining reward of new bitcoins. To fraudulently manipulate the blockchain, an attacker would need to consistently out-compete all other miners by wielding a majority of the global computing power spent mining bitcoins (Lloyds, 2015). Th is
level of control would enable a number of malicious activities, including spending the same bitcoin more than once (“double-spending”) and preventing certain Bitcoin transactions from being added to the blockchain. This will crumble the entire blockchain and bitcoin industry as the key element of trust will be diminished. Although at the current time, mining operations are spread out across the world and the Bitcoin network is fully decentralised, the risk of monopoly always exists (Lielacher, 2017).

5.13 Liquidity risk

Another risk facing Bitcoins is liquidity risk. Liquidity risk can result in not being able to exchange bitcoins quickly enough to prevent a loss, and it is currently one of the main drivers of Bitcoin price volatility. Bitcoin liquidity risk stems primarily from the limited number of market participants and lack of market depth. Bitcoin’s comparatively small market capitalisation makes it particularly vulnerable to large swings in value from relatively small transactions (Lloyds, 2015).

6.0 Risk Assessment in light of the Maqāṣid al-Sharia

Ibn Ashur highlights the Maqāṣid al-Shariah pertaining to wealth and summarises the main pillars of hifẓ al-Māl (preservation of wealth) as marketability and circulation (rawāḥ), transparency (wuḍūḥ), preservation (hifẓ), durability (thabāt); and equity (‘adl). The entire notion of Maqāṣid al-Sharia (objectives of Shariah) revolves around the preservation of order, achievement of benefit, prevention of harm, establishment of equality among people, causing the law to be revered, obeyed and effective as well as enabling the people to become powerful, respected and confident. Hifẓ al Māl (preservation of wealth) is among the most important of objectives in Shariah. The Muslim jurists state that the concept of Hifẓ al Māl goes beyond its literal meaning. It not only refers to the preservation of wealth, but the concept also covers the encouragement to generate, accumulate, preserve as well as distribute the wealth in a just and fair manner.

6.1 Marketability and circulation

The pillar of marketability and circulation promotes the circulation of wealth and prohibits the hoarding of wealth and speculation. Bitcoin fails in the aspect of marketability and circulation as the volatility has only increased speculation resulting in Bitcoin investors to hoard and hold Bitcoin instead of spending it, making Bitcoin illiquid and further inflating the bubble (Heintze, 2014).
6.2 Transparency

The objective of transparency is to avoid harm and disputes as much as possible. The issue with Bitcoin in terms of transparency is that the entire network is cryptic. Every merchant and trader is anonymous. In addition, a lack of a regulatory framework can cause more dispute.

6.3 Hifẓ al Māl

The preservation of wealth means protecting the wealth of the community from being ruined and from shifting to the hands of others without compensation. This axiom ensures that wealth is part of a safe, secure system. Since the very nature of Bitcoin is cryptic, the lack of regulatory safeguards and complex technology, it becomes attractive to hackers and fraudsters as there is an extra layer of secrecy within the industry protecting their identity (He et al, 2016). Furthermore, if any large economy bans Bitcoin, the price of Bitcoin would crash. Hence, any regulatory changes can severely impact the world’s Bitcoin industry. Therefore, in the current volatile and uncertain nature of cryptocurrency regulatory framework, Bitcoin is highly risky and goes against the dictates of Hifẓ al Māl.

6.4 Durability

Ibn Ashur states that the meaning of durability is that wealth and money should be earned in a valid and lawful manner without any uncertainty and dispute. Bitcoin transactions can be considered durable as transfers and exchanges can be made in a valid and lawful manner. Furthermore, Bitcoin transactions can be exchanged without uncertainty and dispute. Therefore, from the aspect of durability of wealth, Bitcoin passes this condition for the preservation of wealth.

6.5 Equity (‘adl)

The final pillar of equity promotes the ethical acquisition of wealth, preservation of the communal wealth by instilling a just and fair system for all and spending this wealth for the benefit of all. Although Bitcoin can be acquired in an ethical manner and can be spent in just causes, there is a big question mark on whether Bitcoin leads to stable preservation of communal wealth. There is a lot of anonymity and lack of transparency to those involved behind the scenes.

