The Use of Cryptocurrencies for Hawala in the Islamic Finance

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Abstract—**This paper aims to evaluate where the application of new fintech solutions like blockchain and cryptocurrencies can be considered as an opportunity to build bridges between Islamic and western culture in order to create a trusted money transfer with low commission and a big transparency and trust.**

The research question is: Can an Hawala systems based on DLT technologies be considered compliant both with anti-money laundry regulations and with Sharia values?

This is a conceptual paper relying upon an understanding of the literature in the fields of technology, sociology, anthropology, criminology and regulatory, as applied to the topic of Islamic practice known as Hawala and emerging new disruptive technologies like Distributed Ledger Technology.

The research has been conducted by a literature reviewing on Scopus data base by searching the following keywords: Islamic finance, cryptocurrencies, hawala, stablecoin, globalcoin, money laundering, blockchain.

The searching period was set on the last 10 years.

The paper discusses some scenarios to define new fintech Hawala system in an evolving scenario of cryptocurrencies, social network commitments and different type of blockchain where it can be digitally transformed by using new fintech technologies while became compliance with anti-money laundering regulations with the respect of Islamic values.

As practical implications, this paper could help to encourage researcher and entrepreneurs to evaluate and propose a digital transformation approach with the aim to maintain ancient tradition and, at the same time, apply new technology that improve the life of citizens.

As social implications this paper expands upon the understanding of how new fintech solution can be easily be integrated in the real life by using common devices like a mobile phone to be used as wallet for the daily expenses and to receive money from relatives from western countries.

The originality/value of this paper is that it covers the literature gap in the field of new fintech solutions applied to Islamic finance by providing a likely proposal by integrating popular tradition, regulations and new technologies.

The research limitations and implications are related to that this is a conceptual paper; case studies haven't been treated, so it is not able to say definitively if the outcomes discussed can be defined as an effective solution and can be developed in the real global society, in a future prospective it'll be possible to continue to make researches in this field of application with fintech technologies and Islamic Finance.

I) INTRODUCTION

In next 10 years many analyst and financial institutions, claim that the Islamic economy will have a big grow and widespread recognition from Muslim communities that assert their religiosity traditional values. This paper aims to analyze how the innovative technology "Blockchain" and the potential of blockchain-based cryptocurrencies can adhere to the concept of "Halal" within the Islamic finance practices and ethics. Thomson Reuters estimates that the Islamic Economy in the 2030 is calculated around 1$ Trillion and the Islamic Finance sector will reach $3,8 Trillion in 2022. There is an increasing interest in cryptocurrencies worldwide and also in the specific field of Islamic finance. However, digital currencies are objects of speculation and not always is compatible with the religion and the Sharia principles and values.

This paper puts a specific focus on money transfer systems known as "Hawala", used to transfer money through a network of mediators ("hawaladars") located mainly in the Middle East, North Africa and South Asia. The Hawala system is perceived as a potentially dangerous practice for terrorist financing, money laundering and tax evasion by many western governments. Through the blockchain, leveraging its transparency, traceability and security features, it is possible to reduce the risks of fraudulent use, remaining true to the halal ethics and adding some typical features use of cryptocurrency. We analyzed possible scenarios about the use of DLT technologies as an evolution in the "fintech" sector and more generally in the Islamic economy. where we'll describe the types of cryptocurrencies called "stablecoin" that can be more appropriate to support the Hawala system because, despite to the famous crypto currencies like bitcoins, the value of stablecoins are related to FIAT currencies like US Dollar, Euros or gold, ensuring value stability, like "OneGram" considered the first cryptocurrency Shariah complaint. Further analysis has been conducted to the new cryptocurrencies, called "globalcoin" as those proposed by the giants of social networks such as Libra (proposed by Facebook through a private blockchain managed by a private foundation) and Gram (proposed by Telegram, on a public blockchain called "TON"). This paper focuses on analyzing how innovative technology "Blockchain" and the potential of blockchain-based applications like cryptocurrencies can be successfully

used for Islamic finance and how the DLT technologies can be adopted as an evolution in the "fintech" sector and more generally in the Islamic economy.

