

Cryptocurrencies And Blockchain Coding Technology From The Perspective Of Islamic Law

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Abstract

Money As A Concept Has Changed Throughout History, Depending On Needs And Advances In Technology. After Electronic Money, Currently The Concept Of Crypto Currency Has Come To Dominate The Agenda Of All, Be It Small Savers Or States. The Concept And The System Of Crypto Currency Needs To Be Studied On The Basis Of Not Only Informatics And Economics, But Also Religion And Law. Instead Of Supporting Or Opposing The Crypto Currency System A Priori, A Multidimensional Assessment Of The Subject Is Needed By Taking Into Account The Evolution Of Concepts And Systems Such As Stock Exchange, Banking And Credit. This Article Will Try To Address The Subject From An Islamic Law Perspective By Comparing Different Approaches.

Key Words: Islamic Law, Money, Electronic Money, Digital Money, Crypto Currency, Blockchain, Bitcoin.

Introduction

Understanding The Concept Of Cryptocurrency, Which Has Been The Subject Of Much Debate Recently Although Its History Dates Long Back, Can Only Be Possible First By Having An Understanding Of Related Terms, Definitions, And Approaches. The Concept Of Money And Its Evolution In Particular Have Great Importance In Maturing Our Perspective On The Concept Of Cryptocurrency. In Our Study, After Generally Outlining The Concepts Of Money, Cryptocurrency, Blockchain Technology, We Emphasize The Positive And Negative Aspects Of Cryptocurrencies Under Current Conditions From The Perspective Of Islamic Law, And Economics.

I. The Concept Of Money

Money Can Be Described As A Means Of Payment That Can Be Used In The Exchange For Goods And Services, That Can Be Stored (Accumulated) Accordingly, And That Can Measure The Value Of Produced Goods And Services.¹ Similarly, In The Definitions That Refer To The Relationship Of The State With The Concept Of Money, It Is Emphasized That The Paper Or Metal Objects That Are Issued And Minted By The State, Used As The Means Of Payment, And Have Their Value Printed On Them Are Called Money.² It Is Argued, However, That The Existence Of A State Authority Is Not Essential For The Adoption Of Money.³ Some Economists Have

¹ 1 Ludwig Von Mises, *The Theory of Money and Credit*, Translated into English by H. E. Batson, Yale University Press, y.y. 1953, p. 29-38; Sabri Orman, "Modern İktisat Literatüründe Para Kredi ve Faiz", *Para Faiz ve İslam, Çınar Matbaası, İstanbul 2015*, p. 17; Ali Acar, "İslami İktisadın Esasları İsimli Kitabın Para ve Faiz İle İlgili Kısımların İncelenmesi", *İslam Hukuku Araştırmaları Dergisi*, Issue XVI, p. 115; Philipp Bagus, "The Quality of Money", *The Quarterly Journal of Austrian Economics* 12, No 4 (2009), p. 27; Stephanie Lo- Christina Wang, "Bitcoin is a Money", *Current Policy Perspectives*, Federal Reserve Bank of Boston, 14-4, p. 3; Amaresh Das, "Money as a Medium of Exchange: Then and Now: Can Technology be a Facilitator of Exchange?", *Global Journal of Management and Business Research: B Economics and Commerce* Volume 15, Issue 11, Version 1.0, Year 2015, p. 39.

² Mehmet Erdoğan, *Fıkıh ve Hukuk Terimleri Sözlüğü*, İstanbul 2010, p. 467; Rıfat Uslu, "İslam Hukukunda Para Birimleri", *İslami Araştırmalar Dergisi*, 2014, XXV-I, p. 29.

³ Orman, p. 12; Leyla Ateş, "Bitcoin: Sanal Para ve Vergileme", *Vergi Sorunları Dergisi*, Volume 37, Issue 308, May 2014, p. 132.

Described Money As Anything That The Public Widely Uses For Making Payments For Debts.⁴ In Islamic History, Money Was Referred To As Sikkah (Coin), Nakd (Cash), And Tibr (Printed, Non-Minted Money).⁵

The Four Functions Of Money Among The Definitions Stand Out: Measure Of Value, Medium Of Exchange, Means Of Transfer Of Value, And Means Of Payment.⁶ It Can Be Seen That The Functions Of Money As A Means To Predict The Future In Terms Of Time, To Make Savings, And To Exercise Control Can Be Added To The Above Functions.⁷ In The Classical Monetary Theory, It Is Emphasized That Money Has To Have The Following Five Characteristics: Portability, Durability, Divisibility, Homogeneity/Uniformity, And Non-Counterfeitability.⁸

It Is Said That Money In The Islamic Economic System Is A Measure Of Value, Flowing In The Opposite Direction And Used Only In Exchange For Produced Goods And Services.⁹

In Islamic Law, The Concept Of Goods Is Also Closely Related To Money. The Definition That Goods Mean Anything That People Use To Acquire Money, Goods, And Similar Other Property Suggests That Money Is Also Included In The Definition Of Goods.¹⁰ However, It Should Not Be Overlooked That Goods, Labour, And Money Are The Primary Aspects Of Different Sections In The Works On Islamic Law. Conventionally, The Concept Of Goods Are The Subject Of The Chapters On 'Bai' (Purchase-Sale), And Money Is The Subject Of The Chapters On 'Sarf' (Exchange Of Money, And Of Monetary Instruments) In Such Works.¹¹

ii. The Emergence Of Money

It Is Known That People In Earlier Times Used The Method Of Barter In Transactions, And That Money Was Invented Much Later.¹² The Non-Conformance Of The Goods To Be Bartered In Terms Of Their Kind And Amount, And The Difficulties That Arose In The Calculation Of The Value Of The Goods Resulted In The Designation Of A Particular Commodity, Which Is Not Included In The Barter And Not Stored, As The Unit Of Account (E.G., Knives In China, Oxen In Rome, Animal Skin And Tobacco Among Native Americans).¹³ However, People Were Forced To Use Metals As The Media Of Exchange Due To The Fact That The Goods

⁴ Ahmed el-Hasenî, *İslam'da Para*, Çeviren Adem Esen, İz Yayıncılık, İstanbul 1996, p. 24; Charles W. Evans, "Bitcoin in Islamic Banking and Finance", *Journal of Islamic Banking and Finance*, June 2015, Volume 3, No 1, p. 5.

⁵ el-Hasenî, p. 22.

⁶ el-Hasenî, p. 24-32; Evans, p. 5; Acar, 115-116; Mikail Altan, "Faizsiz Bankacılığın Temelleri", *İslam Hukuku Araştırmaları Dergisi*, Issue XVI, 2010, p. 126. These functions appear as three categories as a medium of exchange, payment, and a measure of value. See Bill Maurer, *The Anthropology of Money*, <http://www.anthro.uci.edu/~wmmaurer/bio/Maurer-AR.pdf> Accessed: 20 April 2018; Daniel L. Thornton, *Money in a Theory of Exchange*, <https://files.stlouisfed.org/files/htdocs/publications/review/00/01/0001dt.pdf> Accessed: 20 April 2018; Ali Özgüven, *İktisat Bilimine Giriş*, Filiz Kitabevi, İstanbul 1989, p. 330-331. The exchange of goods for goods is called bartering, goods for money is sale contract, money for goods is salam, and money for money is sarf. See Ali Keleş, *İslam'a Göre Para Kavramı*, Doktora Tezi (Uludağ Üniversitesi), Bursa 1998, p. 85-86.

⁷ Özgüven, p. 330-331.

⁸ Osman Orhan- Seyfettin Erdoğan, *Para Politikası*, Avacı Ofset, İstanbul 2002, p. 5-6.

⁹ Sam Adian, *İslam İktisat Teorisi ve Toplumsal Mekanizmalar*, Hongkong 2016, p. 527.

¹⁰ Şemsüddîn es-Serahsî, *el-Mebsût, Dâru'l-Ma'rife*, Beyrut t.y., XIV, 2; Muvaffakuddîn Ebû Muhammed Abdullah b. Ahmed Muhammed b. Kudâme el-Makdisî (620), *el- Mukni' fi Fikhi'l-İmâm Ahmed b. Hanbel eş-Şeybânî, Mektebetü's-Sevâdey*, Cidde 1421/ 2000, p. 151; Muhammed Emin İbn Âbidîn, *Reddü'l-Muhtâr ale'd-Dürri'l- Muhtâr, Dâru Âlemi'l-Kütüb*, Riyad 2003, VII, 10.

