# A RESEARCH PROJECT REPORT ON

# Risk and Return on Bitcoin

## A case study on risk and return of bitcoin and regulation in India

**Bachelor of Business Administration**

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**Under The Supervision of**

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**SCHOOL OF BUSINESS**

**GALGOTIAS UNIVERSITY**

RISK AND RETURN ON BITCOIN IN INDIA.

# CASE STUDY OF HOW BITCOIN CHANGE THE WORLD AND HOW IT IS HIGH RISK AND RETURN IN COMPARISON OF GOLD, SILVER , S&P 500, SILVER AND CURRENCY EXCHANGE RATE.

GALGOTIAS
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# BONAFIDE CERTIFICATE

Certified that this project report " Risk and Return on Bitcoin" is the bonafide work of " (**Md Suhaib-19GSOB1010144) ( Mohammad Shadan- 19GSOB1010421) (Meraj Ali- 19GSOB1010431** )

" who carried out the project Work under my supervision.

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# Approval Sheet

This thesis report entitled **(Risk and Return on bitcoin) by ( Md Suhaib, Md Shadan, Meraj Ali)**

is approved for the degree of bachelor of business Administration.

Examiners

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Supervisor

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# DECLARATION

IherebydeclarethatthisSynopsissubmissionismy ownworkandthat,tothebestofmyknowledgeand belief, it contains neither any material previously published or written by another person, nor any material which has been accepted for the award of any other degree of diploma of the University other Institute. Of higher learning, except where do acknowledgment has been made in thetext**.**

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"Md.Suhaib

"Mohammad Shadan"

"MerajAli".

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# CHAPTER 1 – INTRODUCTION

# RISK AND RETURN OF CRYPTOCURRENCY (BITCOIN)

Abstract. In 2009, the first state-of-the-art currency was used by Satoshi Nakamoto, which combines the basic elements of ownership management using public key crypto with a algorithm to keep search of who owns coins, known as "proof of work". The P2P electronic currency version may allow to be sent directly from one person to another without visit any bankorinstituionoranythirdparty.ItisworkontheblockchaintechnologyOrwecansayweb 3.0(bitcoin) Digital sign offer part of the solution, but the main advantages are lost when a reliable external company is still needed to prevent double spending. The network adjusts the timestamp by quickly accelerating a continuous series of hash-based work, creating an irreplaceable record without resuming proof of performance, more importantly, part of the Bitcoin test is a basic blockchain technology as a distributed consensus tool, and attention immediatelybeginstoswitchtothisotheraspectofBitcoin.Othercommonlycitedblockchain technology applications include the use of digital assets in the blockchain to represent custom currencies and financialtools.

## INTRODUCTION

Bitcoin is a relatively new technology that uses money and innovation, seizing technological opportunities in the digital age of the solution problem.

Bitcoin is refers to a digital currency which operates free central control over bank and governmentwhichislaunchedinJanuary2009.Bitcoinisworld'slargestcryptocurrencybyits market capitalisation. Now, it follows the idea of Satoshi Nakamoto's temporary white paper obscure and anonymous, who or who created the technology is still a mystery. and unlike government funds, it is used by state authorities.

Bitcoin is known as a form of cryptocurrency because it uses cryptography to keep it secure. Bitcoin is not present at a physical term it is only present digitally that's why it is known as digital currency. only balances stored in the public Ledger everyone has clear access to. Although each record is encrypted, all Bitcoin transactions are approved with a large quantity ofcomputersystem,thisprocessisknownasmining.Bitcoinisnotissuedorsupportedbyany banks or governments, and each Bitcoin is not as valuable as assets. Despite not being a legal tenderinmanypartsoftheworld,Bitcoinisverypopularandhasledtothelaunchofhundreds of other cryptocurrencies combined called altcoins. Bitcoin is often abbreviated as BTC when traded.

TherenamingofBitcoindoesnotconflictwiththestatusquo.Thecurrentfiatfinancialsystem does not end soon, and this book does not aim to predict the future when bitcoin becomes a global currency. On the other hand, I do not consider that to be a possibility, either. Bitcoin offers an alternative to the free market value of the store of value and fixed assets, and that is itsstrength.Itprovides"checkandbalance,"figurativelyspeaking,fromthefrequentspending of large banks by monetary policy. As people begin to lose the growing belief that their fiatdu jour money cannot keep its purchasing power, they will look for alternatives, especially when their money bonds are not producing money. Bitcoin is a digital asset. Assets are defined as “somethingusefulorvaluable.”Itisadigitalassetbecauseitisproducedandusedinthedigital world. Just as gold miners need to use labor, resources, and energy to produce gold, bitcoin miners need to use labor, equipment and energy to produce bitcoin. Bitcoin is not just a series ofcoins-aguaranteedoperationneedstobecompletedinorderforbitcointobeimplemented. Thereareproductioncosts,suchasgoldoranyotherpreciousmetal;andunlikefiatcurrencies, bitcoin is not an attempt to create value out of a small amount. Production costs are present in market prices at the time each bitcoin is made, and in central banks, there are no actual cost of producing fiat currency. Big banks print money on a small scale. This is the main difference - bitcoin has real production costs. Also, if you think a suitable cryptocurrency could be a goldbased cryptocurrency in the future, I recommend you read this sectionagain.

In1984,NobellaureateandprominentAustrianeconomistF.A.Hayekstated,“Idonotbelieve that we will ever again have good money before we put this thing in the hands of the government, that is, we will not take it by force. out of the hands of the government, whichwe can only do so in a deceptive way to introduce something they can stop. ”2 Bitcoin is that way of circulatingfraudulently.

The bitcoin domain name was registered on August 18, 2008. Later, on Bitcoin has anecdotal evidence that it is antifragile. It needs to be licked and it keeps coming. It has survived many tragediesandmarketcrashesduringits11-yearexistence.Bitcoinhassurvivedfourfullcycles of bull and bear markets, where bear markets see the price of bitcoin drop by more than 70% eachtime.Italsosurvivedmanyrobberies,withthefirstandlargestrobberyofMt.Gox,which was the biggest exchange in the early days, back in 2014. When it started as a trade in 2011, Mt.Goxwastheonlyrealtrade.wherebitcoinownerscantradewiththeirbitcoin.In2013and 2014,itaccountedfor70%ofallbitcoinpayments.Itwashackedin2014andtherewasahuge loss:850,000bitcoinwasstolen.Atthetime,itwasunclearwhetherbitcoinitselfcouldsurvive such a scandal. But it did. Bitcoin survived the March 2020 fine-tuning, too. In the turmoil of the 2020 epidemic, bitcoin performed the best of all asset classes, including stocks, bonds, oil, real estate, and gold, at thetime.

