# Digital Currency: The Future of Money

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Abstract—Digital currency is one of the hottest topics in the world right now. This is more so in India due to the recent demonetization schemes by the government. Due to that, many people have started using online banking, digital wallets, digital currency among others. Although there is knowledge out there about the digital wallets and online banking, the knowledge about digital currencies like Bitcoin is either minimal or next to none. This paper intends to give an overview of the various digital currencies. That includes explaining what Digital Currency really is, its processing, the real life working and the factors affecting the adoption of such currencies. How the various transactions that include digital currencies take place is one of the major points of focus of the paper. The various risks involved in such transactions are also listed in the paper.

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Keywords - digital, currency, bitcoin, block chain, money.

#### I. INTRODUCTION

Using money to "buy money". You've already begun thinking that this is definitely something weird, haven't you? But this process of digitization, in a nutshell is known worldwide as Digital currency or Digital money [1]. It is a medium of exchange that is based on the Internet, different from physical exchanges i.e. paper notes, coins etc., that resembles properties that are quite alike to physical currencies, but allows for ultraquick transactions and hassle-free transfer-of-ownership. They are issued and managed without any Central authority whatsoever. Like normal paper money, these currencies can to used to buy various products and services on the digital platform or as a source for investments. Crypto currencies and virtual currencies can be thought of as, types of Digital currencies. It is both, a payment system and a currency.

#### II. CONCEPT

When a person first decides to invest in digital currency, chances are they're going to have to go through an exchange to purchase it. To people that are familiar with common currencies like US Dollars or Indian Rupee, the concept of "buying money" seems uncanny and superfluous. It's where exchanges are involved that digital currency behaves less like "regular" money and more like an investment. To make your mind understand the concept of a digital currency exchange, you have to think of crypto currency less as a kind of money and more as a kind of commodity. Think of it as less of a bank, and more of a stock exchange. It's a foreign and intimidating concept to a lot of potential investors. Although it is built on the same kind of model, digital currency exchanges are nowhere near as complex as some stock exchanges.



Figure 1: Types of Digital Currency

#### III. PROCESSING

It is underlined by a peer-to-peer computer network that is made up of users' machines, similar to the networks that underpin BitTorrent and Skype. People always wonder the source of this digital currency. They use mathematics and are generated by the computers in its network which execute difficult tasks that involve high-end statistics, a procedure known as "mining". This mathematics were built so that it becomes relatively much difficult to "mine" currency over different periods. It is also not possible for any national bank of a country to issue copious amounts of new Digital currency and thus reduce the value of those notes that are already in circulation.

A huge network of interconnected PCs are used to keep an eye on and verify both the generation of new currency through various methods of mining, and the transfer of those among people. These verified transactions are recorded onto a public distributed ledger called as block chain. A log containing all of these transactions is maintained, with each new transaction then being sent to as a message across the entire network. The machines involved then communicate with each other to build and get a consensus upon updates made to the official log. This process, which is quite heavily loaded, is in fact the process used to "mine" currency every few minutes, a person whose changes to the log have been accepted by the network is then given a fixed number of currency.

## IV. REAL LIFE WORKING

A person who exchanges a digital currency is someone who "exchanges legal tender for electronic currency, or who exchanges one electronic currency for another." In layman terms, it can be thought of as a person who goes to the exchanger or an online merchant with a few Dollars and exchanges them for digital currency. The exchanger here charges the person a broker's fee. On completion of this process, you can now be known as a crypto currency holder. So, as you might now feel that it isn't as intimidating as you thought it was at first.

Once you have bought the digital currency, you need to be on the lookout of its fluctuating prices. You need to keep track on how your currency is performing, and how the market trend is. This may be troublesome to a few, so its very common that the exchanger, also doubles up as an advisor. They advise their clients on when it is the best time to buy, sell or just hold onto their digital currencies.

Most exchanges now offer digital wallets for the storage and maintenance of your digital currencies. It acts as a central hub which allows you to check up on your account balances, view your transactions, pay up merchants and transfer funds among other investors. The past decade or so has seen a tremendous growth in the number of people using digital currencies and wallets not only all over the world, but in India itself. Many countries have come up with their own digital currencies but **Bitcoin** is the world's most used digital currency. It was the world's first "decentralized digital currency". Some of the other digital currencies circulating around are Ripple, PPCoin, Dogecoin etc.

# V. ADOPTION

Digital currency was nowhere to be seen a decade ago but suddenly people all around the world are seeing its advantages and have started using it more and more. Here are some of the pros of Digital currency.

#### 1. Freedom in Payment

• It is possible to send and receive money anywhere at any given time by using Digital currency.

• You are in control of the money. There is no central authority that you need to rely on.

#### 2. Transparency in Information

• All finalized transactions can be seen by everyone keeping the personal details hidden.

• Anyone part of the block chain can verify the information at given time.

#### 3. Transaction Costs are miniscule

• There are no or very less transactions costs i.e. your bank may charge you \$10 for international transfers, digital currency doesn't.

## 4. Fewer risks for Merchants

• As Digital transactions cannot be reversed, and also no personal information is stored, it protects the merchants from fraudulency.

#### VI. CRITICISMS

Along with all the advantages that the digital currency provides, it has its fair share of criticism. There is, and always will be a section of people who wouldn't tag along on this concept. The major criticisms that have been seen are

## 1. Security

• The purpose of digital currency is to eliminate the middle man i.e. the government, the banking institutions. This has raised some concerns on who uses this system and for what reasons.

• Also, as digital currency is still pretty new, it is more prone to cyber attacks.

# 2. Volatility

• As the amount of digital currency is limited, the increasing demand causes a lot of fluctuations to the rate at which it is exchanged.

• It it is expected that as more merchants and media start accepting digital currency, its price will eventually settle down.

# 3. Under Development

• As it is still in its infancy stage, there are features and services which have room for improvement.

• It has some growth to do before it gains its final potential.

• As it is just starting out, it needs to figure out the problems faced by its users and provide solutions for it.

#### VII. CONCLUSION

To summarize, like every other thing in the world, there are two sides of the coin here. Some may agree to it and some may not but there is no denying fact that digital currency is the way of the future. It is the currency of the Internet. For Digital currency to succeed, more and more people need to be aware about it and they shouldn't let their preconceived notions dwell their concept of digital currency. Also, as digital currencies start to grow, it will be a much viable option, with distinct advantages that will make it stand apart from the

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