6.6 Risk Assessment

Considering the above, Bitcoin fails to fulfil the Maqāṣid al-Shariah in terms of preservation of wealth. Bitcoin fails in the aspect of marketability and circulation as the volatility has only increased speculation resulting in
Bitcoin investors to hoard and hold Bitcoin instead of spending it, making Bitcoin illiquid and further inflating the bubble. In addition, the cryptic nature and anonymity opposes the pillar of transparency. This can lead to fraud, money laundering, hacking and cyber theft. In terms of the pillar of preservation, the current volatile and uncertain nature of cryptocurrency regulatory framework makes Bitcoin highly risky. Bitcoin also fails the pillar of equity (‘ādil) and the communal preservation of wealth.

7.0 Islamic Analysis of Bitcoin

7.1 Islamic Fiqh Analysis of Bitcoin

There are currently three opinions regarding Bitcoin among Shariah scholars:

1. **Opinion 1**: Bitcoin is not Māl and is purely speculative and a non-Shariah compliant investment
2. **Opinion 2**: Bitcoin is a digital asset and not money
3. **Opinion 3**: Bitcoin is currency

All three opinions are considered in this section. For anything to be considered as Māl, it must have:

1) Desirability
2) Storability

Scholars inclined to opinions 2 & 3 examine the economic demand for Bitcoin: In early March 2017, the value of one Bitcoin surpassed the value of a troy ounce of gold. Bitcoin closed at $1,268 whilst the troy ounce of gold closed at $1,233. The market cap of Bitcoin on 17th April was $19,756,107,949. On 14th April, Blockchain recorded a transaction per day figure of 290,208. These factors show a supply and demand factor for Bitcoin indicating to desirability – a component of being Māl. In respect to storability, Bitcoins are encoded within the Blockchain and are entries on a public ledger. Your ownership is reflected by your Bitcoin address being credited with a balance. Considering this angle, scholars of opinions 2 & 3 suggest that Bitcoins pass the criterion of storability in respect to being Māl as they are stored on the shared ledger. In respect to Taqawwum, the Aṣl and

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55 These opinions have been expressed in personal discussions with other Shariah scholars
57 [https://blockchain.info/charts/market-cap](https://blockchain.info/charts/market-cap)
58 [https://blockchain.info/charts/n-transactions](https://blockchain.info/charts/n-transactions)
foundational premise is ‘Ibāḥah (lawfulness) in respect to items and transactions. Considering that Bitcoins are merely digits, there is no evidence or matter which indicates to them being unlawful. Hence, Bitcoins have Taqawwum. Thus, Bitcoin is deemed to be a digital asset to the scholars advocating opinions 2 & 3.

However, scholars who advocate for opinion 1 - Bitcoins are not Māl – argue that Bitcoins are just numbers with digital entries on a cryptic blockchain. They have no intrinsic function, utility at all. On the other hand, other digital assets and real assets (‘Urūd) serve a purpose and function. They have some intrinsic utility and benefit. Bitcoins are just numbers which are fluctuating in value due to pure speculation. There is no real substance or underlying asset; it is just speculation on the fluctuation of numbers. This can result in cryptocurrencies being non-compliant and a form of maysir and prohibited speculation. This group of scholars liken Bitcoin to settling price differences, where the objective is purely the fluctuation of price; interestingly, those are digits also.

For those who consider Bitcoin as Māl, they do so considering it is as something of economic value and being storable, retrievable. According to this opinion, Bitcoin will be a digital asset. They argue that with the technological developments and advancement, it is not necessary for something to be like a classical asset; the very nature of Bitcoin and cryptocurrencies is that it is innovative. To find an example of this classically is almost impossible. They rebut those who say it is not Māl and is merely settling of prices and speculation by arguing that Bitcoin is a digital representation of a value which can be transferred and used. The entire digital world can be summarised as algorithms. However, to understand the reality of Bitcoin, one needs to observe the benefits (thamarāt) and uses to see how different it is from other financial assets; Bitcoins can be used and are used to trade. The Bitcoins in themselves are the assets, whereas, derivatives and financial instruments are nothing in themselves but representations of the price fluctuations of underlying assets they represent. Thus, the difference between the two is: The value of Bitcoin is in themselves and not in an underlying asset, whereas, derivatives do not hold any value, instead, the value represents an underlying asset and the derivative contract and instrument is purely a price reflecting the price of the underlying asset.

