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# Evolution of Cryptocurrency: Changes in the use and Consumer Demands for Digital Transactions

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**ABSTRACT:** Due to the rapid development of information and communication technologies, many activities in our daily life have been merged online and they become more flexible and more effective. A huge growth in number of online users has activated virtual world concepts and created a new business phenomenon which is cryptocurrency to facilitate the financial activities such as buying, selling and trading. Cryptocurrencies have been introduced in the 21st century and have since evolved and adapted to the needs of the market and consumer. Currently, cryptocurrency market is worth over 100 billion US dollars, but since its inception the currency has seen major shifts in usage and format. The market for cryptocurrency has been evolving as well, based on the buying trends of consumers and gradual stringency of government regulations for digital methods of payments and other transaction.

**KEYWORDS:** Cryptography, cryptocurrency, Blockchain, Bitcoin.

## I. INTRODUCTION

We live in a fast world, wild world that is developing at tremendous speed. Every day is an opportunity for something new to see and learn and just when you think that that's it, more comes. There is no doubt that the era of information and communication technologies has created many golden opportunities in several aspects. The world of money and finance is transforming before our eyes. Digitised assets and innovative financial channels, instruments and systems are creating new paradigms for financial transaction and forging alternate conduits of capital. A growing number of online users has activated virtual world concepts and created a new business phenomena. Thus, new types of trading, transactions and currencies have been arising. One of the remarkable financial forms that have been emerged in the past few years is Cryptocurrency.

Cryptocurrencies are digital financial assets, for which ownership and transfers of ownership are guaranteed by a cryptographic decentralized technology. Cryptography is a process that translates legible information into codes that cannot be broken at all. The cryptocurrency is based on the digitized so-called. the main book of all crypto watch transactions called blockchain. Blockchain records individual transactions and ownership of all cryptocurrencies that are in circulation. Cryptocurrency represents digital money that you can't feel, you can't hold it in your hands which can be confusing for a lot of people, especially those who are not able to follow all the changes that technology brought to us.

Bitcoin began operating in January 2009 and is the first decentralised cryptocurrency, with the second cryptocurrency, Namecoin, not emerging until more than two years later in April 2011. Bitcoin is the most widely known (and currently the most valuable) cryptocurrency. There are many others, most notably Ether, the token that powers the popular Ethereum blockchain (the technology behind smart contracts),<sup>16</sup> and Litecoin, a cryptocurrency designed for smaller payments. Today, there are hundreds of cryptocurrencies with market value that are being traded, and thousands of cryptocurrencies that have existed at some point. The majority of cryptocurrencies are largely clones of bitcoin or other cryptocurrencies and simply feature different parameter values



## II. RELATED WORK

The idea of a cryptocurrency used to make transactions from one user to another in a decentralized framework (without a third party) has existed for decades, but only became feasible in 2008 when an anonymous author under the pseudonym Satoshi Nakamoto published an article introducing Bitcoin and the blockchain technology, an elaborate payment system which could allow secure peer-to-peer transactions. [1] Cryptocurrency represents a digital asset, whose main purpose is to be a medium in exchange. It uses cryptography to do so. Types of cryptocurrencies and how they effect economic growth is discussed by the author. [2] Author discussed how Cryptocurrencies draw a lot of attention from investors, entrepreneurs, regulators and the general public. Floating cryptocurrencies account for the very large majority of the crypto asset market capitalisation. Cryptocurrencies can be used both as a means of payment and as a financial asset. [3] History and analysis of cryptocurrency between April 2013 and May 2017. 1500 other cryptocurrencies have been introduced after bitcoin. Individual cryptocurrencies are characterized by circulating supply ,Price market capitalization and market share. [4] pricing in the cryptocurrency market and applying cryptocurrencies by the Bank of Russia for its monetary policy. illiquid cryptocurrencies exhibit strong inverse anti-persistence in the form of a low Hurst exponent. [5] Author discussed experiment to study how susceptible traders in these markets are to peer influence from trading behaviour. The experiment contains statistical analysis of cryptocurrency market. [6] Cryptocurrency and its allocation in the portfolio to produce an optimal portfolio. The historical data of assets is collected and used as analytical instruments. [7] The difference between cash and digital cash is explained along with Bitcoin mining , transaction and Risks.[8] The paper compares the development of cryptocurrency over the past several years . it explores the technical, legal, and economic hurdles that cryptocurrencies face in the future, focusing on the unique problems of financial intermediation in these currencies. [9] A model is proposed in this paper which can serve to help the trader choose correctly one of three actions: buying, selling, and holding the stock. In other words, a trader gets a recommendation about the right option and can catch up the good points for trading. [10] In proof-of-stake protocol, the blockchain is updated by a randomly selected stakeholder, and the probability of an investor being drawn is equal to the investor’s share, that is, the fraction of coins that the investor owns. [11] Analysis of cryptocurrency market to predict sustainable growth in the future. Classification of cryptocurrencies on their purpose of creation. [12] Paper discusses whether cryptocurrency is a driver for money laundering. The suitability of cryptocurrencies for ML is eagerly discussed in related disciplines such as computer science.[13] In this paper, A particular type of price manipulation: the “pump and dump” scheme is examined. These schemes inflate the price of an asset temporarily so a select few can sell at the artificially higher price. [14] The paper presents a brief history of the evolution of currency and the environment in which the first cryptocurrency, Bitcoin, was launched. [15] In this paper agent-based artificial cryptocurrency market in which heterogeneous agents buy or sell cryptocurrencies, in particular Bitcoins is presented.

