

Crypto Currency and Its Assemblage during the Period of Covid-19: A State of the Art Review

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Abstract

The spread of coronavirus has severely affected the behaviour of investors. It made the world commerce panic during the period of Covid-19. The investors could not find the substitutability of conventional methods of investment rather they believe on digital method of currency transaction i.e., crypto currency. The volatility of investment market is triggered into a substantial help to push economic stability through this digital currency transaction. Cryptocurrency markets characterised as a multifarious system in economics and finance discipline. This interdisciplinary study of foreign exchange markets and digital transaction like cryptocurrency is new orientation towards pros and cons of exchange market, portfolio management and investor behaviour. According to the studies generally investor behaviour is shaped by financial analysts, fund managers or other financial backers who have adequate knowledge in exchange market. It observed that investors change their behaviour while they trade and such behaviour is termed as Herding. In this article a detail review has been conducted on various aspects of herding which resulted in the economic, psychographic, social and religious activities of investors. Further, the review has cited more than 50 research articles and done deep understanding on herding and also studied different behaviour of bull and bear markets.

Keywords: Covid-19, Investment, Crypto currency, Herding, Bull and Bear, Digital transaction etc.

Introduction

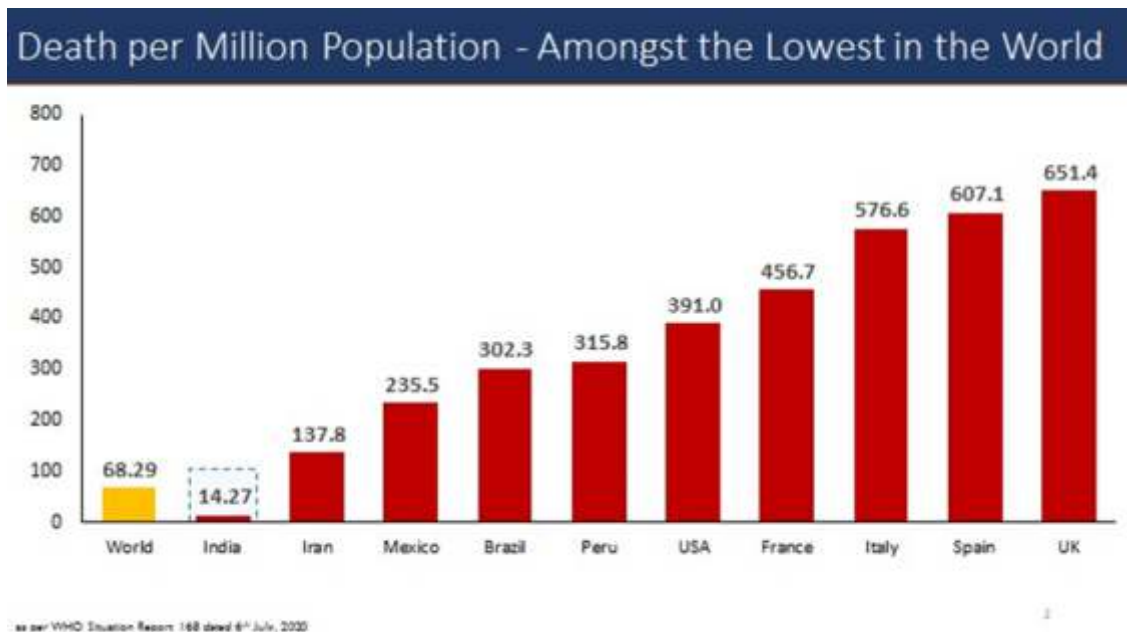
The spread of coronavirus have severely affected the behaviour of investors. It made the world commerce panic during the period of Covid-19. The investors could not find the substitutability of conventional methods of investment rather they believe on digital method of currency transaction i.e. crypto currency. The volatility of investment market is triggered into a substantial help to push economic stability through this digital currency transaction. Crypto currency markets characterised as a multifarious system in economics and finance discipline. This interdisciplinary study of foreign exchange markets and digital

transaction like crypto currency is new orientation towards pros and cons of exchange market, portfolio management and investor behaviour. According to the studies in general investor behaviour is highly shaped by financial managers or analysts, or other financial backers who have adequate knowledge on exchange market. It observed that investors change their behaviour while they trade and such behaviour is termed as Herding. In this regard a detail review has done to anticipate the herding behaviour of investors on crypto currency. Further, an understanding on crypto currency and its impact on economic, psychographic, social, and religious activities of investors have studied thoroughly.