For Bitcoins to be money and a currency, it must have Thamaniyyah. For an asset to have Thamaniyyah, it was previously mentioned that it must be:

وَاعْلَمْ أَنَّ الأَصْلُ فِي الْأَشْبَاهِ كَبِيرٌ بَعْدَ السُّفُرِ الْإِبَاحَةَ فَقَالَ الَّذِي خَلَقَ لَكُمْ مَا فِي الْأَرْضِ جَمِيعًا [البقرة: 29] وَقَالَ رَبُّكُمُ الَّذِي خَلَقَ لَكُمْ مَا فِي الْأَرْضِ جَمِيعًا [البقرة: 29]

كُلُوا مِمَّا فِي الْأَرْضِ {١٦٨} وَقَالَ الَّذِي خَلَقَ لَكُمْ مَا فِي الْأَرْضِ جَمِيعًا [البقرة: 29] وَقَالَ رَبُّكُمُ الَّذِي خَلَقَ لَكُمْ مَا فِي الْأَرْضِ جَمِيعًا [البقرة: 29]
1) An independent standard of value
2) A unit of account

The following observations must be considered before suggesting Bitcoin to be a currency: The current state of Bitcoin is that it is not an independent measure of value. Rather, the value of fiat currencies is used to determine the value of Bitcoin. *Thamaniyyah* demands that the currency itself gives a clear reference of value. Bitcoin falls short of being an independent reference of value. Furthermore, the volatility and instability in Bitcoin opposes the entire purpose of money being a stabiliser and balance for our worldly life. Therefore, with the uncertainty and volatility, Bitcoin loses its primary role and function. Something unstable cannot bring stability to others.

According to opinions 2 & 3, Bitcoin can still serve as a medium of exchange in isolated transactions; something which does not have *Thamaniyyah* can still be traded and used as a medium of exchange in a transaction. Bitcoin will then be regarded as *Thaman* (price) in that particular transaction.

However, according opinion 1- Bitcoin not being a real asset or *Māl* - it cannot be used as a medium of exchange whatsoever let alone as an investment.

### 7.2 Does Bitcoin Qualify as Money in Islam?

Considering all of the above, it is difficult to argue at the current stage that Bitcoin is currency proper in Islamic law due to the following reasons:

1. Bitcoin falls short of possessing *Thamaniyyah*.
2. There is doubt in Bitcoin being money. The legal maxim states that the *Aṣl* and foundational premise in temporary attributes and changeable state (*ṣifāt ʿārida*) is that of non-existence (*al-ʿadm*)\(^60\). Thus, for other than gold and silver, currency is a changeable state; it is not a permanent attribute. Considering the legal maxim, currency cannot be attributed to Bitcoin unless there is sufficient evidence to suggest otherwise.
3. The number of risks associated with Bitcoin undermine the very reasons and objectives money was created to serve.
4. Bitcoin fails to uphold the Maqāṣid al-Shariah in respect to wealth.

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\(^{60}\) هذه القاعدة مأخوذة من الأشباه وقد ذكر في الأشباه (الأصل العدم وليس العدم مطلقا وإنما هو في الصفات العارضة). يعني: أن الأصل في الصفات العارضة هو عدم وجود تلك الصفات أما في الصفات الأصلية فالأصل هو موجود تلك الصفات (درر الحكام شرح مجلة الأحكام ج 1 ص 23 ط Dar al-kتب العلمية)
5. The tendency to invest in Bitcoin as opposed to using it as a medium of exchange shows that there is no overriding and encompassing ‘Urf (custom) to consider Bitcoin as money.