## III. METHODOLOGY

To hear people's opinions on cryptocurrency, we conducted a survey consisting of basic cryptocurrency questions and forwarded it to our friends. We got 45 responses in total. In our survey, we had total of 3 sections.

1] The first section contained questions about whether they have heard about or invested in cryptocurrency and what they think about current financial system.

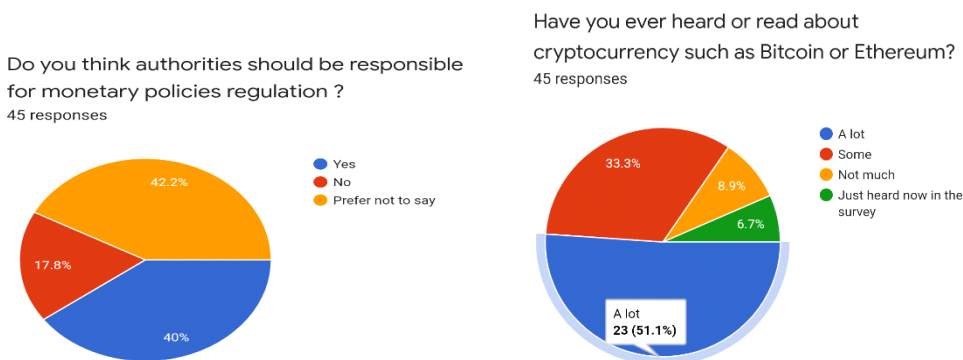


Fig. 1 a

Fig. b



Do you believe private banks issue too much money ?  
45 responses

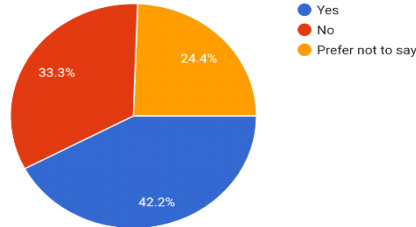


Fig. 1c

final question of 1<sup>st</sup> section was about whether they bought or have invested in cryptocurrency. If 'Yes' then survey continues with the next section and if it is 'No' the then it jumps to section 3.

Do you own or have ever invested in cryptocurrency?  
45 responses

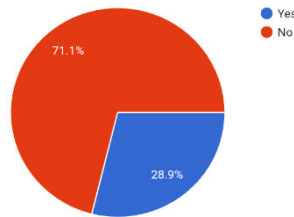


Fig. 1d

2] The 2<sup>nd</sup> section consists questions about why and how much they have invested in cryptocurrency if their answer to the previous question was 'Yes'.

What percentage of your net worth do you have in cryptocurrency?  
13 responses

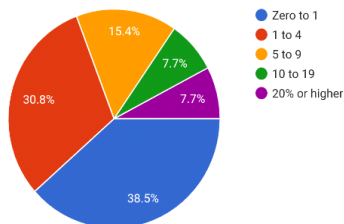


Fig. 2a

Which of the following are reasons to own cryptocurrency (select all that apply)  
13 responses