Online trading has become almost entirely dependent on financial institutions acting as outsourced companies to process electronic payments. Although the system performs well enough in most applications Proof of work is work that is intended to be difficult to produce (expensive, time consuming) but easily verified by others. Bitcoin uses the Hashcash5 system of proof of operation.6 This proof of validation process is used in Bitcoin to generate a blockchain where the first proof-mining miner gets to produce a new block of guaranteed transactions and earns a mining (newly developed bitcoin) service with network protection service. This is a novel because it provides built-in incentives for miners to compete to protect the network and also solves the problem of duplication, which is the power of having one coin usedmorethanonce..Solvingthedualspendproblemiswhatcreatestherealdigitalshortage, which has never been achieved beforeBitcoin.

TheeraofdigitaltechnologybeforeBitcoin,whenyousentadigitalfile,itwasstilljustacopy of the file. Companies have made progress in digital rights management, but that requires a central authority to create and manage those rights. There was no way to have a definite difference in the digital world without some kind of authentication process for an external companyconsultant.Bitcoinhascreatedaseeminglyinsignificantdigitalshortage,withoutthe need for third-party authentication / verification, and that is achange.

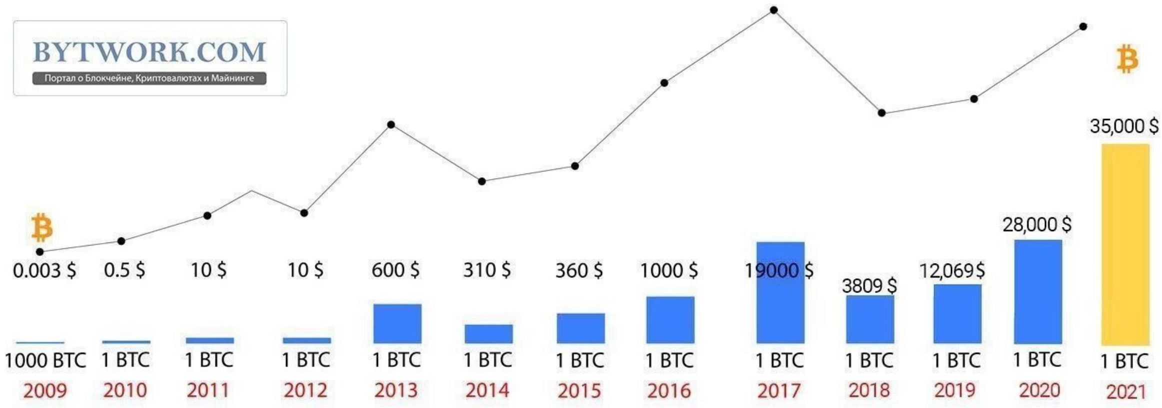
There will always be only 21 million bitcoin. As of mid-2020, about 18.5 million havealready been mined. This makes bitcoin much cheaper than gold in that the inflation rate of bitcoin decreases by half every four years while gold remains the same or responds to price changes. There has never been a harder, more rare currency than bitcoin. The development of BTC is increase day by day in India. India, with a population of 1,403,336,074 by 2022 (BPS, 2021). TheIndianpopulationhasahugeimpactonthegrowingBTCinvestmentclimate.Almostevery country is experiencing a slowdown in growth of economy by 2020 as a result of the covid-19 epidemic.

Bitcoin Blockchain information including historical values, recently excavated blocks, mempool size of unconfirmed operations, and recent activity data.

Table 1 – Shows bitcoin estimated hash rate and estimated transaction volume.

| PRICE | ESTIMATED HASH RATE | TRANSACTION (24HRS) | TRANSACTION VOLUME | ESTIMATED TRANSACTION VOLUME |
|---|---|---|---|---|
| 38,549USD | 191.735 EH/s | 254,101 | 4.721m BTC | 145,881 BTC |

Figure 1: All time bitcoin high.




The fact that Bitcoin is digital helps to develop one of the six features of good money. Good

moneyneedstobeportable,fragmented,scarce,acceptable,long-lasting,anduniform.7Because Bitcoin is digital, it is easy to transfer via the internet, which makes it portable. It divides down into eight decimal places, so that makes it separate and uniform. It is probably more accurate to say digital- not online-based because the user can sign up and send bitcoin trades via shortwave radio8withoutusingtheinternetatall.BitcoinisP2Panddoesnotrequireauthorizationorthird party.Thisisnotthewaymoneyworkstoday.Allmoneyinacommonfinancialsystemneedsa thirdpartyarbitrator,whetheritisamajorbanktowithdrawmoneyoracommercialbanktopay for the work. This layer is not required with bitcoin and removes conflict (costs) andconflicting risk.Nordoesitrequireapprovalortrusttocompleteatask.Thisisachangeandwillreducethe cost of financing transactions and allow more people to use this new digital financial system. Being a P2P and not having a license makes it more acceptable than any other money available. It is done all over the world. From 2020 it can be sold for 180 pairs of fiat currency. 9 As mentioned earlier, Bitcoin does not require authorization as no reliable third party is required to process the transaction. This means that no one needs a bank account or a credit card to be able to usebitcoin.

# CHAPTER 2
# TRANSACTION LITERATURE

Bitcoin uses public key cryptography to verify the integrity of network-created activities. To transfer Bitcoin, each participant has a pair of public keys and secret keys that control their own bitcoin pieces. A public key is a series of letters and numbers that a user must share in order to earn money. Conversely, the private key must be kept confidential as it authorizes the use ofany funds received by the related publickey.

It has always been a matter of theory to produce goods with a predictable substance

aconstantorlowrateofsupplygrowthinordertomaintainitsfinancialrole,butreality,asalways, has proved to be more complex than theory. Governments would do never allow private parties towithdrawtheirprivatefundsandoverrunsintheprimarywayinwhichthegovernmentsupports itself and grows. So the government he will always seek to dominate the production of money and deal with the most powerfula

the temptation to get involved in money laundering. But by establishment of Bitcoin, the world had already come to the four coin transactions Ironclad guarantee that controls its low level of supply growth. Bitcoin takes over great economists, politicians, presidents, revolutionaries, soldiers dictators, and TV experts out of total monetary policy. Fundraisinggrowth isdetermined by planned work accepted by all members e network. There may be a time at the beginning of this type of money when this The inflation schedule could have been imagined, but that timehas gonewellpassed.Forallpracticalpurposesandobjectives,theBitcoininflationschedule,aswell

performancerecord,unchanged.DuringthefirstfewyearsofBitcointheexistenceofthegrowth of the supply was very high, as well as the assurance that the supply The schedule could not be changedwascompletelyunreliable,astimewentonthelevelofsupplygrowthhasdecreasedand network reliability has maintained this The supply schedule has increased and continues to rise with each passing day which no major changes are made to the network. Bitcoin blocks were added to the shared bridge every ten minutes. In with the birth of the network, the reward for the block was set to be 50 bitcoins block. Every four years, about, or after the removal of 210,000 blocks, I block reward is reduced by half. The first episode took place on November 28,2012,

after which the issuance of new bitcoins dropped to 25 per block. July 9, In 2016, it dropped to 12.5 coins per block, and will drop to 6.25 by 2020. According to the plan, supply will continue to increase steadily average, by contrast approaches 21 million coins at some point during the year 2140, at which time no more bitcoins will be issued.