The contagious effect of coronavirus (Covid-19 pandemic) has had severely disrupted the entire world economy drastically. The spread of coronavirus made the world economy paralyzed like no other epidemic earlier. The said contagious disease not only injured the health of individual, it also affected on demand and supply side of commodities. Particularly the spread of coronavirus reduced the labour supply and productivity due to the fear of infection. Similarly, the lockdown effect and social distancing forcibly closed the business partially resulted through supply disruptions. Further the economic conditions of the world became worsen due to home quarantines, morbidity,

fear of disease, and loss of employment. This pandemic has layoff the employment of many people, reduced the household consumption and created an uncertain situation in investment market that overwhelmed the scarcity of demand. The magnitude of spread extremely destroyed the aim, ambition and attitude of individuals. The ambiguity leads to loss of consumer confidence, business growth and tightening the financial conditions which adversely affected on investment market. The investment markets have been under a lot of pressure, unpredictability and uncertainty because of COVID-19 pandemic. Perhaps the overall world equity markets dipped at the end of February 2020. The cruelty of this quickly spreading illness is as yet staggering by numerous individuals, anyway the base purchasers are as yet discovering a 10,000-foot view of this uncontrolled plague as not seen consistently. The pandemic affected the export and import market on various commodities like oil, LNG, agricultural goods and metals across the world. Before the lockdown, China was highest importer of oil from different countries for its manufacturing set up. But it has affected its sales since December 2019. The export and import are market hugely affected the behaviour of the investor's sentiment i.e. herding behaviour or its assemblage.

Fig. 1 World death cases in Covid-19



This paper is divided into 4 different sections. Section-1 explained about the role of the investment market in this digital era. This section is the resultant outcome from 15 different research papers where majority of the authors discussed on the prospectus of cryptocurrency. Section-2 discussed about the nature of the cryptocurrency. In this section the nature like economic, psychographic, social, and religious are explained thoroughly. Section-3 explained about the cryptocurrency returns in the era of Covid-19. Here the effect of corona virus and cryptocurrency is discussed exhaustively. Section-4 explained on the herding behaviour of investors towards cryptocurrency. This section is the resultant outcome of 16 articles where the authors tried to found the role and consequence of herding in investment decision.

Role of investment market in digital era

Investment is additional source of income employed by the investors. It consists of safety of principal amount, liquidity income and purchasing power stability and appreciation. Investment decisions can be made wisely after understanding the investment environment, the availability of the choices, the influence of taxes, inflation and certain established theories. The investment environment can be studied by various kinds of investment alternatives like company shares, debentures, bonds, hybrid securities, post office schemes, mutual fund investments, insurance schemes, provident funds and real estate. Further it required substantial knowledge on the financial markets comprising capital markets of both new issue market and stock exchange, government securities market and foreign exchange market; financial institutions, banks, financial services, risks, market regulators and market participants. The financial structure of a country consists of a network of financial markets, institutions, investors, services and regulators. A financial system helps in effective collection of savings of the individuals and institutions and helps in transforming the funds into investment.

Singh [1] in her article the author articulated about the role of digital currency where both the buyer and seller perform the digital transactions in terms of fund transfer and settlement through online. Allen [2] described about the security features of digital transactions that carries value of

physical device. Feigelson [3] articulated on theories of trust from e-commerce to digital currencies in detail. Zarifis et al [4] proposed a model on unknown instalments of electronic money convention which can be basically controlled by an examiner to get to the point-by-point exchange history of the instalment. They proposed that Bitcoin is viewed as a mysterious electronic money to the centralized banking system that has far reaching of reception. Then again other electronic monetary forms have part of namelessness which could make illicit exchanges helpfully with no guideline. Wu et al [5] proposed a convention model to ensure the mysterious instalments of electronic money which is exclusively directed by an auditor to record the exchange history. Boesch et al [6] articulated on multi-currency transaction between a customer and a merchant over a network. In their article they suggested that the network between the customer and the merchant is absolutely linked with a server that could manage the digital transaction.