According to this opinion, Bitcoin would qualify as a digital asset (Mal) which possesses value (Taqawwum). From a purely fiqh and Islamic law perspective, investing in Bitcoin and the return could be considered lawful based on this opinion. However, the following section on the Islamic moral economy framework should also be considered.

7.3 Bitcoin in light of Islamic Moral Economy

Islamic finance is more than just financial contracts being strictly to the letter of the law. Islamic finance is a component of the Islamic moral economy which has a holistic view for the development of the entire economy and society. The objective of sending the Prophets and the establishment of a Godly order on this earth is purely to acquire Maṣāliḥ (interests) of this world and the hereafter for humanity. When considering the objectives of Islamic finance under the wider and greater moral economy framework, Islamic finance has four key themes (Asutay, 2014):

1) Islamic finance is tenet-bound

   a) Absence of interest-based transactions
   b) Avoidance of economic activity involving speculation
   c) Prohibition on production of goods and services which contradict the values of Islam

2) Islamic finance is principles-based which is grounded in ethics and value

   a) Principles akin to ethical investing
   b) Emphasis on risk-sharing and partnership contracts

3) Islamic finance is embedded financing – real economy linked which offers an alternative paradigm

   a) Asset-backed transactions with investments in real, durable assets
   b) Stability from linking financial services to the productive, real economy
   c) Credit and debt products are not encouraged
   d) Restrains consumer indebtedness

61 فإن الله تعالى أرسل الرسول و أنزل الكتاب لإقامة مصالح الدنيا والآخرة و دفع مفاسدهما (الفوائد في اختصار المفاصد ص 32 ط دار الفكر)
4) Islamic finance has social and development objectives with Islamic banking being community banking

- Serving communities, not markets
- Aims to enable and function individuals
- Open to all-faith clients
- Instruments of poverty-reduction are inherent part of Islamic finance (zakat & qard hasan)

The third dimension of real economy and embedded financing is crucial. Islam promotes asset-backed transactions and investments in the real economy. Money should be invested in the real economy, increasing the actual growth of real assets, products and services. Islamic finance theory promotes economic development in three main ways: its direct link to the real economy and physical transactions, its prohibitions against harmful products and activities, and its promotion of economic and social justice. Islamic finance cannot support such conventional finance activities as debt rescheduling, debt swap, speculation, and other purely monetary or financial activities that do not add to the real economy (Kahf, 2007). At the core, the financial system needs to serve the real economy. The purpose of the financial system is intermediation – that is, to match savings and investments for the purpose of generating economic growth (Aziz, 2012). Thus, investing and purchasing Bitcoin does not serve the real economy. People can begin investing and hoarding their wealth in speculative investments and digital assets such as Bitcoin. This does not benefit the real economy and neither do such investments produce real goods, services or jobs. As a result, real economic growth and the GDP can be impacted the more such investments continue. Considering this angle, Bitcoin investments, fall short of fulfilling the spirit of Islamic finance. The data presented by Baur et al. (2015) shows that Bitcoins are mainly used as a speculative investment. Considering the overarching principles of Islamic moral economy and the established principles of investing in the real economy, one should still consider the different arguments before making long-term, concentrated investments in digital assets which are not linked to the real economy. Concentrating all of one’s wealth into digital assets can have more harm for the society than good. Investing in such assets are fueled by profit and utility maximization which do not benefit the society nor the real economy; Bitcoin investments do not boost services, labour nor the production of goods.

8.0 What would Cryptocurrencies be if they became Money in future?

Cryptocurrencies have the potential to be money if the proper regulation, stability and framework is established for cryptocurrencies. The previous sections highlighted the different types of money identified in current Islamic discourse which comprised of:
1. Al-Thaman al-Khilqī (gold and silver)
2. Al-Thaman al-‘Urfī (customary money)
   2a) Commodity money – has intrinsic value allowing it to be used for other functions but does not have intrinsic Thamaniyyah.
   2b) Fiat money – No intrinsic value and therefore does not provide any considerable function besides being a medium of exchange. It has no intrinsic Thamaniyyah.