Goods are evaluated in three categories in terms of being the price or the subject of sales in a contract.

- Goods whose sale price in a transaction is always 'thaman' are: silver (dirham) and gold (dinar) coins. paralar.
- Goods that are only sold (mab'i) in a transaction are: commercial commodities / 'urudh' (animals, fabric, etc. that are not 'mithli')
- Goods that can both be sold (mab'i) and have a sale price (thaman) are commodities that can be bought and sold as measured-weighted. See es-Serahsî, XIV, 2.

¹¹ Eskicioğlu, p. 43.

¹² Feridun Ergin, *Para Siyaseti*, Hamle Mat., İstanbul 1966, p. 21-24.

¹³ Ergin, *Para Siyaseti*, p. 22.

Mentioned Above Did Not Have A Standard Quality And The Characteristic Of Divisibility, And Had Varying Qualities Within The Same Kinds, Limited Divisibility, And Difficulty Of Portability And Of Protection.¹⁴ Thus, Metals Such As Bronze, Iron, Copper, Silver, And Gold Began To Be Used As Money. The Ease Of Portability, Divisibility, Durability And Stability In Value Increased The Demand For Metallic Money Or Coins. Metallic Money, Initially Exchanged By Calculating Their Weight, Was Later Morphed Into The Form Of Coin In Order To Make Them Easier To Use.¹⁵ Although There Are Differing Views That The First Money Was Used In Anatolia, Or China Or India (Around 2900 Bc During The Mohenjo-Daro Excavations), It Is A Historical Fact That Money Was Widely Used In Anatolia, And That The Lydian King Gyges Had Coins Minted In The 7th Century Bc.¹⁶

It Is Seen That There Was A Metallic Money System In Use At The Time Of The Prophet Muhammad (Saw), That No Paper Money Was Printed, And That Dirham And Dinar In Circulation At The Time Had The Same Metal Value And Commercial/Trade Value And Thus Categorized As Commodity Money. In The Said Period And In The Geography The Prophet Muhammad (Saw) Lived, Byzantine Dinar (Gold Coin) Of Fixed Weight Called 'Rumi', And 'Baghali' ('Wafi', Big In Size) And 'Tabari' (Small In Size) Dirham (Silver Coin) Of Varying Measures Of Weight Were In Use.¹⁷

Although There Were Coins Locally Minted With 'Lafz Al-Jalal' (The Name Of Allah, La Ilaha Illallah Wahdahu La Sharika Lahu, Bismillah Rabbi, Etc.) And Other Similar Expressions Printed On Them At The Time Of The Caliph Uthman And The Caliph Ali, It Was Abd Al-Malik Ibn Marwan Who Had The First Islamic Coin Issued. It Is Known That The Coins Minted At The Time Of Abd Al-Malik Ibn Marwan Were Of Pure Gold And Silver, That Their Weight Was Based On The Reference Values Specified At The Time Of The Caliph Umar, And That 'La Ilaha Illallah Wahdahu La Sharika Lahu' Was Printed On One Face Of The Coins, And The First Two Verses Of The Surah Al-Ikhlâs On The Other. It Is Also Reported That The Coins Also Featured 'Muhammad Al-Rasul Al-Allah' And The Verse 33 Of The Surah Al-Tawbah On One Side, And The Date Of Coinage On The Other.¹⁸

People Have Gravitated Towards The Representative Paper Money Called Banknote After Metallic Money Due To The Need To Store Them Safely. Money Changers (Sarraf) Used To Give A Document, Initially With The Name Of The Holder And Later With The Name Of The Bearer Written On It, Which Was Not Used In Purchasing Goods But Provided Its Owner An Ease Of Safety, Storability, And Transportability, In Exchange For The Metals Entrusted To Them.¹⁹ The Banknote System That Functioned As Such Was Later Replaced By The Fiat Money System, Which Was Declared To Be Legal Tender By Law And In Which The State Did Not Have Any Obligation To Offer Gold In Return.²⁰

As Seen In Early Islamic States, The Ottoman State Also Began To Have Its Own Coin Minted, Exerted Efforts To Build A Stable Monetary System, Tried To Benefit From Money As A Financing Instrument, Did Not Want Metal Coins To Be Saved (Idikhar) Under The Mattress/Pillow, And Supported And Facilitated The Entry Of Precious Metals Into The Country.²¹

In Addition To Its Official Currency (Akçe / Silver Coin), The Ottoman State Also Adopted The Free Movement Of Coins Of Other States On Condition That They Did Not Have Low Intrinsic Value, As The Circulation Of Coins, Just Like Their Mintage, Bore Some Difficulties In A Country With Such Extensive Borders. It Is Remarkable That The Ducat Of Venice Was Used For Large Transactions As The Ottoman State Did Not

¹⁴ Abdullah Durmuş, "Fıkhi Açıdan Günümüz Para Mübadelesi İşlemleri" (Basılmamış Doktora Tezi), Marmara Üniversitesi Sosyal Bilimler Enstitüsü, İstanbul 2008, p. 15.

¹⁵ Zehra Vildan Serin, Para Politikası, Marmara Üniversitesi Yay., İstanbul 1987, p. 27.

¹⁶ Ergin, Para Siyaseti, p. 40; Serin, p. 27.

¹⁷ Beşir Gözübenli, "İslam Hukuk Literatüründe Para", Para Faiz ve İslam, Çınar Matbaası, İstanbul 2015, p. 90 and 93; Uslu, p. 30; Mehmet Erkal, İslam'ın Erken Döneminde Vergi Hukuku Uygulamaları, Türkiye Diyanet Vakfı Yay., Ankara 2009, p. 64. There is also a quadripartite classification as 'dirham al-baghali', 'dirham al-tabari', 'dirham al-maghribi', and 'dirham al-yamani' in addition to the said tripartite classification. See Uslu, p. 30.

¹⁸ Bilal Aybakan, "Nakit", DİA, 2006, XXXII, 324; Uslu, p. 31.

¹⁹ Mükremin Hiç, Para, Kredi ve Fiyatlar, Atatürk Üniversitesi Basımevi, Erzurum 1971, p. 9.

²⁰ Hiç, p. 11-13.

²¹ Ekrem Erdem "Osmanlı Para Sistemi ve Tağşiş Politikası: Dönemsel Bir Analiz", Bankacılar Dergisi, Issue 56, 2006, p. 10.

Have Its Gold Coin Until 1479 (The First Gold Coins Were Issued At The Time Of Sultan Mehmed Ii). Similarly, As A Manifestation Of The Same Situation, The Qualities Of Foreign Coins In Terms Of Their Intrinsic Value And Weight And Their Value Compared To Ottoman Silver Coins Were Announced To The Public In Firmans. However, Akçe As The Official Currency, Kurush, Or 'Shahi' And Red Kurush That He Himself Had Issued Were Used In The Official Transactions Of The State.²² Although Sultan Mahmud Ii, In Whose Era There Were Reportedly 36 Types Of Silver Coins In Circulation, Made Three Important Attempts To Put Into Circulation An Accounting Coin As Istanbul Gold Coin In 1808, Mahmudiye Gold Coin In 1815, And Rumi Gold Coin In 1816, His Attempts Failed In Establishing A Currency Union.²³ In 1824, The Adli Gold Coin Issued Was Made The Accounting Coin Of The State, Which Also Was Not Successful For The Above Purposes; The Mint And Currency Union Was Established Only When The Value Of Money Was Linked To Sterling Through The Operation Of The Bank Charter Act Of 1844.²⁴

It Is Seen That Akçe Was The Main Currency For A Long Time In The Ottoman State, That It Was Replaced By Kurush, And That After 1879 A New Era Of Lira-Kurush Started.²⁵ Moreover, The Ottoman State Faced Economic Contraction And Deflation During Periods Of Contraction Of Gold And Silver Supply. The Contraction Of Supply Of Precious Metals Led To 'Taghshish' Practices²⁶ And Increasing The Amount Of Copper In Akçe (Red Akçe).²⁷