The new and the latest advancements of advances have made the adaptability for electronic money exchange where we can discover possibility to move private computerized cash without the intercession of any financial institution. In such manner a client should forestall itself for spending the equilibrium more than once which is more convenient. Presently Bitcoin is the new development which uses 'peer-to-peer' networks and open-source programming to confine from twofold spending and create 'finality of transactions'. Dwyer [7] inspected the expansions late innovation on advanced exchanges clarified about the utilization of late advances and its restriction of the amount delivered which can make harmony in computerized money. He expressed that in all day, every day trading on 'computerized markets' there are no agents or brokers. King & Scott [8] explained on peer-to-peer crypto-currency design where 'proof-of-stake' replaces 'proof-of-work' to provide maximum network security. Houy [9] investigated on proof of stake transaction and crypto-currencies where he found 51% attack on proof of stake than crypto-currencies. He proposed that the hacker can succeed when its motivation is larger than proof of stake transaction. Gipp et al [10] verbalized on trusted times packing the idea and its

execution in type of an electronic service that utilizes the decentralized Bitcoin block chain to store anonymous, carefully designed timestamps for computerized content. Drożdż et al [11] analysed on the high-recurrence accounts from Kraken, a cryptocurrency trade and expert exchanging stage that expects to bring Bitcoin and other cryptographic forms of money into the standard, the multiscale cross-relationships including the Bitcoin (BTC), Ethereum (ETH), Euro (EUR) and US dollar (USD). A route for crypto-currency exchange validation incorporates getting, by a registering gadget, from an information stockpiling gadget related with a first element, a confirmation data showing ownership of a private key, recovering, by the figuring gadget, from a review or an audit chain, in any event at least one crypto-currency transaction to a location related with a public key comparing to the private key, and verifying, by the processing gadget, in

view of the recovered crypto-currency transaction, the principal element [12].

In this regard Legotin et al [13] examined the prospects for using blockchain technology as a source of financial innovation. Abdullah and Rizal [14] gave a theoretical system with respect to whether a nationalised bank or a financial authority should issue a crypto-currency given accessible technical facilities and its results. Manimuthu et al [15] concentrated on the characteristics of Bitcoin through a precise literature review. The paper depends on essential information collected through primary data from existing research work and secondary data from applicable contextual investigations in the public domain (case studies). In contrast to different monetary standards, Bitcoin appears to have confronted numerous obstacles and with numerous applications in everyday life, made special difficulties for the final user communities.

Table 1. Role of investment in digital era

SI No	Contributions	Suggested outcome	Reference
1	Role of digital currency	Easy fund transfer	Singh
2	Security features of digital currency	Digital transaction is better than physical device	Allen
3	Trust on digital currency	e-commerce is now increasing trust among the investors	Feigelson
4	Supervision of anonymous payments	Increasing adoption for anonymous payments	Zarifs et al
5	Protocol for electronic transaction	Supervised by an auditor	Wu et al
6	Multi-currency transaction	Server could manage the digital transaction	Boesch et al
7	Use of recent technologies and its limitation	No brokers required	Dwyer
8	Peer-to-peer crypto-currency design	digital is authentic	Houy
9	Proof of stake transaction	proof-of-stake replaces proof-of-work	King and Scott
10	Trusted times tamping concept and its implementation	application of blockchain will reduce tamping	Gipp et al
11	High-frequency recordings	high-frequency recordings is eliminating duplications in digital transaction	Drożdż et al
12	Private key retrieving by the computing device	private key should be associated with the public key to retrieve the transaction	Feeney
13	Use of blockchain technology	blockchain technology as a source of financial innovation	Legotin et al
14	Role of digital currency	role of central bank to use the recent technologies	Abdullah & Rizal
15	Review on cryptocurrency	Bitcoin should improve the technology on user friendly system	Manimuthu et al

Role of investment in digital device has a greater interest among the investors. Now the investors are interested to adopt the recent technology like cryptocurrency transaction which replaces the physical monetary exchange. There are 15 article have thoroughly reviewed on the role of investors on cryptocurrency, it observed that the way online blockchain and cyber security helps the investors on secured payments. It also found that the cryptocurrency is safe and secure than physical device. The high volatility of recordings, proof of stakes, easy transfers etc. are the unique features of the cryptocurrency. A buyer and seller can directly access to the multiple applications of this currency where broker role is absolute.