II) METHODOLOGY

To answer the research questions, we have conducted a systematic review of both academic and practice literature. We used Scopus database using the following keywords:

- "stable coins": one paper
- "Islamic finance" and "blockchain": two papers
- "hawala": thirty paper in the area business and management, economic, econometrics and finance.

The literature review has been completed by search how the western rules face the Hawala practice on the anti-laundry money regulations, finally we tried to figure out how the fintech big player are going to design a new currency system based on a global currency build on DLT technologies and finally if this system can be considered as a new sustainable "hawala" system both compliant with government regulations and Islamic values.

III) FRAMEWORK

a) Islamic Finance

Islamic finance is based on values and principles of Islamic Law, known as "shariah". These values are mainly based on the prohibition of financial interest, and contractual uncertainty and the promotion of ethical investments. Shariah compliant financing constitutes financial practices that conform to Islamic law. Islamic institutions are similar to the other typical financial institution with some differences. The Islamic Finance can be better defined and understood by elaborating its distinctive features as below:

- Religious basis. While conventional finance has no religious restrictions, Islamic finance is based on rules and regulations derived from faith and Islamic law. All Islamic banking and financial contracts must be subject to Sharia law.
- No interest. Islamic finance prohibits the gain of interest or an addition to the loan amount over time. Earning money is not allowed.
- Link to real assets. To avoid money earning more money, all Islamic financial transactions are linked to a real asset and there is an exchange of goods and services, making them less risky.
- Bank as a partner. Islamic banks act as a partner to both the depositors and borrowers. Islamic banks also operate as a seller in certain financial transactions.
- Profit and loss sharing. An Islamic bank shares in the profit of the client to whom it provides financing and is also required to share in any loss incurred by the business. On the deposit side, the Islamic bank shares its profit and loss with the depositors, pro rata to their deposit amounts.
- Productive investment. Islam encourages Muslims to invest in productive enterprises rather than hoarding their money, since idle money cannot earn any interest income. As such, Muslim depositors are encouraged to finance as partners, enjoying profit as well as bearing loss. This stimulates the economy and encourages entrepreneurs to put in their best efforts to succeed, which finally benefits the community also.
- Unnecessary and excessive risk. Islam prohibits any transactions that are based on excessive and unnecessary risk-taking leading to uncertainty. As such, speculative transactions are not allowed in Islamic finance. [7].

b) The "Hawala" system

The equations are an exception to the prescribed specifications of this template. You will need to determine whether or not your equation should be typed using either the Times New Roman or the Symbol font (please no other font). To create multileveled equations, it may be necessary to treat the equation as a graphic and insert it into the text after your paper is styled. Hawala is an Arabic can be translated as ''transfer'', the word means ''transform'' or ''change'' [19].The first tracks of hawala of can be found as early of 11th Century in India, where the first bank (the Bank of Hindustan) was established around 1770 in Calcutta**.** In the Hawala exchange system the money is transferred through the mediators known as hawaladars, they process a small fee as payment for the service, the hawaladar can reside in different countries and this guarantees efficiency to international money consumption even between countries with an inefficient banking infrastructure or excessively bureaucracy or corruption. The exchange is based on trust, as the insurance between debits and credits between the various intermediaries will be settled in the future data and is guaranteed only by the honor of the debtor. A typical use of this system are the migrants' remittances in favor of their country of origin. Hawaladars are financial intermediators who manage financial transactions, often without an official bankers' license or government control. The hawaladar transfers cash from one location to another location to another hawaladar. The hawala system often is operated without the real transfer of money. The system works when the hawaladar get in touch with a courier in that country informing him of the details of making the payment. The hawala system is untraceable. The Estimation of Hawala Networks is about over than 500 billion USD flows [25]Hawala network is built on the following: anonymity, low costs, efficiency and trust. Hawala is largely driven by the code of honor, reputation, trust and personal relationships, connecting hawaladars and users. The study conducted by Sharif, Mahama, & Farooqi, has demonstrates that there is no formal governance and management control system in place for managing hawala network, trust acted as