Moreover, Although Kavaim (Plural Form Of Kaime: Paper Money) Went Into Circulation In 1840 As One Of The New Arrangements Of The Tanzimat Period, It Is Thought That They Resemble An Interest-Bearing Treasury Paper Other Than A Banknote. In Fact, The Early Kavaim Had A 12.5% Rate Of Interest And Were Handwritten, And They Were Planned To Be Amortized (Paid) After 8 Years. In The Past, Forgery In Relation To The Handwritten Kavaim Became Widespread And They Faced A Great Loss Of Value In A Short Time.²⁸ Although Printed Kavaim Were Issued As Of 1843, The Ottoman State Could Not Achieve What It Hoped About The Kavaim As The Public Also Lost Trust In Them, And Consequently Silver Mecidiye Coins Were Introduced To The Market That Were Equivalent In Settings To The Currencies Of The European Countries.²⁹

While The State Continued To Withdraw Kaime From The Market, As It Continuously Lost Value Despite Its Interest Rate, It Was Attributed The Highest Nominal Value In Order Not To Let The Public Be Victimized. The 22-Year Long Adventure Of Paper Money In The Ottoman State Has Turned Into A Memory That Is Recalled With The Damage On The Reliability Of The State It Caused Other Than With Bankers Who Deceived People, And Attempts To Fix The Economy Through Speculative Gains.³⁰

iii. Types And Systems Of Currencies

A. Types Of Currencies

1. Goods Or Metallic Money
2. Paper Money Fully Representing Metallic Money
3. Credit-Based Currencies

Credit-Based Currencies Are Dealt With Under Two Main Headings As Those Issued By States And By Banks. Coins, Or Paper Money Used Instead Of Them, Paper Money And Notes Payable In Circulation Are Issued

²² Mustafa Öztürk, "Genel Hatlarıyla Osmanlı Para Tarihi", Türkler, Yeni Türkiye Yay., Ankara, 2002, X, 804-805.

²³ İsmail Hakkı Uzunçarşılı, Osmanlı Devleti'nde Saray Teşkilatı, Türk Tarih Kurumu Basımevi Yayınları, Ankara 1945, p. 473-474.

²⁴ Mustafa Öztürk, X, 805-806.

²⁵ Mustafa Öztürk, X, 810; M. Özgür Yanardağ, "19. Yüzyıl Osmanlı Devleti Para Düzeni: Kâğıt Para Düzenine Geçiş Aşamalarının İktisadi Analizi", Uluslararası Sosyal Araştırmalar Dergisi, Volume 8, Issue 36, 2015, p. 918-919.

²⁶ The policy of 'tashih al-sikkah' refers to the adjustment of the settings of coins, while the policy of 'taghshish' refers to increasing the amount of copper in gold and silver coins, or decreasing the size of coins. See Erdem, p. 11.

²⁷ Erdem, p. 11.

²⁸ Yanardağ, p. 924.

²⁹ Yanardağ, p. 925-926.

³⁰ Yanardağ, p. 928-929.

By The State, While The Banknotes Of Central Banks Or Private Banks And Current Deposits In Banks Are Issued By Banks.³¹

B. Monetary Systems

1. The Gold Standard (Single Gold Currency System)

Gold Has Always Been Adopted As A Reliable Asset In The World Economy.³² In This System That Is Based On Gold (Gold Standard), Money Supply Depends On The Stock Of Gold.³³ The Phases Of The Single Gold Currency System Can Be Covered Under Gold Coin, Gold Bar, And Gold Exchange Systems.³⁴

The System In Which The Currency Is Gold Coin Minted According To A Specific Setting And Weight Is Called The Gold Coin System.

The Gold Bullion System First Appeared In England In 1925 And Came To An End In The United States Of America In 1931. In The Gold Bullion System, Which Serves The Purpose Of Eliminating The Obligatory Circulation Of Gold And Continues To Ensure That Gold Is The Measure Of Value In Transactions But Turns The Banknote (Representative Paper Money) Into A Medium Of Exchange, The Currency Is Accepted As Linked To Gold That Has Specific Fineness And Weight.

In The Gold Exchange System, It Is Accepted That The Currency Of A Country Is Not Directly Linked To Gold, But To Another Country's Currency That Is Convertible To Gold.³⁵

2. The Silver Standard (Single Silver Currency System)

The Silver As A Precious Metal Was Largely Decisive In The Supply Of Money Until The Gold Became More Widespread. In This System, The Weight And Setting Of Silver Coins Were Determined By The State, And Serious Differences Occurred Between Their Real And Nominal Values Over Time.³⁶

3. Bimetallism (Double-Metal System)

It Is The System In Which The Monetary Unit Is Adopted As Both Gold And Silver, Allowing The Conversion Of Other Currencies Into Gold And Silver.³⁷ According To Mintage Policies, Unlimited Coinage Is Essential, And The Value Ratio Of Gold And Silver Is Determined By The State.³⁸

The Measures Of And The Islamic Jurisprudence Viewpoint On Nisab, Purchase-Sale, Mahr, And Similar Issues As Mentioned Both In The Verses Of The Qur'an And In The Hadiths Of The Prophet Muhammad (Saw) Were Stated With References To The Currencies Used In The Hejaz Region.³⁹ Departing From This Point, It Can Be Said That The Prophet Muhammad (Saw) Adopted The Double-Currency System That Was In Use At His Time, And Did Not Impose Any Restriction On The Convertibility Of Gold And Silver To One Another. An Example Of This Can Be Cited As The Fact That It Is Possible To Pay Off One's Debt Both In Zakat And In Ransom Using The Currency Of Personal Preference.⁴⁰

4. Fiat Money System

In The Fiat Money System, Money Does Not Function As A Commodity And Its Value Is Determined By The State. Accordingly, Money Is Issued And Put Into Circulation, Regardless Of The Amount Of Gold Or Silver It Has, Based On State Initiative.⁴¹

China Is Reported To Be The Place Where Fiat Money Was Used For The First Time In The 2nd Century Bc. However, It Is Often Observed That Paper Or Similar Materials Have Been Used As Money In History. The

³¹ el-Hasenî, p. 41-54; Sadun Aren, *İstihdam, Para ve İktisadi Politika*, Bilgi Yayınevi, Ankara 1968, p. 116-120; Orman, p. 20-23.

³² Feridun Ergin, *Para ve Faiz Teorileri*, Beta Yayın Dağıtım, İstanbul 1983, p. 20.

³³ el-Hasenî, p. 44.

³⁴ Orman, p. 28-29.

³⁵ Ergin, p. 20-52; Keleş, p. 12-17.

³⁶ el-Hasenî, p. 44; Orman, p. 33; Keleş, p. 11-12.

³⁷ el-Hasenî, p. 45; Orman, p. 33.

³⁸ Ergin, p. 21; Keleş, p. 20-21.

³⁹ Gözübenli, "İslam Hukuk Literatüründe Para", p. 89; Uslu, p. 33.

⁴⁰ Gözübenli, "İslam Hukuk Literatüründe Para", p. 95.

⁴¹ Orman, p. 37.

'Çav (Ch'ao)' Used By The Uyghurs As Paper Money Can Be Cited As An Example In This Regard.⁴² Particularly In The Twentieth Century, The Old Form Of Paper Currencies As Convertible/Exchangeable With Precious Metals Was Replaced By The New Form That Had Nominal Value.⁴³ In Fiat Currency System, There Is A Binary Structure As The Banknote (Paper Money) And The Representative (Bank) Money.⁴⁴

Today, The Gold Standard Is Not Used Any Longer And, Instead, Fiat Money Is Used Whose Value Is Determined According To Other Countries' Production Of Goods And Services And To Which Laws Attribute Specific Purchasing Power.⁴⁵

We Can Generally Say That Commodity Money Circulates As Commodities, That Representative Money Has A Value In Exchange For Gold And Silver Although Without Any Intrinsic Value, That Paper Currencies Do Not Have Any Material Value Beyond What Is Printed On Them, Nor Can They Be Exchanged For Any Other Value When Necessary, But Can Only Represent The Denominational Value It Has, And That Bank Money Is Intangible Money That Cannot Be Circulated Physically.⁴⁶