Nature of cryptocurrency

The cryptocurrency has varied nature. It has economic, social, psychographic and social nature where the buyer and seller exchange their investment easily. Therefore, it is important for the government to take the decision to attract

the investors by providing several incentive plans. In this section the nature of investors and the impact of cryptocurrency is thoroughly observed and found that nature is an important factor for the investors.

Kumar and Suvvari [16] studied the elements of instability overflow across four significant cryptographic money returns in particular Bitcoin, Ethereum, Wave and Litecoin. Simanovskiy [17] investigated the financial idea of cryptocurrency, hazards that emerge from its utilization for monetary turnover overhauling, and results of various alternatives of its probable legitimization. Miraz and Maaruf [18] examined the use of Blockchain (BC) the technology behind the Bitcoin crypto-currency system. Sigler [19] articulated that crypto-currency has created from an exclusive investigation to probably the most smoking point in both the technical aspect as well as the finance fields.

Table 2. Nature of cryptocurrency

SI No	Contributions	Suggested outcome	Reference
1	Nature of cryptocurrency	digital currency is volatile so lot of developments needed	Kumar and Suvvari
2	Economic nature of cryptocurrency	It will manage the inflation rate	Simanovskiy
3	Nature of cryptocurrency	use of Blockchain (BC) the technology can improve the financial transaction	Miraz and Maaruf
4	Behavioural aspects on cryptocurrency	Hottest topic in financial market	Sigler

Cryptocurrency returns in Covid-19

The hazardous effects of coronavirus have drastically changed the mindset of every individual. Now the investors are thinking on safe investment with good returns, due to volatility of fiancé market. In this pandemic, cryptocurrency played an important role to provide adequate financial return from the investment. This section provided the sentiment of the buyers and sellers during Covid-19. The authors presented the highest possibility of return in this pandemic as the digital transaction of cryptocurrency is automatic, secure, and to some extent reliable.

Corbet et al [20] investigated that cryptocurrency returns are discovered to be significantly affected by negative supposition identifying with Coronavirus. Mnif et al [21] studied the level of cryptocurrency proficiency through multifractal investigation preceding and succeeding the period of Covid-19. The empirical outcomes established that COVID-19 had a positive influence on the crypto currency market efficiency. Lahmiri& Stelios [22] investigated the development of the informational efficiency in 45 cryptocurrency markets and 16 international stock markets previously and during COVID-19 pandemic. Drożdż et al [23] studied the complexity of

the cryptocurrency market. The Coronavirus bear market presents the main intense market misfortunes since dynamic exchanging of Bitcoin started. This market slump gives an opportune trial of the every now and again elucidated place of refuge properties of Bitcoin. Here Bitcoin doesn't go about as a place of refuge, rather diminishing in cost in lockstep with the S&P 500 as the emergency creates. When held close by the S&P 500, even a little allocation to Bitcoin significantly expands portfolio drawback risk. It observed that cast question on the capacity of Bitcoin to give cover from choppiness in customary business sectors [24]. Coronavirus pandemic has shaken the worldwide financial framework and caused extraordinary strife. Confronting remarkable dangers in the business sectors, individuals have expanding requirements to track down a place of refuge for their investments. Given that the idea of this emergency is a blend of various issues, it is generously unique in relation to any remaining financial crisis known to us. It is accordingly critical to re-examine the place of refuge part of some traditional asset types, in particular, gold, crypto-currency, foreign trade and commodities[25].

Umar & Mariya [26] analysed the influence of coronavirus pandemic fuelled panic using wavelet during January–May 2020 of crypto currency. It observed that there is high soundness between moves of the Coronavirus Panic Index and the price moves in Euro, English pound, and Renminbi monetary forms just as developments of the Bloomberg Galaxy Crypto Index. Demir et al [27] analysed the linkage between cryptocurrencies (to be specific Bitcoin (BTC), Ethereum (ETH), and Wave (XRP)) and Coronavirus cases/mortalities. This will help investigate whether