the most important control mechanism with a high level of the efficiency, effectiveness and lower transaction costs. Trust is the relational mechanism which held the network together and acts as an effective cohesive force. In the HNets the transaction cost is very low comparing to the traditional money transfer system. An Hawala transaction does not rely on any third-party monitoring as hawaladars only deal with one another. In addition, trust is the platform on which open communicationfor confidential and sensitive information sharing is built [25]. From the ethical dimension, the question that tried to answer is "Is hawala a financial practice that deserves moral respect or rather, should it receive a dis-approving judgment form an ethical point of view?". [19].The answer provided is that Hawala is a financial practice founded on Islamic basis, and it's strictly related to its ethical values. Since hawala is considered one of the most used Informal Value Transfer System (IVTS) where a big amount of legitimately earned money go through this channel. Hawala is also considered as an underground parallel banking system, it extends to countries in South-East Asia , in the Indian sub-continent, and in the Middle East, North America, Europe and Africa [35]

c) Money laundering and terrorism financing

Money laundering is the attempt to disguise the sourceof capital, often obtained from illegal activities, with the aim to appear as a legitimate it. It is usually accomplished through some complex financial transactions [26].The most common perception from the majority of western financial institutions andgovernment is that hawala is closely related to money laundering and terrorism. It's a common perspective that money laundering often is based on close relationship-based transfers like "hawala"[20].

The EU Commission has been released a report about the risk of money laundering and terrorist financing on the internal EU market [4]. The EU has defined common rules by establishing a framework called "EU anti-Money Laundering/Counter Terrorism Financial - AML/CFT" and EU Financial Intelligence Units - FIUs). The report presents the main risks for the internal EU market in a wide range of sectors and the horizontal vulnerabilities which can affect such sectors.Hawala pose a specific threat, particularly in the context of terrorism financing.

The Directive 2 (PSD2) rules payment services, it states that all operators providing payment services should be appropriately registered and regulated. Hawala is usually qualified as illegal since isn'tofficially registered and do not comply with the requirements of PSD2. Within the mitigating measures to address the identified risks, one of the EU policy initiatives, is related to address the technology-enabled services and business models, by and internal Fintech task force to determine whether existing rules and policies are adequate.

The Commission has set alsoaFinTech Task Force to assess developments on technology-enabled services and business models, like, crowdfunding, digital currencies, blockchain and digital identity. In May 2015 the European Parliament and the Council have released a directive related on money laundering or terrorist financing. In May 2018 the EU has amended the directive 2015/849, with the release of the EU directive (EU) 2018/843, where at the article 10 says that "Member States shall prohibit their credit institutions and financial institutions from keeping anonymous accounts or anonymous passbooks" and extends the due diligence to all customers to all exchange and wallet service providers that operate on virtual currencies. Hawala networks, are considered an alternative channel that operates outside regulations.Hawala operators are concerned that customers don't appreciate the verification on the origin and the destination of funds.Another issue about the hawala money transfer is that often the bank transfer is not possible due to the lack of banking structure in the country of destination [37].

d) Cryptocurrencies

Between 2007 and 2008, the world was shaken by the financial turmoil caused by the chain of financial collapses built on bad debts that triggered a crisis that had not occurred since the "Great Depression". During this period, the world observed the fragility and instability of a closely interconnected and heavily indebted global financial system. In response to these events, in October 2008, Satoshi Nakamoto published a white paper, introducing the topic of blockchain to the world, outlining the benefits of a currency exchange system called bitcoin. Bitcoin and other cryptocurrencies are probably the most commonly recognized use case of blockchain [8].