C. The Concept Of Electronic (Digital) Money

Electronic Money Is The Electronic Store Of Monetary Value On A Technical Device Without Requiring Any Calculations Made By Banks That Can Be Used In Payments As Paper Issued In The Name Of The Bearer. Payments And Transfer Of Funds Are Carried Out Electronically In Inter-Bank Payment Systems.⁴⁷ Electronic Money Develops As Backed By Fiat Currency, Is Based On Electronic Protection And Transfer, And Functions As The Representative Of Nominal Paper Money.⁴⁸ Electronic Money Is Used Through Debit Cards, Stored-Value Cards, And Electronic Cash. Debit Cards And Bank Cards Linked To Savings Accounts Allow For Withdrawal Of Money And Making Payments On The Internet Or Acting As Credit Cards Through Pos (Point Of Sale) Devices. Transactions Can Be Made With Stored-Value Cards To The Extent The Value Previously Stored On Them Allows. There Are Numerous Examples Of Electronic Cash: E-Cash, Cybercash, Netcash, Mondex, Geldkarte, Proton, Cash, Netchex, Mini-Pay, Millicent, Etc.⁴⁹

Iv. The Concept Of Crypto (Virtual) Currency And Blockchain Coding Technology

A. What Is Crypto (Virtual) Currency?

Cryptocurrency Or Virtual Currency Is Defined By The European Central Bank (Ecb) As Follows: "The Digital Representation Of A Value That Is Not Issued By A Central Bank, A Credit Institution, Or An E-Currency Institution, And That Can Be Used As An Alternative To Money".⁵⁰ This Definition Indicates That There Is No Obligation For The Existence Of A State Or An Official Authority Behind Cryptocurrencies.

Virtual Money And Electronic Money Are Often Confused, But They Are Two Concepts That Have Different Definitions. Electronic Money Is A Medium Of Payment That Is Used In The Name Of The Holder And Particularly On The Internet Through A Computer Or Other Data Storage. Virtual Money, On The Other Hand, Is

⁴² Melek Özyetgin, "Eski Türklerde Ödeme Araçları, Kağıt Para Çav'ın Kullanımı", Modern Türklük Araştırmaları Dergisi, Volume 1, Issue 1, Ankara 2004, p. 100-101.

⁴³ el-Hasenî, p. 46-50; Namık Zeki Aral, Para Meselesi ve Bretton Woods Konferansı, Alaattin Kral Matbaacılık, Ankara (t.y.), p. 7-11.

⁴⁴ el-Hasenî, p. 46-47 and 50-51; Ergin, p. 25-26.

⁴⁵ Nur Keyder, Para: Teori, Politika, Uygulama, Bizim Büro Yay., Ankara 1993, p. 19.

⁴⁶ el-Hasenî, p. 52; Keleş, p. 30; Osman Eskicioğlu, "İslam'da Ekonomik Sistem", İslam Hukuku Araştırmaları Dergisi, Issue 16, 2010, p. 40.

⁴⁷ Nurettin Öztürk-Asuman Koç, "Elektronik Para, Diğer Para Türleriyle Karşılaştırılması ve Olası Etkileri", SÜ İİBF Sosyal ve Ekonomik Araştırmalar Dergisi, XI, 2013, p. 212- 213.

⁴⁸ Çarkacıoğlu, Abdurrahman (2016), Kripto-Para Bitcoin, p. 4-5. <http://www.spk.gov.tr/SiteApps/Yayin/YayinGoster/1130> Accessed: 25 May 2018.

⁴⁹ Armağan Ebru Bozkurt Yüksel, "Elektronik Para, Sanal Para, Bitcoin ve Linden Doları'na Hukuki Bir Bakış", İstanbul Üniversitesi Hukuk Fakültesi Mecmuası, Vol. 73, Issue 2, İstanbul 2015, p. 190.

⁵⁰ European Central Bank, Virtual Currency Schemes - A Further Analysis, Frankfurt 2015, p. 6. <https://www.ecb.europa.eu/pub/pdf/other/virtualcurrencyschemesen.pdf> Accessed: 20 May 2018. The definition of electronic money in Turkey is as follows: "the monetary value that is accepted and issued by an institution that issues electronic money, can be stored electronically, is used to perform transactions defined under this law, and is accepted as a medium of payment by real and legal persons in addition to such institutions that issue electronic money". See Article 3 of the Turkish Law No. 6493 on Payment and Securities Settlement Systems, Payment Services, and Electronic Money Institutions.

A Medium Of Payment That We Cannot Speak About Its Physical Entity, That We Cannot Physically Touch It, That Can Be Used In Electronic Commercial Transaction, And That Is Based On Its Own Unit Of Account Only. While Electronic Money Has Known Units Of Money On The Market Such As Euro, Dollar, And Turkish Lira, Virtual Money, Such As Bitcoin, Does Not Have Such Units Of Money. This Is Because The Issuer Of Virtual Money Also Determines The Unit Of The Virtual Money.

Currencies Of Virtual Money Are Adopted Within A Virtual Community, Unlike The Widely Accepted Electronic Currencies. Electronic And Virtual Currencies Also Differ In Terms Of Legal Regulations. While Electronic Money Is Put Into Circulation By Money Institutions, Virtual Money Can Be Introduced To The Market By Private Individuals. The Supply Of Electronic Money Is Fixed, Unlike That Of Virtual Money. Virtual Money And Electronic Money Also Differ In Terms Of Having Control Over Them And Their Nominal Value Being Guaranteed. Notwithstanding These Differences, We Can Say That Virtual Money Is A Type Of Electronic Money Based On The Common Denominator Of Digitality.⁵¹

B. Blockchain Technology

It Is A Self-Controllable Digital Value Ecosystem That Can Be Used In Many Areas Requiring Central Registry Other Than Money And Financial System, And That Allows For The Safe Storage And Transfer Of An Asset Without Requiring A Wet-Ink Signature And Handling.

Although Some Refer To This System As A General Ledger, This System Allows For All Members Using The System To Have All The Data In Block Chains, Unlike The Single Central Registry (Server, Etc.) In A General Ledger, And This Is Seen As An Important Defense Against Data Tampering.

Blockchain Is A Distributed Database Where Transactions Are Monitored As Encrypted. Blockchain Technology Eliminates The Double-Spending Problem Through A Public Key Encryption Technique By Assigning A Private Key (Such As A Password/Cipher That Is Kept Secret) To Each User And A Public Key To All Users.

The Transaction Starts When The Recipient Sends The Public Key To The Current Owner Of The Virtual Money. Money Is Transferred Through The Digital Signature Of An Algorithm. A Public Key Is An Encrypted Address Stored In A Blockchain. Each Currency Is Associated With An Address, And Each Transaction In Crypto-Economics Is The Simple Transfer Of Virtual Currency From One Address To Another. Although The Transactions Are Traceable, The Anonymity Of The People Involved In Them Is Ensured.⁵²

C. Types Of Cryptocurrencies

Although There Are Numerous Currencies Powered By The Blockchain Coding Technology, Bitcoin Has Come To The Fore Due To Being The First Of Its Kind And Being Widespread. At The Last Update Date Of Our Article, Apart From Bitcoin, There Were 10.545 Different Cryptocurrencies Traded, With The Total Number Changing Daily, Under Different Names, Such As Ethereum, Ripple, Bitcoin Cash, Cardano, Litecoin, Nem, Neo, Stellar, Iota, Eos, Monero, Etc.

As Of June 21, 2021, The Total Market Capitalization Of All Cryptocurrencies Is Usd 1.326.600.724.443, And Their Daily Trading Volume Is About Usd 119.648.665.443. Bitcoin Makes Up About 45.8% (Ethereum About 16.9%) Of Cryptocurrency Market And Has A Daily Trading Volume Of About Usd 50 Billion. ⁵³

D. Bitcoin

Bitcoin Is A Virtual Currency That Can Be Directly Transferred From One User To Another (Peer-To-Peer).⁵⁴ The Concept Of Cryptocurrency Refers To The System Based On The Transfer Of The Currency, The Production And Transfer Of Which Is Carried Out Through Cryptology (Cryptography), Without Requiring A Central Authority. In This Context, We Can Say That Cryptocurrencies, Including Bitcoin, Do Not Exactly Overlap With The Concepts Of Electronic Money And Digital Money.⁵⁵

⁵¹ Yüksel, p. 198.

⁵² Marc Pilkington, *Blockchain Technology: Principles and Applications*, Research Handbook on Digital Transformations, 2016, p. 5; Burçin Bozdoğanoglu, "Sanal Para Birimi Bitcoin'in Kayıtdışı Ekonomi ile Karapara Faaliyetlerine Etkisi ve Vergilendirilmesi", *Mali Hukuk Dergisi*, Vol.10, Issue 111, March 2014, p. 8.