cryptographic forms of money can fill in as a hedge/assemblage against Coronavirus. They utilized wavelet coherence analysis which demonstrated that there is at first a negative linkage among Bitcoin and the number of revealed Covid-19 cases and mortalities; in any case, the relationship gets positive during the later period. Iqbal et al [28] investigated the extraordinary effect of Coronavirus on the crypto currencies' market. Kristoufek [29] considered the quantile relationships of Bitcoin and two benchmarks S&P500 and VIX and made correlation with gold as the asset of traditional safe haven. As Coronavirus has been spreading across the world since early 2020, a developing number of vindictive missions are underwriting the subject of Coronavirus. Coronavirus themed crypto-currency scams are progressively mainstream during the pandemic. Notwithstanding, these recently arising scams are inadequately perceived by our local community. The authors presented the principal measuring investigation of Coronavirus themed cryptocurrency scams and made a complete scientific classification of Coronavirus scams by physically dissecting the current scams revealed by clients from online assets. Then, at that point, they proposed a hybrid model to carry out the examination by: 1) gathering revealed scams in the wild; and 2) identifying undisclosed one's dependent on data gathered from doubtful entities (e.g., domains, tweets, and so forth) [30]. Corbet et al [31] articulated on flight to safety in this pandemic and evolution of Bitcoin in China to reduce the financial stress. Mariana et al [32] found that the two largest cryptocurrencies such as Bitcoin and Ethereum are suitable as 'short-term safe-havens' in this pandemic.

Table 3. Cryptocurrency returns in Covid-19

SI No	Contributions	Suggested outcome	Reference
1	Buyers attitude on cryptocurrency in Covid-19	negative sentiment on digital transaction	Corbet et al
2	Impact of crypto currency returns	positive impact	Mnif et al
3	Impact of crypto currency returns	positive impact on digital transaction found during Covid-19	Lahmiri & Stelios
4	Buyers attitude on cryptocurrency in Covid-19	Investors attitude need to change	Drożdż et al

Sl No	Contributions	Suggested outcome	Reference
5	Intention of investors	physical proof is needed	Conlon et al
6	crypto currency returns in Covid-19	critical to re-think the 'safe-haven' role of some conventional asset	Ji et al
7	Observation on buyers attitude	high lucidness between moves of the Coronavirus Panic Index and the price moves in Euro, British pound, and Renminbi currencies	Umar & Mariya
8	Impact of crypto currency returns	positive relationship observed between crypto currency and death cases of coronavirus	Demir et al
9	Impact of crypto currency returns	down turn of digital currency	Iqbal et al
10	crypto currency returns in Covid-19	Scam can be managed through proper care	Kristoufek
11	Safety rules of cryptocurrency	Bitcoin and Ethereum are suitable as short-term safe-havens in this pandemic	Mariana et al
12	crypto currency returns in Covid-19	innovative alternative investment asset class	Akhtaruzzaman et al

Herding behaviour towards cryptocurrencies

Most of the reason the investors change their behaviour while trading. They tend to give higher importance to gainers. This type of behaviour is known as herding. In the investment market like cryptocurrency transaction the investor attitude is changing dramatically from time to time. Sometimes the sentiment will be positive or negative. Probably the buyers watch the market activity where investors can easily invest its value and receive the return positively. This section provided the detail outcome of 16 research paper, where most of the authors articulated on the sentiment of the investors and they suggested that herding is also an important factor for financial gain.

Akhtaruzzaman et al [33] examined the monetary virus happens through financial and nonfinancial firms among China and G7 nations during the Coronavirus time frame. Cryptocurrencies have arisen as an inventive elective speculation investment class, exchanged information rich business sectors by all around the world circulated financial backers. Gurdgiev [34] researched on the herding conduct in cryptocurrencies in various circumstances. The examination utilizes day by day returns of significant cryptocurrencies recorded in CCI30 list and sub-significant cryptocurrencies and significant stock returns recorded in

'Dow-Jones Industrial Average Index', from 2015 to 2018. Quantile regression technique is utilized to test the assembling impact in market imbalances, between 'inter-dependency' and 'intra-dependency' cases. Results affirm the presence of assembling in cryptocurrency in upper quantiles in bullish and high instability periods due to overexcitement among investors, which lead to high volume trading. Significant cryptocurrencies cause assembling in sub-significant cryptocurrencies, yet it's anything but a unidirectional linkage. In any case, no intra-dependence impact among cryptocurrencies and equity market is noticed. Results demonstrated that in the CKK model assembling exists at upper quantile in market that might be expected when the market is moving quick, consistently trading, and bullish pattern are winning. Further investigation affirms this story as, at upper quantile, the beta of bullish system is negative and significant; which means the primary wellspring of market assembling is a bullish pattern in investment, which builds market disturbance and offers investors chance to assemble. Additionally, we found that assembling in cryptocurrencies exists in high instability periods, however this assembling or crowding generally relies upon market activities, not market movements.