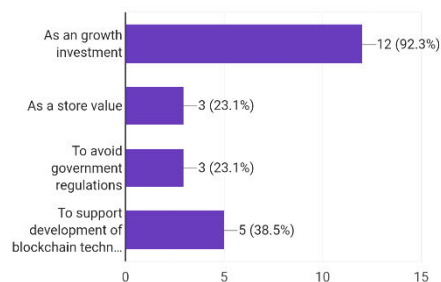


Fig. 2 b



In your opinion which is more risky, investing in cryptocurrency or investing in stock market?  
45 responses

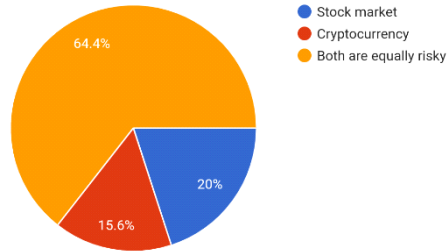


Fig. 3a

3] The third section was about what they think about cryptocurrency and if they have any future plans about investing in it .

How likely are you to invest in cryptocurrency this year?  
45 responses

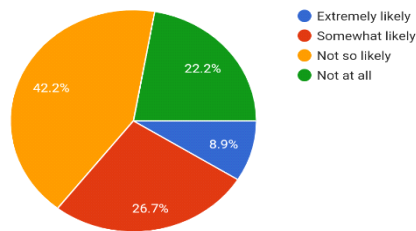


Fig. 3b

In 5 years do you think cryptocurrency would be worth more than it is today?  
45 responses

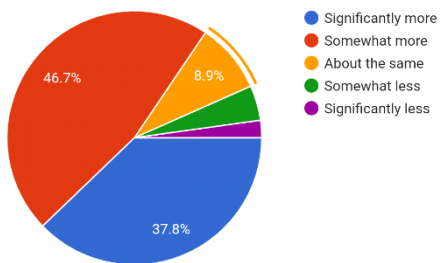


Fig. 3c

Which do you think would be more profitable , investing in stock market...sting in cryptocurrency?  
45 responses

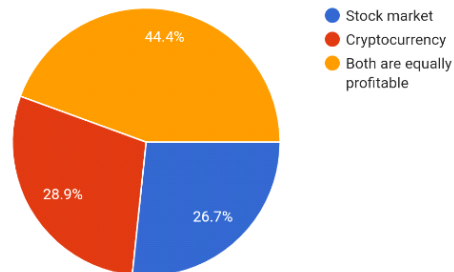


Fig. 3d



#### IV. EXPERIMENTAL RESULTS

From Fig. 1a it is observed that more than 50% of the participants have heard a lot about cryptocurrency which shows how cryptocurrencies have evolved through the years. Fig. 1b shows mixed responses when the participants were asked whether they think the authorities should be responsible for monetary policies regulation. Fig. 1c shows that majority of the participants think banks issue too much money. In Fig. 1d it is observed that more than 70% of the participants have not invested in cryptocurrency.

In Fig. 2 a, when asked why they invested in cryptocurrency, 92.3% of the participants selected as an investment growth option and Fig. 2d shows what percentage of their net worth they have in cryptocurrency.

Fig. 3a, the results show that 42.2% of the participants are not likely to invest in cryptocurrency this year. Fig. 3b shows that more than 60% percent if the participants think that investing in in both, cryptocurrency and stock market, are equally risky. In Fig. 3c, it is observed that 44.4% of the participants think investing in both, cryptocurrency and stock market, are equally profitable. Fig. 3d shows that majority of the participants think that in 5 years cryptocurrency will be worth more than it is today.

#### V. CONCLUSION

cryptocurrencies are a hot topic in the global financial system. There is great volatility of cryptocurrencies exchange rates. With this, there is a high risk of trading these cryptocurrencies. Their growth has been able to gain the attention of many speculators. They are easily portable. It is only after the required trust in the cryptocurrencies after which they will be used on a wider scale. If the cryptocurrencies fail to gain that trust, then their boom might decline. They are still in their infancy, and it is not sure as to when they will be maturely traded in the markets globally. Many different cryptocurrencies have gained the required attention. Some nations have started to issue national cryptocurrencies. It is quite possible that shortly, the bitcoins might have a way for cryptocurrencies to flourish. Despite the flaws, bitcoins are still considered tour-de-force in the digital currency. It has provided an alternative currency for the less developed countries and has opened the doors of economic transformation. In this way, it gives the individuals more choices to manage their finances. Without regard to bitcoins accomplishing the lofty transformations, the cryptocurrencies are seen to be entering the financial stage and changing the global financial landscape forever.

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