⁵³ <https://coinmarketcap.com/> (Accessed: 21 June 2021).

⁵⁴ Ateş, p. 133; Bozdoğanoglu, p. 4.

⁵⁵ Ateş, p. 133 and 134.

Although There Are Many Claims About The Early Foundations Of Bitcoin⁵⁶, A Digital Currency System⁵⁷ Developed As An Alternative To The Fiduciary Monetary System, Bitcoin Was Introduced And Put Into Service By An Unknown Person Or Group Of People Using The Name Satoshi Nakamoto In A Work Titled "Bitcoin: A Peer-To-Peer Electronic Cash System, November 2008" Published On The Internet In 2009.⁵⁸ While Bitcoin Is The Most Famous Among Cryptocurrencies, It Is Not The First Virtual Currency. Digicash, One Of The First Cryptocurrencies Created By David Chaum, Appeared In The World Of Economics In 1990s, And Disappeared In A Haze Of Bankruptcy In 1998. Bitcoin Can Be Described As The First Example Of Cryptocurrency As A Subtype Of Virtual Currency.⁵⁹

The First Bitcoin Block Was Mined By Nakamoto. The Total Number Of Bitcoins Was Set To Be Limited To 21 Million Units, And Of Which 17.1 Million Are Currently In Use.⁶⁰ For Each Unit Of Bitcoin In The Remaining Amount To Be Put Into Use, A Mathematical Problem That Confirms The Verification Of Transactions Needs To Be Solved Using The Processor Power Of Computers. Miners Who Decode This Algorithm Thereby Contribute To The System And Are Awarded 12.5 Bitcoin. This Process Is Called 'Bitcoin Mining'. This Method Is Developed To Ensure That The Supply Of Bitcoin Is Not Uncontrolled. As Decoding This Algorithm Requires Highly Professional Knowledge And Very Powerful Technical System Equipment, It Is Not Something That An Ordinary Person Can Easily Do. Therefore, People Who Want To Use Bitcoin Can Buy Virtual Currencies In Exchange For Conventional Currencies From Websites That Sell Cryptocurrencies. The Price Of Bitcoin Against National Currencies Is Determined Instantaneously, Depending On The Demand Generated On These Cryptocurrency Stock Markets On The Internet.

A Bitcoin Client Called Bitcoin Protocol Has To Run On The Computer Or An Account Has To Be Created On A Website That Can Run The Said Client In Order To Buy Or Trade Bitcoin.⁶¹

V. The Issue Of Legitimacy Of Cryptocurrencies

A. Opposing Views

We Can List The Arguments Of Those Who Have Negative Opinions About The Issue Of Legitimacy Of Cryptocurrencies As Follows. Firstly, Cryptocurrencies Face Serious Criticisms As They Do Not Have Any State/Government Warranty Regulations Or General Authority In Place. According To This Argument, Cryptocurrencies Cannot Be Used As Policy Instruments.⁶²

Another Disadvantaged Aspect Of Cryptocurrencies Is The Restricted Access To Them. The Connection Between The User And Their Account/Cryptocurrency Is Lost Where There Is No Access To The Internet Or When The Existing Connection To The Internet Fails. Among The Serious Reliability Issues Are The Irreversibility Of Transactions Made On A Crypto Account And The Risks Of Account Loss. In This Context, The Unexpected Failures Of The Hard Drives Of The Computers On Which Cryptocurrencies Are Stored And Loss Of Data, As Well As Their Exposure To Virus Attacks And Other Attacks Are Among The Legal And Technical Problems That Are Faced.⁶³

There Is Vast Field Of Debate, Which Needs Regulations, About The Use Of Cryptocurrencies For Laundering Proceeds Of Crime, Money Laundering, And Financing Of Terrorism, Etc. The Fact, In Particular, That Transactions Are Carried Out With Digital Virtual Identities Other Than Real Identities Poses A Major Threat.⁶⁴ In This Context, The Relevant Authorities Around The World And In Turkey Conduct Various Studies In The Face Of The Increasing Demand For Cryptocurrencies. It Seems Currently Difficult To Lay The Legal

⁵⁶ See for example the issue of The Economist dated 9 January 1988. It is also argued that cryptocurrency is the product of the idea suggested by Wei Dai in 1998 (See Ateş, p. 133). Ateş, p. 133).

⁵⁷ Çarkacıoğlu, p. 11-14.

⁵⁸ Satoshi Nakamoto, Bitcoin: A Peer-to-Peer Electronic Cash System, <http://www.bitcoin.org/bitcoin.pdf>.

⁵⁹ Ateş, p. 132 and 133.

⁶⁰ <https://coinmarketcap.com/currencies/bitcoin/> Accessed: 30 June 2018.

⁶¹ Ateş, p. 134.

⁶² Bozdoğanoglu, p. 6; Mufti Faraz Adam (2017), Bitcoin: Shariah Compliant? p. 45-46. <https://afinanceorg.files.wordpress.com/2017/08/research-paper-on-bitcoin-mufti-faraz-adam.pdf> Accessed: 25 May 2018.

⁶³ Ege, p. 26.

⁶⁴ Bozdoğanoglu, p. 5 and 8.

Foundation For Them, To Control Them, To Establish Control Mechanisms Based On Individual Efforts Of Countries, And To Impose Bans On Them. At This Point, The Supervisory And Regulatory Bodies In Many Countries Have Issued Warnings About The Risks Posed By Cryptocurrencies.⁶⁵ The Cryptocurrency System Does Not Allow For The Confiscation Of Assets Or Prevent Their Transfer As It Rejects Centrism From The Beginning.⁶⁶ While This May Seem Attractive In The First Place, It Creates A Huge Vacuum In The Public Order And Security, As Well As In The Fight Against International Crime.

The Virtual Currencies, Powered By A Strong Encryption Technology And Used In The Internet Environment, Are Able To Derive Great Value As They Are Widely Accepted As A Medium Of Exchange Or Perceived As A Commodity. The Value Of Cryptocurrencies, Just Like Conventional Currencies And Commodities, Is Also Appreciated On The Markets Where They Rely On Supply-Demand Dynamics. Today, Cryptocurrencies Are In Demand For Speculative Investment Purposes Beyond Being Used As A Medium Of Exchange. The Prices Of These Currencies Therefore Show A High Level Of Volatility. This In Return Raises The Problem Of User (Consumer) Protection.

The Issue Of Legitimacy Of Cryptocurrencies Is Also Questioned By Islamic Jurists. In Fact, It Is Clear In This Regard That The Use Of Currencies Reliable Among Users As A Medium Of Exchange And Of Value Determination Is Permissible.⁶⁷ Some Islamic Jurists, However, Do Not Consider Cryptocurrencies, Bitcoin In Particular, As A Commodity, Nor Do They Accept Them As Something That Can Be Bought And Sold, And Argue That Cryptocurrencies Are Merely Fictional Investment That Islamic Law Does Not Consider Legitimate.⁶⁸ First Of All, The Fact That Cryptocurrencies Cannot Be Bought And Sold Physically Poses A Major Problem In The Sense Of Property Ownership. The Function And Usefulness Of Cryptocurrencies, As They Cannot Be Based On Tangible Wealth Or Property, Are Considered Controversial From The Beginning.⁶⁹ Islamic Jurists Who Hold This View Highlight 'Gharar'⁷⁰ In The Way Cryptocurrencies Are Produced, Go Into Circulation, And Are Handled Among The People Involved, As Well As Their Structure That Allows For Their Use As A Means Of Deceit. Moreover, It Is Pointed Out That Cryptocurrencies Can Be Instrumentalized For Unearned And Unjust Enrichment.⁷¹

Islamic Jurists Also Raise The Issue Of Insecurity And Victimization Caused By The Sudden Rise And Fall Of Value In Cryptocurrencies That Are Prone To Speculations. It Is Argued That Uncontrolled Cryptocurrencies, Whose Circulator, Issuer, Responsible, Center, And System Itself Are Not Known, Can Be An Instrument To Crimes And Offer Opportunities For Drugs, Arms, Etc. Dealers.⁷²

Production Is The Main Reason For Taxation In Islamic Law And It Has A Sensitive Taxation System.⁷³ In This Context, Taxation Of Cryptocurrencies Bears Great Difficulties.⁷⁴ Cryptocurrencies Contain The Two

⁶⁵ Bozdoğanoglu, p. 5.