Jalal et. al. [35] inspected the presence of assembling behaviour in the cryptocurrency market. Results from the static model recommend no critical assembling. They utilized a logistic regression model, and found that assembling will generally happen as vulnerability increases. Bouri et al [36] tested for assembling in cryptocurrency markets utilizing the CSAD technique. Ajaz and Anoop [37] expressed that assembling is the 'under up and down' market action showing over-eagerness and over-response. Susana et al [38] proposed that Coronavirus pandemic set off serious vulnerabilities in the cryptocurrencies market and has prompted wide variances in prices causing extreme instability and market declines. King et.al. [39] analysed the degree to which assembling and criticism of trading practices drive 'pricedynamics' across nine significant cryptocurrencies. Utilizing sample price information from bitcoin, ethereum, XRP, bitcoin cash, EOS, Litecoin, stellar, cardano and IOTA, separately, they reported heterogeneity in the sorts of criticism of trading systems the investors use across business sectors. Though some cryptocurrency markets show proof of assembling, or, 'pattern pursuing', practices, in different business sectors it shows proof of antagonist type practices. Kizys et al [40] contemplated the government reaction to the novel Coronavirus pandemic which moderated the investor assembling behaviour in global stock exchanges. da Gama Silva et al [41] examined assembling behaviour and infection phenomena in the cryptocurrency market. Poyser [43] proposed that cryptocurrencies' prices are driven by assembling.

Kallinterakis & Ying [44] investigated on assembling and its probable determinants in the cryptocurrency market. They suggested that cryptocurrency market entails strong destabilizing potential entrusted with its regulatory treatment. Aziz et al [45] investigated the role of religious philosophy in determining investor behaviour by examining differences in herding across 'Shariah and non-Shariah' compliant firms in the international energy market.

They suggested that assembling in both 'Shariah and non-Shariah-compliant' energy organizations, and on down market days in particular. Cross-sectional tests indicate higher herding in larger and more-profitable Shariah firms and those with positive analyst forecasts for the future, which is consistent with pressure-driven behaviour to maintain performance. They observed that the COVID-19 pandemic does not significantly alter herding behaviour for the sample firms.

Senarathne and Jianguo [46] explored the investor assembling in the cryptocurrency market prompts 'correlations' in cryptocurrency returns utilizing the technological innovation. Haryanto et al [47] investigated on two social inclinations for example the disposition effect and assembling utilizing the Mt. Gox data in the Bitcoin cryptocurrency market. It observed that utilizing trade full circle and endurance (survival) examination, the market shows an opposite manner impact in bullish periods and the typical positive disposition impact in bearish periods. Calderón [48] articulated on the sustainability of investment market future of online transactions or the 'disruptive' technological innovation. This article aimed to address the cryptocurrency price assurance puzzle from a conduct account viewpoint and attempting to discover the parallelism between the literature on inclinations present in monetary business sectors that fill in as a beginning stage to understand crypto-markets. Mattke et al [49] expressed that Bitcoin is a fine proven blockchain-based cryptocurrency which has drawn in a lot of consideration from media and regulators. Baker & Jeffrey [50] examined the investors' sentiment on cryptocurrency. The paper explained the investor sentiment approach through top down and macroeconomic. The 'top-down' approach expands on the two more extensive and more undeniable presumptions of 'behavioural finance sentiment' and the cut-off points to exchange to clarify which stocks are probably going to be generally influenced by the investors' sentiments.