Bitcoin,asaformofcurrency,isnotverydifficulttounderstand.Forexample,ifyouownbitcoin, you can use your crypto wallet to send small portions of that bitcoin as payment for goods or services. However, it becomes more difficult when you try to understand how itworks.

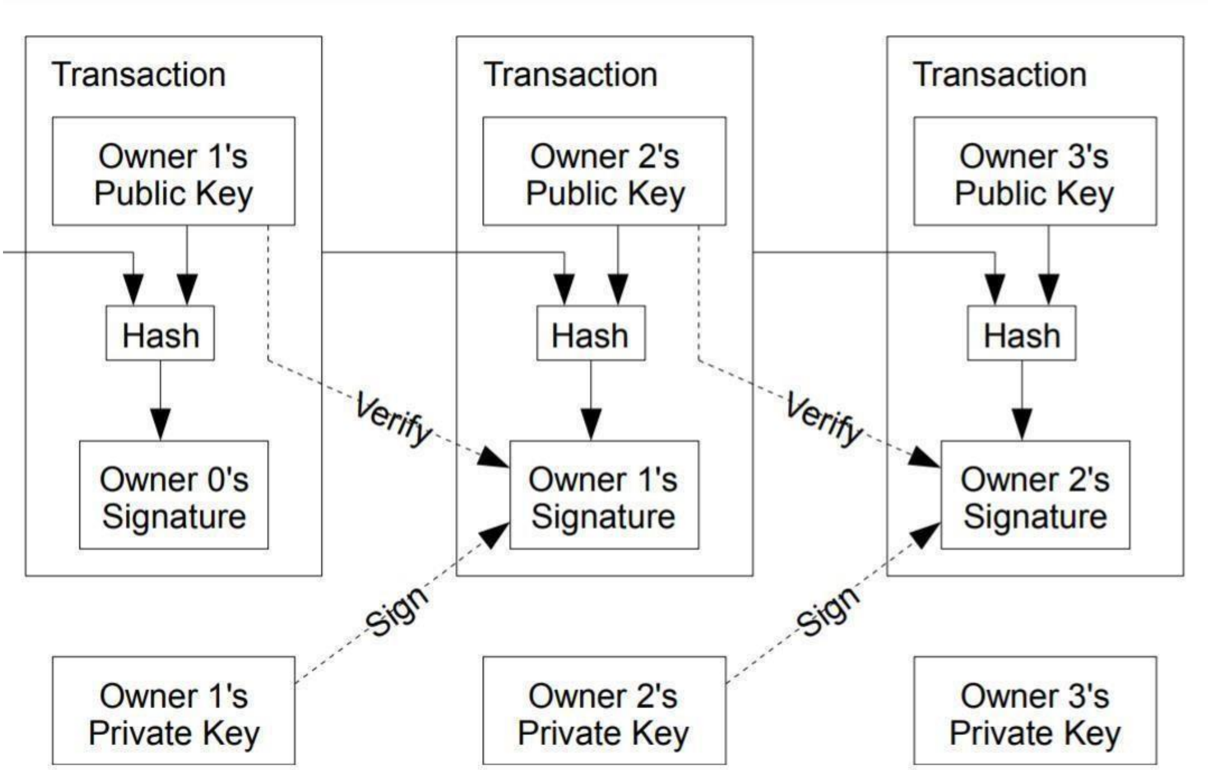



Fig 2.1 show transaction approve by buyer and seller.

Cryptocurrencies are part of the blockchain and network needed to enable it. Blockchain is a distributed ledger, a shared database that stores data. Inside blockchain data is protected by encryption methods. When a transaction takes place in a blockchain, information from the previous block is copied to the new block with new, encrypted data, and the transaction is verified by authenticators - called minersnetwork. Once the transaction is confirmed, a new blockisopened,thenBitcoinisbuiltandawardedtotheminer(s)whoverifiedthedatawithin the block — and then free to use, hold, or sell it..

Bitcoin uses the SHA-256 hashing algorithm to encrypt data stored in blocks in a blockchain. Simply put, the activity data stored in the block is encrypted to a 256-bit hexadecimal number. That number contains all activity data and information linkedto blocks prior to thatblock..

AvarietyofcomputerandsoftwaretoolscanbeusedtodigBitcoin.WhenBitcoinwas first issued, it was possible to mine competitively on a personal computer. However, as the popularity of the hassle increased, more miners joined the network, reducing their chances of being a hash solution. You can still use your personal computer as a miner if it has new hardware, but the chances of resolving the hash areslim.

This is because you are competing with a network of miners who produce about 220quintillion hashes (220 exa hashes) per second. hashes per second. In contrast, a computer with the latest hardware accelerates to about 100 mega hashes per second (100 million) .7

To be a successful Bitcoin miner, you have a few options. You can use your existing personal computer to run Bitcoin-compatible mining software and join the mining pool. Mining lakes are groups of miners who combine their ability to combine to compete with large farms in ASIC mines.

You increase your chances of winning by joining the pool, but the rewards are much less because they are shared.

Ifyouhavethefinancialmeans,youcanalsobuyanASICminer.Youcanusuallyget anewoneforabout$20,000,buttheusedonesarealsosoldbyminersastheyupgrade theirsystems.Thereareimportantcostssuchaselectricityandcoolingthatyoushould consider when buying one or moreASICs.

There are a few mining plans to choose from and many lakes to join. The two most popular programs are CGMiner and BFGMiner. When choosing a swimming pool, it is important to make sure you find out how they pay for the prizes, what the fees are, and read some reviews of the mining pool.