⁶⁶ Ateş, p. 134.

⁶⁷ Din İşleri Yüksek Kurulu Kararı, <https://kurul.diyagnet.gov.tr/Karar-Mutalaa-Cevap/38212/dijital-kripto-paralarin-kullaniminin-dini-hukmu-nedir->

⁶⁸ Adam, p. 40.

⁶⁹ Adam, p. 41.

⁷⁰ 'Gharar' means substantial uncertainty. See İbn Rüşd, II, 142.

As narrated by Abu Hurairah, the Prophet Muhammad (saw) prohibited 'gharar' and 'khatar' in transactions. Peygamber (SAV)'in garar ve hasâ alışverişinden nehyettiğini haber vermektedir. See Süleymân b. Eş'âs Ebû Dâvûd, Sunen, Dâru Sahnûn-Çağrı Yayınları, İstanbul 1992, (Kitâbu'l-Buyû' ve'l-İcârât), III, 672; Ebû İsâ Muhammed b. İsâ b. Sevrâ et-Tirmizî, Sunen, Dâru Sahnûn-Çağrı Yayınları, İstanbul 1992, (Kitâbu'l-Buyû'), III, 532; Ebû Abdullah Muhammed b. Yezîd b. Mâce, Sunen, Dâru Sahnûn-Çağrı Yayınları, İstanbul 1992, (Kitâbu't-Ticârât), II, 739.

⁷¹ Din İşleri Yüksek Kurulu'nun konuya ilişkin fetvası için bkz. <https://kurul.diyagnet.gov.tr/Karar-Mutalaa-Cevap/38212/dijital-kripto-paralarin-kullaniminin-dini-hukmu-nedir-> Accessed: 23 May 2018.

⁷² Karaman, "Sanal para (bitcoin, bitpara)" <https://www.yenisafak.com/yazarlar/hayrettinkaraman/sanal-para-bitcoin-bitpara-2041314> Accessed: 15 May 2018.

⁷³ Eskicioğlu, p. 44.

⁷⁴ For the review of Hayrettin Karaman on the issue, see: Hayrettin Karaman, "Sanal para (bitcoin, bitpara)" <https://www.yenisafak.com/yazarlar/hayrettinkaraman/sanal-para-bitcoin-bitpara-2041314> Accessed: 15 May 2018.

Characteristics As Non-Taxable And Anonymity That Underlie The Phrase 'Tax Haven'. It Is Impossible To Identify The Owner Of Cryptocurrencies Controlled By A Specific Pair Of A Wallet And A Key.⁷⁵ This Raises A Huge Tax Loss Problem For States.

Although It Is Legitimate To Make Profit Through Such Methods As Foreign Currency Exchange, It Is Argued That The Accumulation Of Assets, Which Can Be Considered Hoarding And Stockpiling (Kanz), Is Also Applicable In This System, That Money Not Involved In Production Would Not Provide Any Benefit For The Society, And That It Is A Way Of Earning Income That Pious Muslims Should Not Resort To.⁷⁶

With Regard To Cryptocurrencies, References Are Made To The Facts That They Damage The Market Balance And The Sense Of Labour, That Cryptocurrency Users Are Deprived Of Legal Protection, That They Cause Relevant Authorities To Remain Incapable And Unauthorized For That Matter, That They Are Prone To Cheats, Deceits, And Deception, And Therefore The Hadith, "Who Deceives Us Is Not One Of Us"⁷⁷ Is Emphasized.⁷⁸ It Is Argued That The Use Of Cryptocurrencies Presents Major Threats Both For Individuals And For States, Which Is Contrary To The Hadith/Legal Principle⁷⁹ Of "Neither Harm, Nor Reciprocate It".⁸⁰

It Is Argued That Cryptocurrencies Do Not Have Any Legal Value, That There Are Serious Doubts About Whether Or Not They Are Considered Money, That Their Risks Do Not Serve Their Causes And Purposes, That They Are Not In Compliance With 'Maqasid Al-Shariah', Which Intends To Observe The Benefit Of Creation. Those Who Defend The Same View Also Argue That There Are Not Any Customary Practices That Legitimize The Use Of Cryptocurrencies As A Medium Of Exchange.⁸¹

The Risks Cryptocurrencies Bear Include Such Areas As Security, Technology, Money Laundering, Loss, Data And Transactions/Processing, Brokery, Legislation, Structural Deflation, Competition, Measurability, Monopoly, And Liquidity, Etc. This In Turn Does Not Ensure That Cryptocurrencies Do Not Comply With 'Maqasid Al-Shariah' In Terms Of Circulation, Accountability, Protection Of Property, And The Legal System.⁸² Departing From All These Premises And Consequences, It Is Considered Impermissible And Illegitimate To Use And Earn Money Through Trading Crypto (Virtual) Currencies That Do Not Comply With The Goals Of Islamic Finance, That Do Not Contribute To Real Economy, Production Of Goods-Services, And Employment,⁸³ That Leads To The Emergence Of A View That Bears Resemblance To A Pyramid/Ponzi Scheme, And That Causes Some People To Suffer Victimization While Some Other People To Enjoy Unearned And Unjust Enrichment.⁸⁴

B. Favouring Views

We Can Sum Up The Views Of Those People Who Take A Favorable Approach To Cryptocurrencies As Follows. In The Cryptocurrency System, Users Are Jointly Affected By Taking Advantage Of The Setbacks And Failures In The Execution Of The System. Accordingly, The System Features A Benefit-Risk Sharing Mechanism, And It Can Be Stated That There Is A Loosely Built Partnership Among Users.⁸⁵

The Important Advantages That Cryptocurrencies Offer, Regardless Of Time (Any Hour Of A Day, Regardless Of Holidays And Weekends) Or Place, Are Based On Their Such Qualities As The Ability To Perform Transactions And Transfers Momentarily At Very High Speeds, An Infrastructure More Complex, Secure, And Inimitable Than Those Of Existing Banking Systems, The Ability Of The Users To Have Access To The System

⁷⁵ Ateş, p. 138.

⁷⁶ Karaman, <https://www.yenisafak.com/yazarlar/hayrettinkaraman/sanal-para-bitcoin-bitpara-2041314>

⁷⁷ Ebû'l-Huseyn b. el-Haccâc Müslim, el-Câmiu's-Sahîh, Dâru Sahnûn-Çağrı Yay., İstanbul 1992, (Kitâbu'l-Îmân) I, 99.

⁷⁸ Mısır Başmüftüsü Şevki İbrahim Allâm'ın fetvası için bkz. <http://www.dar-alifta.org/ar/ViewFatwa.aspx?sec=fatwa&ID=14139> Accessed: 25 May 2018.

⁷⁹ Ebû Abdullah M3alik b. Enes el-Asbahî el-Himyerî, *el-Muvatta'*, Dâru Sahnûn-Çağrı Yayınları, İstanbul 1413/1992. (Kitâbu'l-Akdiye), II, 745. See also Mecelle-i Ahkâm-ı Adliyye, Article 19.

⁸⁰ Allâm, <http://www.dar-alifta.org/ar/ViewFatwa.aspx?sec=fatwa&ID=14139>

⁸¹ Adam, p. 42-43.

⁸² Adam, p. 49.

⁸³ Adam, p. 44.

⁸⁴ Din İşleri Yüksek Kurulu, <https://kurul.diyenet.gov.tr/Karar-Mutalaa-Cevap/38212/dijital-kripto-paralarin-kullaniminin-dini-hukmu-nedir-> ; Karaman, <https://www.yenisafak.com/yazarlar/hayrettinkaraman/sanal-para-bitcoin-bitpara-2041314> ; Allâm, <http://www.dar-alifta.org/ar/ViewFatwa.aspx?sec=fatwa&ID=14139>

⁸⁵ Evans, p. 8.