Cryptocurrencies would not fit into the classical types of money. They are not Thaman Khilqī nor Thaman ‘Urfī, rather, they would be a new breed of currencies which share the properties of Thaman Khilqī, commodity money, fiat currency and electronic money. They would not qualify as Thaman Khilqī as they do not possess intrinsic Thamaniyyah; Cryptocurrencies are merely digits. Cryptocurrencies are not commodity money because they do not have any intrinsic value, whereas, commodity money has intrinsic value and serves an alternative function besides being a medium of exchange. Commodity money were initially assets (‘Urūḍ) which later gained prominence as money. Conversely, cryptocurrencies cannot be considered ‘Urūḍ as ‘Urūḍ have intrinsic value and serve another purpose besides being a medium of exchange (Ibn Nujaym). Thus, when the jurists discuss Fulūs (copper and brass coins), they state how Fulūs could be sought for their ‘ayn (corpus) and sūrah (image). However, cryptocurrencies do not have an ‘ayn and nor are they ever sought for their image and corpus. Cryptocurrencies are traded solely for their apparent Māliyah (value), similar to Thaman Khilqī. However, cryptocurrencies resemble commodity money (Thaman ‘Urfī or Thaman Ištīlāḥī) from the angle that the Thamaniyyah has come from the people; Thamaniyyah is not inherent in them, rather, people have acknowledged Thamaniyyah.

Cryptocurrencies are not fiat currency as fiat currencies are part of a centralised system. Furthermore, upon being withdrawn, fiat currencies serve as collectible items due to their coinage. On the other hand, cryptocurrencies are part of a decentralised system. Upon withdrawal or decline, will they serve as collectibles or merely be strands of random digits? Nonetheless, cryptocurrencies resemble fiat currencies from the aspect that in and of itself, it has no intrinsic value, rather, something extrinsic is giving it value. In the case of fiat currencies, it is the government backing that is giving value, whereas, cryptocurrencies draw their value from the trust of people, supply and demand and from the overall concept. Cryptocurrencies are not electronic money. Electronic money is part of the centralised system and a digital representation of a fiat currency (Bank of England, 2014).
9.0 Is Centralisation Necessary for Money in Islam?

Until the caliphate of Abdul Malik ibn Marwân, the Islamic government did not control the currency nor its coinage. The Islamic government did not have a ‘Royal Mint’, however, Sayyiduna ‘Umar ibn al-Khaṭṭāb radiyallahu ‘anhu did introduce some measures to stabilise the alloy, content and weight of silver coins. In the year 74 AH, the government of Abdul Malik ibn Marwân established a monetary system and an Islamic dirham. Furthermore, mint houses were established which took control of the coins in circulation and improved the quality and consistency of the currencies.

In the early decades of Islam, money was thus decentralised and left to public practice. However, one may argue that money was still centralised since the Muslims used the Dinar – a Byzantine currency – and Dirham – a Persian currency.

The Hanafi jurists state that Ta’āmul can establish currency just as coinage and minting from the government established currency. The Hanafi jurists reasoned that anything minted and centralised would give a known benchmark and point of reference, thus, creating ease in the markets and facilitating transactions.

The Shafi’i jurists state that it is disliked for other than the government to mint coins and currency as it was the role of the government. Furthermore, it was a secure method to combat counterfeiting, forgery and corruption.

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The Hanbali jurists are explicit in stating that it is not permissible for the Sultan to ban the currency commonly used by people as it will cause financial harm to the people, unless they are recompensed proportionately in the new currency without a fee.66 Considering the benefit and harm for the masses, Imam al-Šułuṭī (d. 911 H) also states that it is disliked for the government to withdraw or nullify a currency commonly used among people.67

Al-Buhūṭī (d.1051 H) says that the reason why the government should solely take control of minting is to benefit the people and to make it easy for them in their transactions and affairs.68

From the above, it is evident that the jurists and economists in Islam favoured a centralised monetary system because of the following reasons:

1) Trust in the currency
Thus, if these characteristics are found in a decentralised system, there is nothing to prohibit such a system in Islam. These underpinning principles are the ideals for currency and money in Islam. The government and ruling authority would have been the most efficient and instrumental in achieving these ideals. It is on the back of this it seems that classical scholars favoured a centralised system. However, the reality is that the Quran and Sunnah have not defined currency, instead, they have left it to the understanding of the people and custom of the people as mentioned by Imam Ibn Taymiyyah (d.728 H). This is a common feature for those aspects of law which are fluid, dynamic and adjustable.