The volatility of Bitcoin is based on the fact that its supply does not change completely either does not respond to requests for changes, as it is designed to grow in fixed rate. For any conventionalasset,theneedforvariancewillbeaffectproductionproducerdecisions:increase of demand causes them to increase their production, equating inflation and allowing them to increasetheirprofits,whiledecliningdemanditcancausemanufacturerstoreducetheirsupply and allow them to reduce loss. The same situation exists with the currencies of the country, where the banks are central they are expected to maintain stability in their purchasingpower

financials by setting the limits of their financial policy to resist market fluctuations. With a deliveryschedulethatneverrespondstodemand,toonomajorbankwillmanagethesupplyof goods, there may be flexibility, in particular in the early stages when the need varies greatly from day to day,too

Bitcoin markets that deal with Bitcoin are still in its infancy.If the work is broadcast in one place, this node then transmits it to the network until it reaches the mining area. The miners will then order this transaction in what is called a block template. This is the blockchain plan thatthemineristryingtoaddtotheblockchain.Whenaminerfindsthenextblockintheseries, this block template is mined and becomes a non-convertible block in the blockchain. Finally, this block is broadcast to network nodes that will install you intheir.

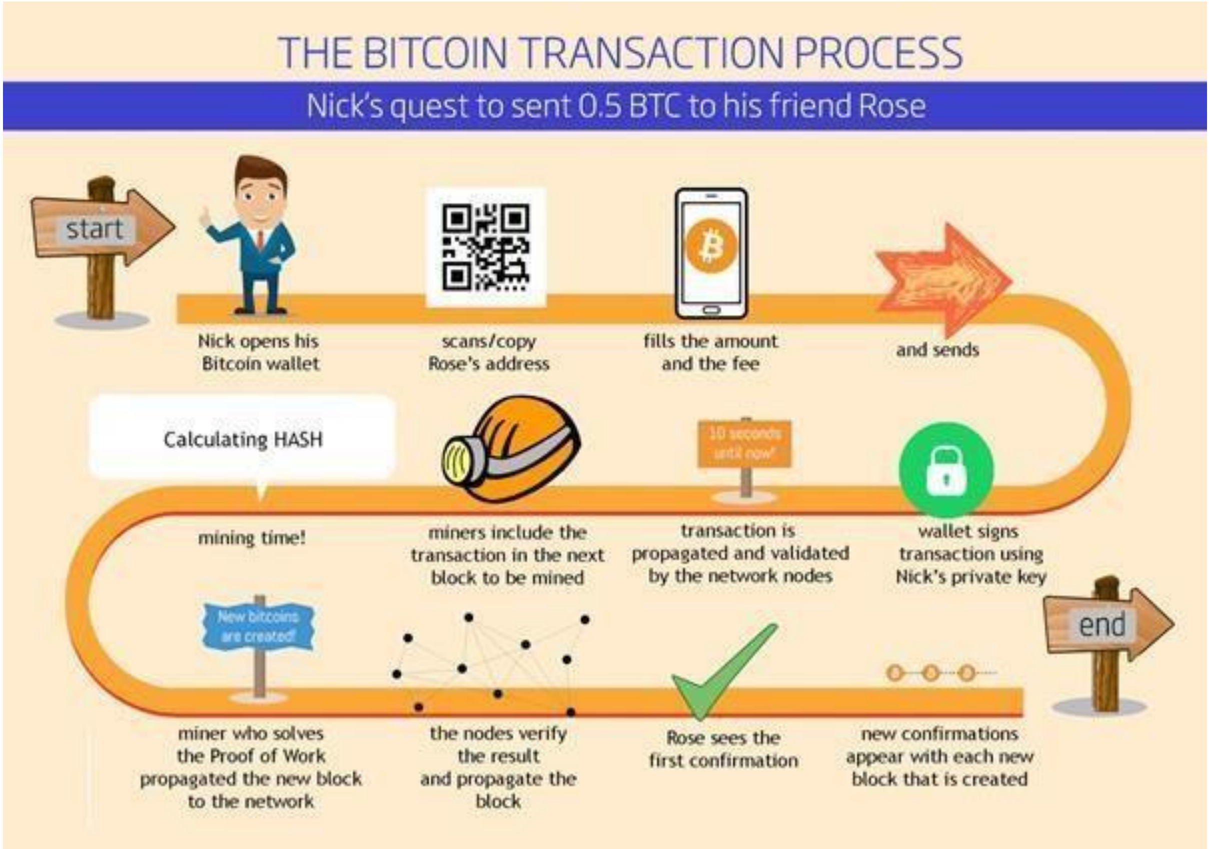



Fig 2.2 show high level of P2P transaction.

# CHAPTER 3
# THE LONG TERM WAVE OF ECONOMIC CYCLE

Have you heard the saying "Luck loves courage"? It also reaps what is fixed. Cycles are important information structures because they help to provide an indication of what is happening and what will happen. The cycles provide the first step for compelling the entire investment space. Combined with other layers, they can provide the fixed investor valuable information that most people do not include in investing decisions. This gives the investor a chance.

Aninvestorneedstoknowwherethemarketsareheadedbasedonthevariousfactorsthataffect them. Between the short-term debt cycle, which is about 5-10 years, and the long-term credit cycle, which is about 75-100 years, there is the long-term economic cycle. This was invented by Russian economist Nicolai Kondratiev in the 1920's and developed by Joseph Schumpeter in the 1930's and later by Carlota Perez in the earlymillennium.

Kondratiev discovered a long-wave structure and explained that it has four stages.Schumpeter thendevelopedonitthatthelong-wavecyclewasdrivenbyabusinessmanandinnovation.He also showed how this long-wave cycle interacts with several othercycles.

Finally, Perez expanded on it further by showing that the long-wave cycle was directly driven by technological change and marked five cycles over 200 years ago. Describes structures that contain more details of what happens during a cycle. We go into one of Perez's books in Part II.

## Kondratieff Cycle

In this chapter we divide this cycle of long waves, 50 to 60 years, and the first of its phases / seasons: Spring, Summer, Autumn, Winter. The Kondratiev cycle, or K-wave, is made up of fourcomponents(Figure3.1).Eachcategoryhasdifferentfeaturesofthepre-seasonconditions, market structure, investor sentiment, inflation / inflation trend, credit yields, and interest rates, andwhichassetcategorieswillperformbetterinthatseason.Eachseasonalsohasanindicator of seasonalchanges.