Table 4. Herding behaviour towards cryptocurrencies

SI No	Contributions	Suggested outcome	Reference
1	Herding behavior in cryptocurrencies	assembling mainly relies on market activity, not market movement	Gurdgiev
2	Conditions of herding	herding tends to occur as uncertainty	Jalal et la
3	Herding behavior in cryptocurrencies	herding stimulates market expansion	Bouri et al
4	Buyers attitude	over-enthusiasm and over-reaction	Ajaz& Anoop
5	Herding & price	wide changes in costs causing serious instability and market declines	Susana et al
6	Herding behaviour in cryptocurrencies	trend chasing behaviours are important	King et al
7	Regulatory environment impact	government is responsible for immediate settlement	Kizys et al
8	Attitude of buyers	herding is responsible for change in attitude of investors	da Gama Silva et al
9	Herding & Price	cryptocurrency is price driven	Poyser
10	Herding behaviour in cryptocurrencies	cryptocurrency market entails strong destabilizing potential	Kallinterakis& Ying
11	Herding behaviour	COVID-19 pandemic does not significantly alter herding behaviour for the sample firms	Aziz et al
12	Technology & herding behaviour	technology is mainstream to expand the market	Senarathne & Jianguo
13	Investors sentiment	positive effect on bull and bear market	Haryanto et al
14	Investors sentiment	herding behaviour is positively correlated with the digital currency	Calderón
15	Attention by stakeholders	cryptocurrency which has drawn in a lot of consideration from media and regulatory authorities	Mattke et al
16	Investors sentiment	investors sentiment is positively correlated with the investment market	Baker & Jeffrey

Pros and Cons of Crypto currency

The recent financial trend of digital currency has attracted the buyers and sellers where they can stimulate the financial gain through digital transactions. It provides ample opportunities for the investors to exchange the value in accordance to the market conditions. There has been a consistent development of interest with regards to cryptocurrency. As it turns out to be more incorporated into various levels of our lives, it's nothing unexpected that expanded awareness is driving the developing monetary transformation. While there are both positives as well as negatives to the computerized cash, actually there are sufficient enormous organizations and partnerships seeing approaches to incorporate the technological innovation and benefit as much as possible from its benefits, so the idea of 'digital currency' isn't disappearing at any point in the near future. From the various literatures, some of the positive and negative impacts of cryptocurrency are extracted here as follows:

Positive impact of cryptocurrency:

- i. Easy fund transfer
- ii. e-commerce is now increasing trust among the investors
- iii. Supervised by an auditor
- iv. No brokers required
- v. High-frequency recordings
- vi. Server could manage the digital transaction
- vii. User friendly system
- viii. It will manage the inflation rate
- ix. Innovative alternative investment asset class

Negative impact of cryptocurrency:

- x. Increasing adoption for anonymous payments
- xi. Negative sentiment on digital transaction
- xii. Cryptocurrency is price driven
- xiii. Wide fluctuations in prices
- xiv. Safety measures are inconsistent

Types of Crypto currency

Since 2009 more than 30 varieties of cryptocurrency have introduced their digital currency across the world. Most of them are also quite popular among the buyers and sellers. At

present 26 types of cryptocurrency are active in the market. The investors find the technical viability of these cryptocurrency and choose the alternative to make the digital transaction transparent.

Table 5. List of cryptocurrency

Bitcoin	Monero
Litecoin	Titcoin
Namecoin	Verge
Peercoin	Stellar
Dogecoin	Vertcoin
Gridcoin	Ether
Primecoin	Ethereum Classic
Ripple	Nano
Nxt	Tether
Auroracoin	Zcash
Dash	Bitcoin Cash
NEO	EOS.IO
MazaCoin	Cardano