The blockchain was initially conceptualized by Satoshi Nakamoto to solve some problems related to electronic transactions. In 2008, Nakamoto introduced two ideas that had a substantial impact, offering opportunities for further innovations. The first idea refers to the"bitcoin" currency, a digital currency that operates on a peer-to-peer, decentralized, cryptographically secure, immutable, without any government or other central support. The second idea was the notion of blockchain. that has been defined in several ways: the main accepted definition is that it is a distributed ledger. Distributed ledger technology (DLT) is a genericermthatdescribesalltechnologiesthatdistributeinformation acrossmultiplesites, countries or institutions and includes blockchain.

A blockchain refers to an open, shared, decentralized, and distributed ledger in which transactions are recorded and added in chronological order with the goal of creating tamper-proof permanent records [13].DLT technologies does not require a central server to store data. As long as the network reaches consensus on what transactions have occurred in the past, it collectively acts as a server to host the data. If a dishonest participant decides to edit the previous data, the majority of the network quickly excludes it [8]Blockchain technology differs from most existing information systembyincludingfourkeyfeatures;decentralization,security,

intelligent execution and verifiability [21].Two main types of blockchain stand out in terms of access control: the blockchain can be public or private (bitcoin uses a public version). Within a public blockchain, each transaction is public ("without authorization") and users can remain anonymous. Each user can join without requiring permission from other members. The blockchain has an incentive mechanism to encourage participants to join the network. Access to the blockchain is controlled by the consortium's blockchain, composed by members[30].

Most researchers state that the most popular cryptocurrency, the bitcoin, which is not regulated from a central bank or institution, guarantees anonymity for buyers and sellers and the using of bitcoins in the dark web (e.g. TOR) presents advantages for criminals and cyber terrorists. Both bitcoin and TOR provide features like anonymity and provide opportunities and protection for criminal activities on crimeware marketplaces [26].In relation with money laundering and terrorism finance, in cryptocurrencies the public keys are "pseudonym" it's encrypted, an ABCD public key it's owned by the person/entity who own the private key. Every user could generate many couple of public/private keys, this will complicate the analysis to find the realowner.Every transaction is public since it's registered on a public distributed ledger (DLT), it's possible to read every (since creation) cryptocurrencies change in possession using blockchain explorer. "A blockchain explorer is a web application that operates as a bitcoin search engine, in that it allows you to search for addresses, transactions and blocks and see the relationships and flows between them. Popular blockchain explorers include: [1]

- blockchain.info
- blockexplorer.com
- insight.bitpay.com
- blockr.io"

Nowadays forensics are helped by specialized company who analyzed blockchain and follow change in possession of cryptocurrencies. On the other side the research for a deeper anonymity is developed by some specialized cryptocurrencies like Monero(www.getmonero.org/), and Zcash (z.cash/the-basics/), or mixing service where provider mix coins from different owners using other and property wallet. Some analysis shows potential use of cryptocurrencies by terrorist or criminal but poor daily use.

e) Stable Coins

Stablecoin is a cryptocurrency whose value is fixed to a non-volatile asset like fiatcurrency, aprecious metal, oil or other. The idea of a stablecoin is to produce a crypto asset whose value isn't disposed to to extreme volatility. This characteristic contrasts with the high volatility (marked price changes in short periods of time) typical of the most well-known cryptocurrencies, like bitcoin. The issuers of stable coin are used to make this link through a reserve of the underlying (collateralized/backed) and guaranteeing the possibility for the holders of the crypto to convert on demand and without limitations, a system very similar to the gold monetary standard of the early 1900s.Less successful and widespread have been cryptocurrencies guaranteed by precious metals or raw materials, also because they are more difficult to manage. Imagine what and how many activities are needed to buy or sell gold, oil or precious stones daily to adapt the reserves to the amount of money in circulation. Or how to guarantee the conversion of the cryptocurrency into the underlying asset in the case of physical delivery.