### Spring - Start of Decrease and Depreciation

Thenewcyclebeginsinthespring.ThererarestillremindersofconcernfromtheWinterseason ofthepreviousround.Thecyclebeginswithanindicationthatalowerstockhasoccurred.It canbescarytogobacktothepreviousdepressionandself-esteemisweak,butoptimismstarts withthelittlegreenshoots.Thereisagradualincreaseinbusinessandemployment.AsSpring progresses, inflation begins to slow down. Banks began to provide loans to businesses and individuals. Interest rates on that debt start at low levels. The Federal Reserve or other central banks start with lower interest rates on commercial banks. Consumers are starting to feelmore confident that there is economic growth. The market cycle feels fresh, as if something has changed in the end. Investors are beginning to see the rise in stock markets and other investments begin to generate stable returns. The best asset classes in the spring are stocksand real estate. This lasts for years, usually between 10 and 15 years. Spring ends when there is a high level of bull market in equitymarkets

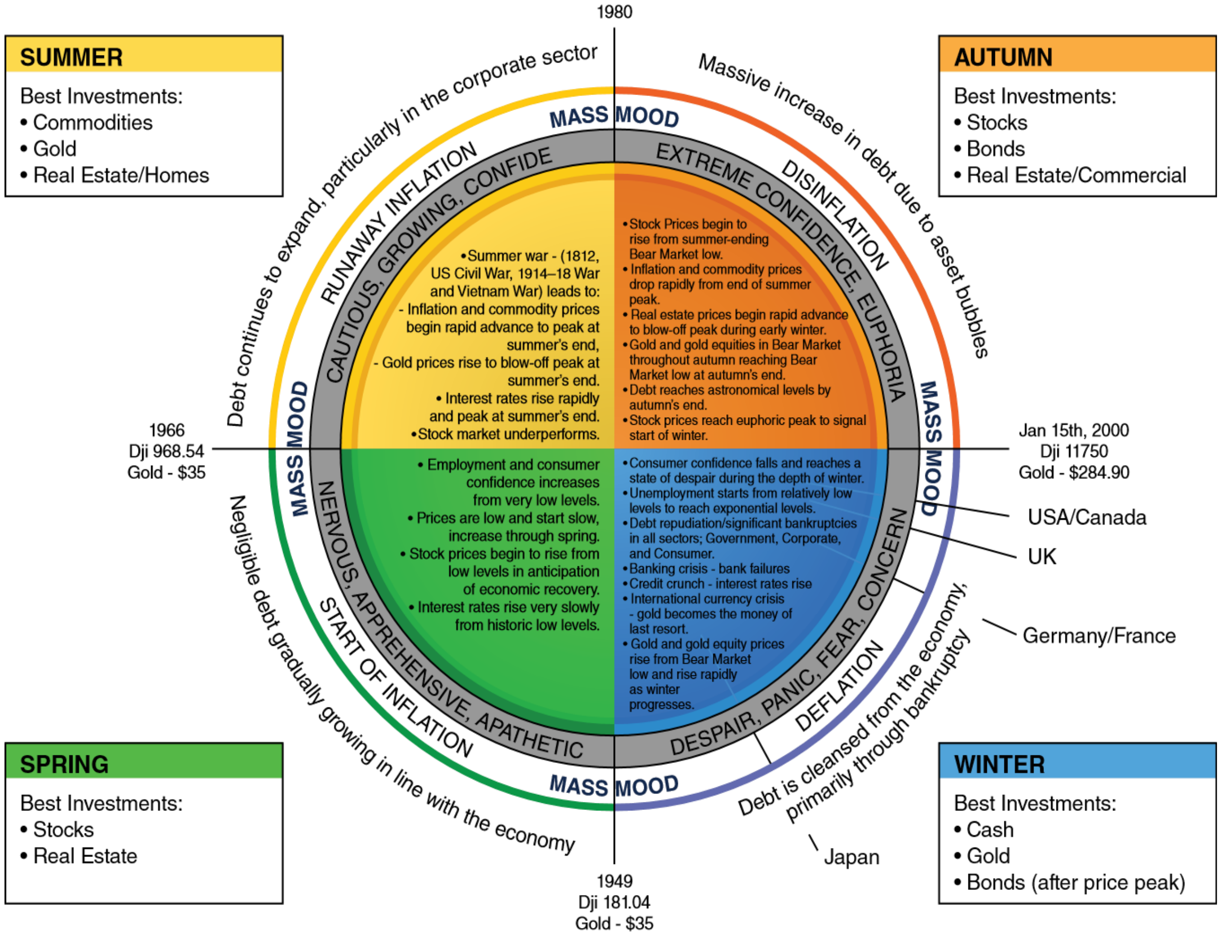



**Figure 3.1 The Kondratieff Cycle** *Source*: Longwave Group

## SUNWAY – RUNWAY INFLATION

Summerbeginswithanindicationthatthestockmarketisbooming.Whatiscontroversialabout summer is that market participants, investors, and the general public have growingconfidence in the market and in the economy. Inflation rises at the rate of change. In fact, by the end of summer inflation rates will rise. There is a growing increase in debt, but especially in businesses, not individuals. As inflation rises, the Federal Reserve responds and interest rates rise sharply. Debt is more expensive in the summer than in the spring and will sometimes threaten to reduce the economy. With inflation, the price of gold and commodities begins to rise. Stock markets are beginning to feel pressured and are beginning to falter. Summer ends with a low bear market in the stock market. The leading categories of investment assetsduring the summer are real estate, precious metals, and realestate.

**Autumn - disinflation**

Autumn begins with a slowdown in the stock market, rising interest rates, rising inflation, and an economic downturn. In the fall, confidence is high. I repeat, confidence is high. There is growth, almost overconfidence associated with happiness in the markets. Inflation is usually lowthroughouttheautumn.Thereisahugeincreaseindebt asbanks extendalargeamountof debt, usually to individuals and consumers, not businesses. Interest rates fall on inflation throughout the season. With declining interest rates, bond prices are starting to work much better. The best categories of goods you can have in the Autumn stocks, bonds, and retail and long-distanceassets.Autumncanlastlongerthanotherseasonsanditsdurationis15-20years. The end of Autumn is usually marked by a high market capitalization in the stockmarket.

**Winter - Deflation**

The onset of winter is marked by a high market capitalization. The stock market begins to crumble, leading to anxiety, fear, and panic. Self-esteem declines rapidly. The rate of change in inflation levels rises to a direct decline. With huge debts being extended to business and individuals, banks feel a sense of debt and almost no debt to anyone. Interest rates decrease, and then rise throughout the winter as Long-wave Economic Cycle 31 credit crunch follows. Then interest rates fall to 0% by the end of Winter. The big bear market starts in the stock market and all commodity prices go down as everyone looks to sell the stock. The best categories of assets you can have during this season are cash, gold, and bonds, but only after the debt is settled. This season could take a long time as banks and companies expand their capacity and work to reduce debt. Property prices fell below expectations. Winter marks the end of the cycle.