Source: https://en.wikipedia.org/wiki/List_of_cryptocurrencies

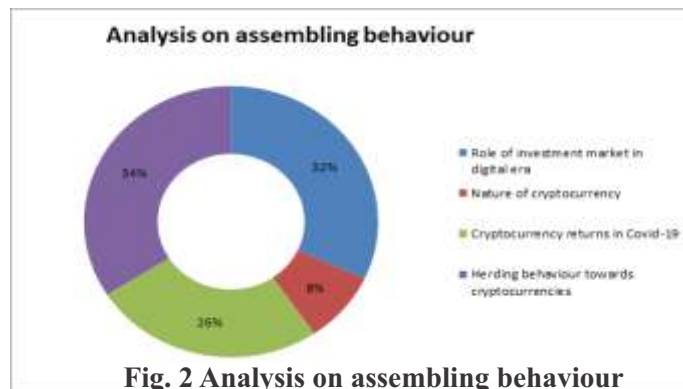
Discussion

Cryptocurrency is a different form of block chain, a trust less and distributed consensus system that allow us to send and/or receive money from someone without the third party. In the name of proof of work, it kept all kind of public contacts and accounts in the form of a ledger. Proof of work is an costly PC computation that need to performed in order to create a new group of trust less transactions (i.e. block) on a distributed ledger called blockchain. The entire transaction is performed by mining the public information in a ledger. The entire process is running with the mathematical calculations where security became the major concern. Since the epidemic of Coronavirus, the world economy has fallen down to a large extent. Most of the country closed their business transactions with other country which affected the domestic business. The investors are finding the alternative solution where they can buy or sell the currencies without intermediation. In this epidemic the cryptocurrency has turned the mindset of the buyers and sellers, now they feel that it is the only secure form of transaction. Keeping all these aspects of

cryptocurrency, the authors reviewed more than 50 research article where Covid-19 and digital currency have significant relationship exist during this pandemic. The public even have the trust on the cryptocurrency due to its different features.

The present study is analysed in 4 different segments, they are discussed as follows:

- Role of investment market in digital era
- Nature of cryptocurrency
- Cryptocurrency returns in Covid-19
- Assembling behaviour towards cryptocurrencies



From figure-2 we can observe the percentage of article reviewed and its consequences on cryptocurrency transaction in Covid-19 era particularly. From this figure majority of percentage article reviewed on assembling behaviour towards cryptocurrency where it found that herding is an important factor to create a positive sentiment of a buyer and seller in digital transaction market. It is a detail outcome of 16 research paper, where most of the authors articulated on the sentiment of the investors and they suggested that herding is also an important factor for financial gain. The above figure exhibited that 32 percentages of articles reviewed on the role of investment market in digital era. There are 15 article have thoroughly reviewed on the role of investors on cryptocurrency, it observed that the way online blockchain and cyber security helps the investors on secured payments. It also found that the cryptocurrency is safe and secure than physical device. The high volatility of recordings, proof of stakes, easy transfers etc. are the unique features of the cryptocurrency. A buyer and seller can directly access to the multiple applications of this currency where broker role is absolute. From this figure it observed that 26 percentage of article reviewed on cryptocurrency return in Covid-19. The authors presented the highest possibility of return in this pandemic as the digital transaction of cryptocurrency is automatic, secure, and to some extent reliable. Now the investors are thinking on safe investment with good returns, due to volatility of fiancé market. In this pandemic, cryptocurrency played an important role to provide adequate financial return from the investment. This section provided the sentiment of the buyers and sellers during Covid-19. The above figure also exhibited on nature of cryptocurrency. The nature like economic, psychological, social and religious aspects are majorly affected the cryptocurrency market.

Conclusion

The Coronavirus pandemic is a worldwide stun like no other, including synchronous disturbances to both demand and supply in an interconnected world economy. On the supply side, diseases lessen work supply and efficiency, while lockdowns, business shutdowns, and social separation additionally cause supply interruptions. As far as

the demand side is concerned, layoffs and the loss of income (from illness, isolation, and joblessness) and demolished financial possibilities diminish family consumption patterns and firms' investments. The outrageous vulnerability about the way, term, extent, and effect of the coronavirus pandemic could represent an endless loop of breaking down business and customer confidence and constraining monetary conditions, which could prompt loss of job and investment. The investment markets have been under a lot of pressure, unpredictability and ambiguity because of Coronavirus pandemic. During the close of February 2020, the overall world equity markets had gone down. In this regard the cryptocurrency is the only possible area of interest where the buyers and sellers have secure transaction. It could provide ample opportunities for the investors to exchange their values in the market with wide variety of protocols. The automatic trading system may have some difficulty in transaction but the digital platform will definitely replace the physical device as it records the data through high end of blockchain process. The investors also affected in terms of herding behaviour to some extent, so the government should take possible measure to provide guaranteed return to the investment. Thereby the cryptocurrency will help the buyer and seller in all types of exchange process to make trade viable in future.

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