However, there are examples of cryptocurrencies of this type even though their capitalization is a fraction of that on a FIAT basis. Libra will also adopt this principle of stabilization, but the reserves will be realized by a basket of currencies/bonds of various countries.

The main uses have been identified in:

- Currency refuge, in the case of speculative activity there are moments in which an investor wants to disinvest from cryptocurrencies but wants to be ready to repurchase them, instead of converting his assets into FIAT currency with significant costs and long times can buy stable coins treated by almost all exchanges (which is not true for FIAT currencies) and avoid swings
- Currency for arbitrageurs, when a crypto currency presents different prices on different exchanges, it is common practice to buy it where it costs less and to quickly try to resell it where it costs more, to do this it is necessary to transfer the currency or at least its value, for what purpose the stable coin are ideal since the transaction is fast and cheap and not subject to fluctuations during the transfer time (albeit short).
- Currency for access to exchanges that do not accept USD / EUR. Almost all exchanges that accept FIAT currency deposits submit their customers to the ALM and KYC regulations, some exchanges while being very efficient in managing a large number of cryptocurrencies do not accept payments to FIAT, the most efficient and risk-free system for moving their own assets from one to another is to transfer stable coin.

Uses of Stable coin under development:

- Remittances from migrants
- Payments in the digital economy
- Payments in the non-digital economy

The main element of a stable coin as mentioned is its underlying guarantee, it is in fact the certainty of the existence and consistency of this underlying the subject of greater discussion by detractors of these currencies. An independent audit on the guarantee reserves is the desired solution to clear these currencies definitively, also for payment uses in the non-digital economy.

f) Stable Coins Global Coins (Gram and Libra)

The standard cryptocurrencies features join with the low volatility of stable coins has waked up the international players interest for these financial instruments. The possibility of create property "payment system" independent from national currencies and with a huge user's base has become an attractive project for internet giants.

A global coin expresses the concept of a cryptocurrency with the main characteristic to be globally recognized. The first known global coin projects are: *Libra* which brings together some multinationals with Facebook and *Gram* (or Ton) the cryptocurrency promoted by the Telegram instant messaging platform.On June 18, Facebook came out and published Libra's White paper [11],self-defined "new decentralized blockchain, a low-volatility cryptocurrency, and a smart contract platform that together aim to create a new opportunity for responsible financial services innovation " whose target is "a stable currency built on a secure and stable open-source blockchain, backed by a reserve of real assets, and governed by an independent association".

The proposed structure includes a Libra virtual currency and a non-profit Libra Association based in Geneva that will manage the currency. In addition, a second Libra Investment Token to be assigned to those who invest in the project at least $ 10m. Currentlythere are 28 investor/founder members, including Calibra, the Facebook subsidiary created specifically for this purpose. The founding members are: Mastercard, Mercado Pago, PayU, Stripe, Visa, Booking, eBay, Facebook/Calibra, Farfetch, Lyft, Spotify, Uber Technologies, Inc., Iliad, Vodafone Group,Bison Trails, Coinbase, Inc., Xapo Holdings Limited, Andreessen Horowitz, Breakthrough Initiatives, Ribbit Capital, Thrive Capital, Union Square Ventures, Creative, Destruction Lab, Kiva, Mercy Corps, Women's WorldBankingThe global coin main problem is the globality, the incompatibility of a global currency with a world fragmented from a regulatory point of view. The need to be compliance with national regulations can limit the use of currency globally.

Finma, the Swiss government agency for the control of financial assets has recently [6]write, Libra is "A Swiss paymentsystem is automatically subject to the Anti-Money Laundering Act. Money laundering standards would need to be ensured throughout the ecosystem of the project. The Gram (or the Ton) is the principal cryptocurrency of the Telegram Open Network (TON) Blockchain [16]is based on the popular messaging system Telegram. Telegram is planning to make Gram digital wallets available to the 200 million to 300 million global users of Telegram messaging applications.