## Technological Variability - Construction on the Long Wave Cycle

Drs. Carlota Perez, author of Technological Revolutions and Financial Capital, 1 developed thisideaofalong-termeconomiccycleanddefinedhisframework.Histheoryisbasedonwhy theselong-wavecyclesoccur.Heexplainsthatthesewavesarisewhencollectionsofnewbasic substances are put together, allowing for the development of each of these new ways. This collection of innovations ultimately leads to technological change that leads the businesscycle to greater transformation. In addition, he charges that these cycles have marked patterns, attributes, and certain events. In his book, he goes through five technological changes of the last 200 years and the last is the Age of Information andCommunication.

Perez describes each of these cycles as surgery. Each surgery has two very different natural times: Installation Period and Period of Use. Typically, each operation takes 40-60 years and each interval takes 20-30 years.

Each era has two stages within it. The installation time has a Damage phase and a crazyphase. Posting Time has a Synergy phase and a Growth phase. Delivery and Delivery Times are separated by a milestone, something Perez called Turning Point. Among other things, this is where “crashes”occur.

## The Past Longwave Cycle – The Age of the Internet

In Perez’s book,2 she walks through five technological revolutions of the past 200 years with the last being the Age of Information and Telecommunications. This was the Age of the Internet.

If we went through the full long-wave cycle for the Age of the Internet, Perez started the cycle in 1971 with the advent of the microprocessor chip. It experienced its first phase (Spring) or irruption phase from the 1970s into the 1980s. Here’s where inflation began and where technological revolution started to gain momentum with the cluster of innovation.

ThenextphaseofthecyclewastheSummerphasefortheFrenzyphase,whichbeganin1990s. Duringthe1990stherewasgreatfeverandagreatmovementininvestmenttowardtheInternet.

We saw production capital and financial capital being deployed in massive rates toward many technologiesrelatedtotheInternetandtelecommunications.Thisiswherewesawadecoupling of financial capital and production capital. We started to see a bubble or a mania in public stocks that were Internet stocks or dot-com stocks throughout the 1990s. Price and valuewere decoupling. This continued until 2000 when the dot-com bubble popped. This event marked the beginning of what she calls the Turning Point for this market cycle – when there is a breakdown of the market.

Mostpeoplewouldsay2000wasthebeginningoftheTurningPoint,andthatitcontinueduntil roughly2008whenwehadthefinancialcollapseandGreatRecession.TheTurningPointphase can have many booms and busts and last for a period of time. We saw new laws enacted to address the new innovations of the Internet – laws that forced taxes to be paid by e-commerce companies, laws signed like the Consumer Financial Protection Bureau being created, the FCC's Net Neutrality (though it was under attack during the Trump administration), andmany other legislative items to affect this innovative market. The final milestone that completed the Turning Point is the Institutional Recomposition where laws and governance are enacted to address past problems. Corporations and businesses reform, reorganize, and recapitalize. I would say most would estimate that the Turning Point was completed in 2010 or so, this technological revolution. Though, I would point out that Dr. Perez thinks we are still in the Turning Point of the Age of Information as of2020.

ThenextphaseofasurgeistheSynergyphasewherethere'sarecouplingofproductioncapital andfinancialcapital.Productioncapitalisatthehelm,leadingwithproductiveusesoffinancial capital. Growth is coherent. In the Age of the Internet surge, we've seen rapid growth with companieslikesoftware-as-a-service(SaaS)companies,disruptorslikeAirbnb,Uber,andLyft, aswellasthecoreInternetcompanieslikeFacebook,Google,Amazon,andNetflix(alsocalled the FANGstocks,

## The Long-wave Economic Cycle

Many believe we entered the Golden Age for the Age of Information in 2009. For the next decade, we were in productive times for this long-wave economic cycle where production capital has recoupled with financial capital. Large gains were made within the cycle and the technologicalrevolutionmadebroadandrapidenhancementstotheglobalcommunity.Internet technology is ubiquitous. Global communications are both fast and cheap. An entire sector of the economy and telecommunications has been disintermediated as we no longer pay huge long- distance telephone callexpenses.

The Age of Information has entered its fourth phase, the Maturing phase of the Deployment period,theendofwhichwillcompletethefulllong-wavecycle.Duringthisphase,mostofthe useradoptionhashappenedasweareinthelaterstageofthetechnologyadoptioncycle.Capital deploymentinthatlaterstageandmaturityhastakenoverthefinaldecadesofthistechnological revolution.

The Golden Age was confirmed in part by the performance of the FANG stocks (Facebook, Amazon,Netflix,andGoogle)from2012to2020,whichoutperformedtherestoftheS&P500 by more than two times. Combined, these four stocks represent a total market capitalization of morethan$4trillion.Apple,whichwasn’tevenintheoriginalfourFANGstocks,hadamarket capitalization of $2 trillion in mid-2020 and was the world’s most valuablecompany.


Figure 3.2 FANG Stocks versus the S&P 500

# Moving in Cycles

Marketsandeconomiesmoveincycles.Theyoscillatelikewaves.Thisisdueinparttothefact that they are driven by human behavior. As investors and market participants, we react, which affects the market, which reacts, and it all continues in a volatile but predictableway.

Nothingaboutthefinancialmarketsfitsintoasimpleequation.What’simportanttounderstand asaninvestoriswhereyou’reatinaparticularcycle.Theunderstandingofcyclesisatool.As an investor, knowing your location and position within a cycle can be your compass to guide you in developing your investmentplan.

## .CHAPTER 4 –

## BITCOIN RISK & RETURN

The RBI issued its 3rd warning about trading in a virtual and digital currency like bitcoin, on Tuesday. On Wednesday, the charge of one bitcoin raised upto $ 12,000 in the US.

ItisnotthatanyonewasexpectingRBIcautioningtotriggeradesiretoconsumebitcoins.China advanced and restricted cryptocurrency trading anterior this year, but the trade proceeded to over the counter platforms, and the restrictions only created a temporary glitch in the bitcoin circle.

Ironically, when there are a lot of bitcoin circles, it attracts a lot of people to this circle.

At the moment, many hacks, robberies and scams are still out of the business of bitcoins. In Indian trading platforms, the number of end users doubles every 3 months. In actual fact, the speed of bitcoins has surpassed the broad margin, in India. As a result, there is an estimated 1520%increaseininternationalvalue;thevalueofonebitcoinwasaroundRsNinelakhsatthe Coin secure platform on Wednesday.

Mentioned the dramatic hike in bitcoin prices in the present year — less than $ 1,000 earlier this year , "Only invest that you can afford." In other words,

A crypto investor, Nitin Sharma says "There are a few different reasons why the average investor should not expose himself to cryptocurrencies. to inform the basic technology and the basicneedforsuchtokensorfunds.Asthesayinggoes,oneshouldnotinvestinsomethingyou do not understand, at least at a basic level. " Sharma, who officially founded the big company says it took him approximately four months to learn and create that understanding before investing.Onthecontrarythemajorityofnewfreshmemaresimplychasinginflation,whichis a very old feature of thebubble.