Considering that a centralised system is not necessary, Shaykh Abdullah al-Mani' states: “Money is thus whatever is agreed to be such, whether by government authority or public practice.” Thus, money can be determined by centralisation and decentralisation. If a decentralised system can provide benefits similar to that of a centralised system, a medium of exchange can become money through public practice and widespread acceptance.

10.0 Conclusion

This research used an inductive process by interpreting classical legal texts to identify the principles of defining money in Islamic law. Three elements were identified for anything to be considered as money: Māl (wealth), Taqawwum (legal value) and Thamaniyyah (monetary usage). The concept of Māl was analysed; different definitions and understandings were presented. A famous definition was "what is normally desired and can be stored up for the time of need". Two key criteria for Māl were highlighted from this definition: "desirability" and "storability". Storability simply referred to something retrievable for use at a future date. On the other hand,
desirability referred to something beneficial and lawful for use which people had an inclination to. The second condition was Taqawwum, which meant that the asset must be lawful. The final condition was Thamaniyyah. Thamaniyyah referred to the potential of something to be a measure of value and be commonly used as a medium of exchange. Upon analysing Bitcoin to see if these criteria were met, arguably, Bitcoin is Māl and has Taqawwum. However, Bitcoin fails to fulfil the role of money which has been described by Shariah and thus cannot be considered to possess Thamaniyyah. This was ascertained by considering the associated risks with Bitcoin as well as the Maqāṣid al-Shariah. The following risks were ascertained in relation to Bitcoin: Security risk, technological risk, money laundering risk, volatility risk, data risk, transaction risk, intermediary risk, regulatory challenge, structural deflation risk, competition, Bitcoin scalability risk, monopoly risk, liquidity risk.

After highlighting the above risks, Bitcoin was screened to see if it passes the Maqāṣid al-Shariah principle of preservation of wealth. Bitcoin failed in terms of marketability, circulation, transparency, hifẓ al-Māl and equity (‘adl). Bitcoin failed in the aspect of marketability and circulation as the volatility has only increased speculation resulting in Bitcoin investors to hoard and hold Bitcoin instead of spending it, making Bitcoin illiquid and further inflating the bubble. The issue with Bitcoin in terms of transparency was that the entire network is cryptic. Every merchant and trader is anonymous. In addition, a lack of a regulatory framework can cause more dispute. Bitcoin failed in terms of hifẓ al-Māl since the very nature of Bitcoin is cryptic. With the lack of regulatory safeguards and complex technology, Bitcoin has become an attractive prospect to hackers and fraudsters as there is an extra layer of secrecy within the industry protecting their identity. Furthermore, any regulatory changes can severely impact the world’s bitcoin industry. Bitcoin was further assessed in terms of the principles of Islamic moral economy. A key theme and objective of Islamic moral economy is embedded financing and investments linked to the real economy. Bitcoin and cryptocurrency investments do not serve the real economy and do not promote real growth of an economy. Therefore, considering the overarching principles of Islamic moral economy and the established principles of investing in the real economy, one should consider the different arguments before making long-term, concentrated investments in digital assets which are not linked to the real economy. Concentrating all of one’s wealth into digital assets can have more harm for the society than good. Investing in such assets are fueled by profit and utility maximization. Investing in Bitcoin does not benefit the society nor the real economy; Bitcoin investments do not boost services, labour nor the production of goods. Nevertheless, any return on Bitcoin investments would be lawful and Shariah compliant according to this argument.

And Allah Ta’ālā Alone Knows Best

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