IV) RESULTS

a) Blockchain and Cryptocurrencies in Islamic Finance

Is Islamic finance and Blockchain are fully compatible with each other?

In 2018 Egypt's Grand Mufti Shawki Allam said in an official fatwa that trading with Bitcoin was "unlawful" according to Islamic rulings. Egypt was not the only country prohibiting Bitcoin. A Saudi minister, Assim Al-Hakim, announced that the currency is forbidden in the country because "it is a cryptographic form of money that is vague and gives namelessness to crooks". "We know that Bitcoins remain anonymous when you deal with it, which means that it's an open gate for money laundering, drug money and haram (forbidden) money," he said. "Muslims should not get involved in such dubious transactions simply to make a quick buck, to make a quick profit. This is not an Islamic concept," warned Hakim. Some researcher affirms that blockchain would incorporate some Islamic values into finance.

Theadoption of DLT technology will allow Islamic Finance to adapt to the changing landscape of modern economic transactions [36]. Hussein Elasrag in a recent study affirms that blockchain made the process of charitable zakat, trackable, auditable, and immutable [3].

The use of Cryptocurrencies in Islamic finance could be more appropriate medium of exchange than riba-backed central bank fiat currencies, because of lower transaction fees than mainstream money transfer, this could be useful for more than 2 billion of people with poor infrastructure banking systems, providing the access market of goods and services and payment system.

The use of cryptocurrencies could facilitate small scale cross border trade. Fait Muedini, in his paper [11].has tried to answer the most common question that Islamic scholar, analyst and other asked on bitcoin and Islamic finance: "Is bitcoin compatible within the regulations of Islamic finance?" In his conclusions, Muedini wrote that bitcoin and other digital currencies seem to be aligned to the most valued characteristics in Islamic jurisprudence and this new system of finance called fintech is highly compatible with Islamic Finance and Islam's message of justice.

b) Onegram a sharia's compliant cryptocurrency

OneGram is the first cryptocurrency that has been certified in compliance with the ancient Islamic rules called Sharia's. It is inherently regulated by rules imposed on financial operations in the Islamic world". OneGram "have chosen the proof of stake (PoS) blockchain technology as it uses 10 times less energy than proof of work (PoW) protocols. On top of that, it is very fast, it takes only a few

seconds to carry out a transaction. Delegates and validators are democratically elected by the community of OneGram stakeholders.

Despite significant recent developments and innovation, the market for cryptocurrencies remains somewhat niche. Cryptocurrencies have shortcomings that currently discourage mainstream use, in particular, high volatility and barriers to entry and exit. OneGram aims to solve these issues by creating a business ecosystem to solve the entry and exit issues. Backing each coin/token with one gram of gold at launch to address the volatility issues and use blockchain technology to solve any outstanding problems. In short create a unique cryptocurrency. In addition, each transaction of the OneGram coin/token (OGC) generates a small transaction fee (1%) which is reinvested to purchase more gold (net of admin costs), thus increasing the amount of gold that backs each OneGram coin/token (OGC).

Therefore, each OGC increases in real value over time. This alone makes OneGram unique not only among cryptocurrencies, but all other currencies worldwide

V)DISCUSSION

c) The Hawala based on blockchain

Hawala is based on the same principles as the blockchain, trust, community, privacy, and decentralization. The blockchain can be used to improve the efficiency and speed of Hawala using digital processes, while maintaining the respect of traditions and Islamic values. Blockchain can be applied to be a natural evolution for Hawala, event because in the next 10 years is estimated that over 6 Billion people will be online, we assume that it will be possible to transform and digitalize the Hawala processes by using a stable coin cryptocurrency.