The sole fact that the regulation is unclear is the other danger. The buying as well as selling of Bitcoin in India is done on the basis of the permission because it is not vehemently prohibited. Do the norms of the RBI’s FEMA (Foreign Exchange Management Act) apply to overseas purchased bitcoin and later traded on the coast? Probably not, some lawyers are arguing, because FEMA is not talking about real money. In short, everything is gray. As long as Indian policymakers are concerned, as does The Great Republic of China, about the many Ponzi schemesthathaveemergedalongsidethebitcoinconvention,andrestrictthetradingofbitcoins platforms, traders may be introuble.

But on the contrary, with person like the head of the IMF making good declarations about various digital currencies and a huge economy like EL SALVADOR giving bitcoin legal sanctions, a direct restriction may not be possible. However, investors should enjoy the related regulatory risks, especially considering the lack of lucidity from the Indian regulators.Another attribute we require to enjoy is that cryptocurrencies are hard to appreciate. “While I am still committed to open space opportunities, it is difficult to think about testing these new crypto assets. With bitcoin, depending on whether it is thought of as 'digital gold' (stock market) or purchase currency (exchange method), you can come up with very different estimates of what could be profitable for it. future. Right now, it's just speculation, ”saidSharma.

Kunal Nandwani, CEO of Trade Solutions, a fintech company, is concerned about the spread of bitcoin, with the future launch of trading on major platforms such as CBoE and CME in the US. "Bitcoin was intended to be used as a decentralized peer-to-peer currency. The whole idea was to divide the provinces away from monetary and regulated financial systems. -Bitcoinwas founded? ” heasks.

In fact, some analysts have argued that a sharp rise in real money could outweigh its use as a currency; people may prefer to hold it in appreciation, rather than use it to purchase goods and services. Yes, this raises the question — if it is not the kind of money that is being bought by most consumers, then what is the point of inflation?

But despite the many uncertainties risks, bitcoin has also provided some traders the joy of earning 1600% profits over the past year. This seems to be the fastest thanks to each unit of time for any great investment opportunity; With that kind of reward, it is not surprising that people ignore the warnings around them.

Bitcoin refunds are distorted in all frequencies compared to a badly distorted stock return. Skewness rises from 0.80 daily frequency to 1.76 weekly frequency, and to 4.32 monthly frequency. Concomitant kurtosis is 15.21 everyday frequency, 10.25 frequency every week, and25.38frequencyeverymonth.Recoveryofbitcoinhasaexcessiveprobabilityofrecovering from daily returns whether it’s negative or positive. For instance, the chances of a "disaster" return 20 percent daily is about 0.5 percent; the chances of a “miracle” return 20 percent daily is almost one percent. The Ripple and Ethereum recurrence have alike features: well retained in all frequencies and have high kurtosis; as well as high probability of negative returns and extraordinary daily profits. Bitcoins are more flexible than traditional currencies. In managing therisksoffinancialinstruments,itisimportanttoassessthelikelihoodofunusualandextreme events.Wewilluseexcessvaluetheorytomodelstatisticallysuchcasesandcalculatemeasures ofextremerisk.ThedistributionofthehighestvaluewillbecomparedtothereturnBitcoin currencies and will be compared to the traditional currencies in the currency. We will also calculate the risk measures, the amount at risk and the expected shortfall of Bitcoin.

| **PLATFORM** | **N0. OF CRYPTO** | **PRICING STRUCTURE** | **FEE TO BUY BITCOIN** |
|---|---|---|---|
| eToro | 43 | 0% commission + spread | 0.75% |
| Binance | 500+ | 0.1% per trade | 0.1% |
| Coinbase | 130+ | variable transaction fee + spread | varies (fee as low as $0.99) + variable spread |
| Webull | 25 | 0% commission + 100bps (1%) markup | 1% markup |
| Kraken | 80+ | 1.5% transaction fee+ variable payment processing fee | 1.5% fee +additional fee based on the payment method |

Table 2- Accentuates the various platform, including thenumberof crypto, its price structure and transactionaside.

Many Bitcoin transactions are spread across different types of purchases. from focusing on an online shopping system, paying with a credit card and buying other necessities.

To attract users' interest in increasing bitcoin transactions, a number of gift and bonus models were made in the Bitcoin trading process. Many ways to give gifts like credit card pieces with another merchant.

Statistical definitions include rate, lowest, highest value and the standard divergence of each andeveryinvestmentinstrument,namelybitcoin,exchangeratereturns,goldreturnsandstock returns during the 2011–2020 survey. The return of Bitcoin has the highest rate of 18% compared to the return from other investment tools. Additionally, the standard deviation of bitcoinrecoveryisasignificant61.08%comparedtootherinvestmenttools.Thebitcoinranges from-38.87%to470.88%.Thehighestcorrelationisfoundinthereturnstockandtheexchange rate for returns (−0.602). If stock returns increase, the exchange rate of return will be indubitably lower. In other words, the stock price index will rise, if the INR exchange rate is strongenough.ThestrengtheningoftheINRexchangeratehascontributedtothegrowthofthe domestic economy so that investors can invest more in stocks. Therefore, stock recovery also increases when there is an increase in INR exchange rate. Meanwhile, bitcoin does not show a correlation with other investment instruments shown with a consolidation matrix value of less than5%.Thisfigureshowsthatbitcoinrecoveryisnotaffectedbyotherinvestmentinstruments such as the exchange rate, gold and stock returns.

An review of the volatility of the returns acquired from each of the investment instruments of thestockreturn,exchangeraterecovery,goldrecoveryandbitcoinreturncanbeevidentlyseen in figs 3 to 6. Each investment tool shows a different return volatility. The lowest standard divergence is the exchange rate of 2.58%, while the highest standard divergence is Bitcoin 61.08%. i.e investing in bitcoin has a much higher risk compared to other investment tools. Some planting tools have a low risk of between 2.6% and 4.7%. Investing in the foreign exchangeratehasamuchlowerriskcomparedtootherinvestments.Stockandgoldinvestments havesimilarrisksofapproximately4.2%to4.7%.Awiderangeofvolatilityhasbeenfoundin the investment of return on Bitcoin, particularly in the years 2012 to 2014. In the year 2013, the recovery of bitcoin reached a very high level where the recovery increased from 10-70%. However, the return was significantly reduced to (- 5%) in 2014. It implies that investing in bitcoin gets a higher profit and a higher risk compared to other investmenttool.