Wherever There Is An Internet Connection, Having No Condition To Require Personal And Private Information On Users, And Having No Lower Or Upper Transaction Limit, Or Extra Costs And Payment. They Are Difficult To Be Confiscated And Actually Have A Status That Makes It Impossible To Do So, Compared To The Currency And Accounts Under The Control Of The State.⁸⁶

It Is Already Permissible To Invest In Foreign Currencies, Gold, And The Like, And Sell Them When Their Prices Increase, And Thus Earn Money.⁸⁷ Cryptocurrencies Are Also Prone To Speculations Like All Foreign Currencies, Gold, And Other Legitimate (Halal) Investment Instruments, And Therefore It Cannot Be Considered As The Single Measure To Describe The Said System As Haram (Forbidden By Islamic Law).

Today's Economists Emphasize, Against The Claim That Cryptocurrencies Are Not Legitimate On The Ground That They Are Not Put Into Circulation By A Competent Authority, Such As The State, That An Object Does Not Require To Be Issued By The State In Order For Such An Object To Be Regarded As Money, And That In This Regard What Matters Most Is Whether Or Not The Public Adopts And Approves It.⁸⁸ It Is Known, However, That Some Of The Cryptocurrencies Are Put Into Circulation By States.⁸⁹ Therefore, The Use Of Cryptocurrencies Will Naturally Attain Legitimacy As It Is Not Possible To Claim That There Is Ambiguity About Them, And That Their Supply Is Warranted By States Or Competent Authorities.

The Claims That Cryptocurrencies Are Illegitimate On The Ground That They Are Unbacked Do Not Serve As Valid Evidence To Argue That Their Use Is Haram. In Fact, Paper Money Has Nominal Value Only, And It Is Not Known How Many Of World Currencies Are Backed, Or Whether Or Not Some Of Them Are Backed. Moreover, It Is Observable Today That Central Banks Do Not Have Any Limit To Print Money, Which Causes Hyper-Inflation In Many Countries.⁹⁰

The Lack/Absence Of 'Qabdh' (Receipt, Possession, Delivery Of The Subject In Exchange) In Relation To Cryptocurrencies Is Another Issue Of Legitimacy That Substantiates The Claim That They Are Not Permissible. The Concept Of 'Qabdh' In Islamic Law Is Dealt With In Two Categories As Qabdh Al-Hakiki (Real Or Physical Possession) And Qabdh Al-Hukmi (Constructive Or Legal Possession). According To This, It Is Stated That The Delivery Of Movable Assets Does Not Require Their Place To Be Changed Absolutely, And Takhliyyah (Release Of Or Provision Of Access To Asset/Property) Is Sufficient For The Seller.⁹¹ Qabdh Is Not Necessary In Similar Settings In Which Ownership Is Based On 'Constructive Receiving' And Particularly At Present All Its Stages Are Established On The Internet And With Its Own Procedures , And Which Do Not Bear Any Risk Of 'Gharar'.⁹² In This Context, The Said Reason Cannot Be Put Forward As Evidence In Disfavour Of Cryptocurrencies.

The Presence Of Uncertainties About Taxation Of Cryptocurrencies Is Another Reason For The Issue Of Illegitimacy. It Is Safe To Claim, However, That Tax Evasion Is Possible On All Kinds Of Savings Instruments. The Tax Will Be Equitably Imposed Commensurate To The Measure Of Good Faith Is Present. Although Cryptocurrencies Have Advantages In Terms Of Accountability/Transparency, Registry System, And Control Mechanisms, It Is Considered That Tax Evasions Are More Likely To Take Place Compared To Other Currencies. The High Risk Of Tax Evasion, However, Is Not A Sufficient Reason To Describe This Currency System As Haram. This Risk Can Be Eliminated Only Through Introducing Legal Regulations On The Subject. In Fact, China And Brazil Are Countries That Have Taken Important Steps In This Regard,⁹³ And It Is Known That Many Countries Have Introduced Similar Legal Regulations.⁹⁴

⁸⁶ Ateş, p. 134; Börteçin Ege, "Sanal Dünyanın Gerçek Parası: Bitcoin", Bilim ve Teknik, Issue November 2013, p.25.

⁸⁷ Karaman, <https://www.yenisafak.com/yazarlar/hayrettinkaraman/sanal-para-bitcoin-bitpara-2041314>

⁸⁸ Ateş, p. 132.

⁸⁹ Ethereum is a cryptocurrency put into circulation by Russia, and most recently Venezuela put into circulation the cryptocurrency Petro.

⁹⁰ Evans, p. 7.

⁹¹ Mustafa Kisbet, "İslam Hukukuna Göre Satılan Malın Kabzı ve Hükümleri", İslam Hukuku Araştırmaları Dergisi, Issue XVI, 2010, p. 483.

⁹² Kisbet, p. 484 and 490.

⁹³ Ateş, p. 133.

⁹⁴ Bozdoğanoglu, p. 7-8.

Some Islamic Jurists Who Opine In Favour Of Cryptocurrencies Suggest That The Process Of Mining, On Which Cryptocurrencies Are Based, And Ju'alah Contract (Where Reward Is Promised) Bear Similarities.⁹⁵ Ju'alah Refers To Commitment And Promise To Pay A Price Or A Reward. Sects Except The Hanafi School And The Dhahiri School Adopt A Positive Approach To Ju'alah Contract.⁹⁶ While The Hanafi School And The Dhahiri School, Which Do Not Approve Ju'alah Contract Except For Some Exceptions, Justify Their Claims On The Ground That A Ju'alah Contract Is A Risk-Bearing Acquisition As It Is Done For Something That Is Not Known Whether It Exists Or Not, That Initially There Is Not Any Tangible Asset Or Labour, And That Either Of The Parties To The Contract Is Uncertain.⁹⁷ Mining, Too, Is A Certain Process In Which The Party Who Puts Labour Gets Rewarded, And It Means That Ongoing Financial Transactions Are Recorded In The Electronic Currency Network In A Very Short Period Of Time. In This Respect, The Transaction In Question Can Be Considered As A Kind Of Ju'alah Contract.⁹⁸ In Fact, Ju'alah Refers To The Reward Stipulated By The Offeror For A Predetermined Work To Be Done Or Served For Over A Period Of Time, On Condition That The Work Is Mubah But May Be Uncertain (Not All Aspects Of Which Needs To Be Clear). It Is Possible To Associate The Above Definition With Mining. For Instance, 50 Coin, Set By The Electronic Currency Network Bitcoin As The Reward For Miners, Is A Certain Price And Is Reduced By 50% Once In Four Years. According To This, Ja'il (Offeror) Is The Electronic Currency Network Bitcoin That Gives An Amount Of Coins To The Worker Who Finishes The Work First, The Mubah Work In Question Refers To The Documentation Of Transactions With Electronic Currency. This Is Also A Work Whose Nature And Duration Are Known.⁹⁹ It Is A Method Similar To Mudaraba To Which People Resort Based On Their Needs.¹⁰⁰ According To This, Mining, Which Can Be Considered As A Ju'alah Contract Where The Offeror Has Not Determined The Specifics, And Partnership In This Process Are Permissible, And Miners Are Entitled To Receive The Reward To Be Determined Upon Completion Of The Work.¹⁰¹

Cryptocurrencies Threaten The Dominance Of Monopoly Currencies And Herald A New Alternative System For Currency Transactions And Transfers Unless A New Monopolization Occurs In This Field As Well. The Cryptocurrency System Raises The Prospect Of A Future In Which It Will Curtail The Existing Banking System Over Time And Have The Ability To Liquidate It Even If In Part. In The Cryptocurrency System, The Standard Intermediary Role Of Banking Is Eliminated.¹⁰²

Above All, Perhaps Most Importantly, There Are No Interest Schemes In The Cryptocurrency System, At Least Under The Current Circumstances.¹⁰³ This Becomes The Most Important Defining Feature For The Legitimacy Of Cryptocurrencies, Considering That Interest Is The Most Important Red Line Of The Islamic Economic System.

The Islamic Jurists' Favourable View Of Cryptocurrencies Manifest Itself In Two Different Forms. Some Islamic Jurists Consider Cryptocurrencies (Particularly Referring To Bitcoin) As A Digital Capital And Argue

⁹⁵ Abdullah b. Muhammed b. Abdülvehhab el-Akîl, el-Ahkâmu'l-Fikhiyyetü'l-Muteallika bi'l-Amelâti'l-Elektruniyye, el-Memleketü'l-Arabiyyetü's-Suûdiyye Vezâretü't-Ta'lim el-Câmiatü'l-İslâmiyye bi'l-Medîneti'l-Münevvere, p. 41 <http://iefpedia.com/arab/wp-content/uploads/2018/01/Bitcoin4.pdf> Accessed: 25 May 2018.