We will find more people with a smartphone and an internet connection than people with a bank account. It isn't matter of "if but just matter of "when" money will go mainly on internet using cryptocurrencies. In a cryptocurrency blockchain the nodes can be seen as hawaladar, where nodes and miners, that maintain the network through mutual trust and consensus. Due to the problem of "under banking" for more than 1,8 billion people, it is reasonable that such hawala system can be developed over a mobile app, could be a messaging system like WhatsApp (using libra) or Telegram (using Gram) to be used as payment and money transfer system, also where there are poor banking infrastructure and electronic payment systems.

An Hawala digital system based on blockchain can solve most of the problems related to money laundering and terrorism finance, because of traceability of transactions, identification of users (through the authentication and identification operated by exchangers). Regards the cryptocurrency to be used with this hypothetical Hawala system, the use of a stablecoin can reduce the risk of speculation and currency fluctuation, which are against the Islamic values. In the next table, we tried to provide a parallelism between the Hawala system and a stable coin:

TABLE I. PARALLELISM BETWEEN THE HAWALA SYSTEM AND A STABLECOIN

Characteristic	***Hawala***	***Stable coin***
Rapid	Yes	Yes
Cheaper	Yes	Yes
Distributed	Yes	Yes
Centralized	Partially	Centralized
Trusted	Yes	Trustless
Halal	Yes	Yes

In our opinion, an hawala system based on blockchain by using a globalcoin based on a stablecoin, like Libra, can be easily adopted by billions of people, by ensuring the transfer of money by using a very common mobile app, like a messenger (Facebook or WhatsApp). Even in some countries where there is lack of money exchangers (to convert Libras in local coins) or lack of bank infrastructures (ATM) and lack of electronic payment systems (POS), the coins received from the Hawala system can be spent by using the "cryptowallet" provided by the mobile messenger app, where the purchaser can send money to the seller in any shops, without the need to exchange the currency.

The governments could see the introduction of a global cryptocurrencies as a partial lack of control in monetary policy. Anyway, even now local currencies of developing countries oftenhave partial use by citizens who prefer foreign currencies (USD/EUR). However, it is not easy to accept this new paradigm.We have already seen clumsy attempts to combine cryptocurrencies with the control of the currency itself. In Venezuela in December 2017 the Petro was announced as the first statecryptocurrency (www.petro.gob.ve/files/petro-whitepaper-english.pdf). The Petro should have emancipated the state of Venezuela and the Venezuelan citizens from the official international payment circuits and from the dollar both controlled by the United States. The attempt to date is a fail, also due to the excessive control that the government wanted to impose on money, as if it were a national currency simply turn digital. The capitalization and circulation of the Petro (PTR code) is today on the international markets equal to 0

VI) CONCLUSIONS AND LIMITS

The research described in this paper is a tentative to evaluate how a digital transformation concept to an ancient and very traditional practice like Hawala. We have analyzed how the application of a fintech solution like blockchain and the cryptocurrencies can define an evolution that represents an important evolution with a series of potential benefits for the modernization of this practice in order to make it perfectly legal with respect to anti-money laundering laws and regulations and against the financing of international terrorism and at the same time respect for religious traditions, in line with the values of Islam.

The use of stable coin cryptocurrency can ensure the value of the transactions while the use of a global coin can allow a diffusion in those countries where the banking infrastructures are not yet adequate, while respecting the needs of traceability and identification of the users of the money transfer circuit, through the use of an app instant messaging provided by the most popular social networks. The possibility of institutionalizing the solution, for example, through a global central bank, could also guarantee the absence of private interests and maximum transparency regarding operations.

In conclusion, this approaches can be considered as an opportunity to build bridges between Islamist and western culture in order to create a trusted money transfer with low commission and a big transparency and trust, where Western government and regulators can watch at hawala practice as a modern and fair solution to be included in the western practice while they are assured about safety and transparency, while Islamic culture can see at this typical western technologies as a halal financial system.

The limit of the research described in this paper is that the "globalcoin" are, at the time of this study a conceptual model only, so Libra and Gram haven't been yet released and is notpossible to verify the real applicability of the theorized model to the Hawala practice.

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