⁹⁶ İbn Kudâme, p. 232; Şemsüddîn eş-Şeyh Muhammed Arafe ed-Dessûkî, Hâşiyetü'd- Dessûkî alâ Şerhi'l-Kebîr, İsa el-Bâbî el-Halebî ve Şurakâuh, t.y. y.y., IV, 60-61; Ebû İshâk İbrâhim b. Ali b. Yûsuf eş-Şîrâzî, el-Mühezzeb fi Fikhi'l-İmam eş-Şâfiî, Dârü'l-Ma'rife, Beyrut 2003, II, 437; Ebû Ca'fer Muhammed b. el-Hasen b. Ali et-Tûsî, el-Mebsût fi Fikhi'l-İmâmiyye, el-Mektebetü'l-Murtadaviyye, Tahran t.y., II, 367; Hocaefendizade Ali Haydar Efendi, Dureru'l-Hukkâm Şerhu Mecelleti'l-Ahkâm, Dâru Alemi'l-Kütüb, Beyrut 2003, I, 502.

⁹⁷ el-Akîl, p. 42-43; Şevki Ahmed Dünya, el-Cuâle ve'l-Istisnâ', el-Benku'l-İslâmî li't- Tenmiye el-Ma'hedü'l-İslâmî li'l-Buhûs ve't-Tedrib, t.y. y.y., p. 7-8; Mehmet Âkif Aydın, "Cuâle" Maddesi, TDV İslam Ansiklopedisi, VIII, 77-78.

⁹⁸ el-Akîl, p. 41.

⁹⁹ el-Akîl, p. 42.

¹⁰⁰ Mudaraba refers to partnership in provision of capital and labour, in which it is essential that loss is accrued on capital and profit is shared. See Fahri Demir, İslam Hukukunda Mülkiyet Hakkı ve Servet Dağılımı, Medikomat, Ankara 1993, p. 197.

¹⁰¹ el-Akîl, p. 42-44.

¹⁰² Evans, p. 4.

¹⁰³ Evans, p. 7.

That They Do Not Bear The Characteristics Of A Currency. Some Others, On The Other Hand, Consider Their Legitimacy As A Currency In Addition To Accepting Them As A Digital Capital.¹⁰⁴

The Islamic Jurists Who Accept Cryptocurrencies As Goods Also Consider Such Investment As An Asset Whose Value Arises Out Of Its Economic Value And Which, At The Same Time, Can Be Stored And Recoverable, And Thus Describe Them As A Digital Capital. They Argue, Against Those Who Do Not View Cryptocurrencies As Goods, That Cryptocurrencies Have The Qualities Of Transferability, And Representability Even If In Digital Sense. Cryptocurrencies Can Be Used In Trade. However, They Have To Have A Value That Is Linked To An Independent Standard And Unit Of Account So That They Can Be Considered As A Currency. They Are Not Considered As A Currency On The Ground That They Do Not Have An Independent Measurable Value And, On The Contrary, Their Price Determines Their Value And Thus The Resulting Uncertainty Causes Them To Lose Their Quality Of Being Stable.¹⁰⁵ According To This View, They Cannot Be Considered As A Currency Although They Are Thought To Have A Commodity And 'Taqawwum' (Assessable Value) And Are Thus Suitable Instruments For Investment. Even Those Who Do Not Consider Cryptocurrencies As Suitable For The Islamic Economics Suggest That They Can Adopt A Different Approach To Cryptocurrencies In The Event That They Are Regulated, Stable, And Have A Reasonable Ground, Taking Into Consideration The Possibility Of Their Spread And Being Widely Accepted In The Future.¹⁰⁶

Conclusion

The Qur'an And The Sunnah Of The Prophet Muhammad (Saw), Which Are The Primary Sources Of The Religion Of Islam, Set The Ground For The Islamic Economics, Just As A Legal System Would Do. Although There Are Understandably No Systematic Legal Norms On Money Theories Or Economic Theories In The Qur'anic Verses And Hadiths, It Is Seen That, If We Deal With The Verse Of Loan Separately, There Are Regulations About Economic-Commercial Life, Such As Prohibitions On Interest In Particular, Gharar, And Other Means Of Unearned Income, As Well As Other General Regulations About The Establishment Of Justice.¹⁰⁷ There Is No Concrete And Detailed Explanation Concerning The Consideration Of An Object As Money In The Primary Sources Mentioned Above. In Fact, These Matters Are Not Likely To Be Determined Based On Clear Provisions. According To This, It Is Possible To Consider Anything As Money That Performs The Real Functions Of Money And Is In Compliance With The Islamic Sense Of Legitimacy, Without Regard To Its Form, Material, Or Name.¹⁰⁸ Therefore, Just As People Have Replaced The Coin System By Paper Money System In History, It Is Inevitable That They Will Substitute The Old Systems With The New Systems That Perform The Functions Of Money. As A Matter Of Fact, Depending On Technological Developments And Our Needs, New Currencies Or Instruments Of Payment, Transfer, And Savings Enter Into Our Lives Every Day. For Instance, We Remember That There Have Been Lengthy Intense Discussions About The Use Of Credit Cards In The Recent Past. From This Point Of View, It Is Not Possible To Predict That The Conceptual Discussions About Economics Will Not In Any Way Come To An End.

In Our Opinion, It Is A Huge Shortcoming That Most Of The Comments On Cryptocurrency System Are "Bitcoin"-Centric Assessments. As We Highlighted Above, Bitcoin May Be The Most Popular Of Cryptocurrencies, But It Is Merely One Of Approximately A Thousand And Four Hundreds Of Other Types Of Cryptocurrencies. Therefore, In Addition To Its Many Advantages, It Is Not Right To Think That The Negative Qualities Of Bitcoin In Terms Of Islamic Law Constitute A Basis For The General Judgment That All Cryptocurrencies And The Entire Cryptocurrency System Are Considered Haram. The Issue Of Legitimacy In Particular That Is Raised On The Basis Of The Claim That Cryptocurrencies Are Not Under The Guarantee Of A State Or Authority Are Therefore Not Applicable To Many Types Of Cryptocurrencies. Ethereum Of Russia And Petro Of Venezuela Can Be Cited As Examples In This Regard. The Possibility Of Turkey's Intention To Put Into Circulation A State-Backed Cryptocurrency Based On A Mine Such As Boron (For Example, Borcoin/Bormoney) Should Not Be Ruled Out Completely.

¹⁰⁴ Adam, p. 40-41.

¹⁰⁵ Adam, p. 41 and 49.

¹⁰⁶ Adam, p. 43 and 45.

¹⁰⁷ For example, see the Verse 275 of the Surah al-Baqarah (2/175) for the prohibition of interest; see the Verse 29 of the Surah al-Nisa (4/29) for the prohibition of unearned income and deception.

¹⁰⁸ Gözübenli, "İslam Hukuk Literatüründe Para", p. 95-96 and 85-86; Altan, p. 126.

Cryptocurrencies Do Have A Dimension That May Cause Particularly Small Savers To Be Deceived, That May Lead To Various Types Of Victimizations, And That Has Security Vulnerabilities. The Factuality And Truth Value Of The Haram Fatwa Based On The Above And Similar Reasons Should Certainly Not Be Ignored. However, It Is Like Rowing Against The Current, So To Speak, To Turn A Blind Eye To This Currency System, Simply Because Of Its Negative Aspects That Can Be Eliminated Or Corrected, Or To Condemn It To An Immutable Label As Illegitimate. It Is Important To Shift The Focus On Conducting Studies About How The Cryptocurrency System Can Be Developed On A Legitimate Basis, Taking Into Consideration More Of Its Qualities And Promises In Compliance With The Understanding Of The Islamic Law, Other Than Comparing It To The Existing Systems. We Believe That It Is Of Great Importance To Identify The Realistic Viewpoint Of Islam On This System And Accordingly Focus On Building A Unique System(S) In Accordance With The Islamic Understanding Before Having To Experience A Future In Which The System Is Widely Accepted, Fallen Into The Hands Of International Monopolies, And Infected With The Red Lines Of The Islamic Economic Theory, Such As Interest And Gharar, Which Altogether Means It Is A Little Too Late.

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