Fig 3– Stock return 2010 to 2022. Source: data processing 2022.

The last 10 year of stock market recover at 9.2% over the last 140 years. However In the mid of 2010 and 2020 that the S&P 500. Has performed better than. Lost in. Average historical data. It gives. 13.6% of annual return. over the last 10 years

But the return of the stock market we focus today may be very distinct from the return of the stock market over the past 10 years. Certainly there are a number of reasons why we may see a return greater or less than average.The index includes over 500 major

There are so many stock market indicators, including the S&P 500.

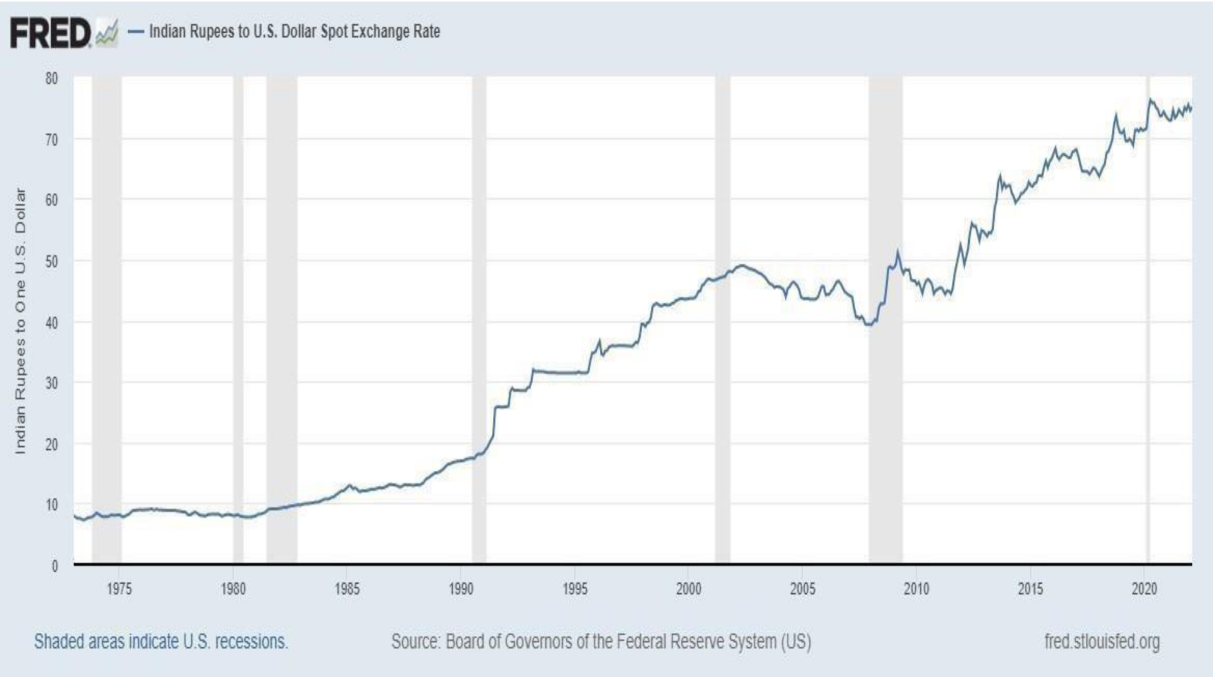



Fig 4 – Exchange rate of Indian rupees to U.S.D.

The Banker's bank, i.e. the RBI dropped a benchmark repo rate of 4 % at meeting in February, emphasising it maintained a monetary policy stance as long as it was a necessity to support economic stabilityandhelpinreducingthenegativeimpactofthepandemic,whileensuringthatinflationremains within thetarget.

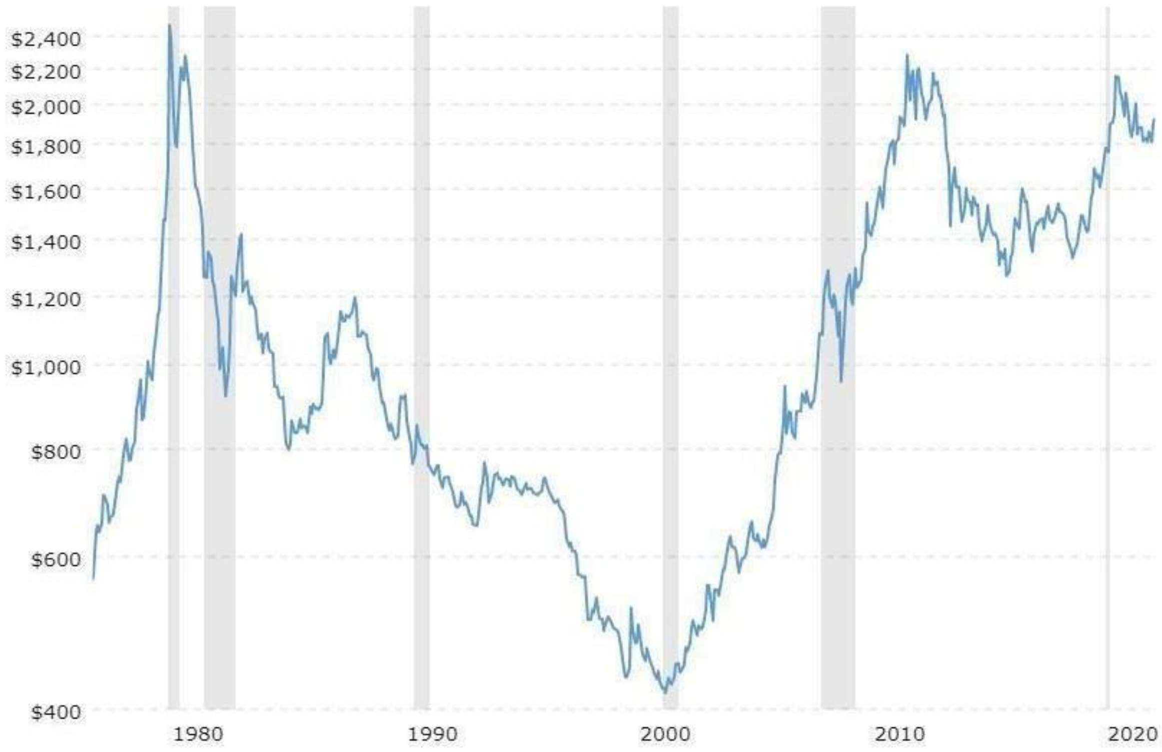



Fig 5- Gold return 1980 to 2020.

Between1971and2019,goldaveragereturnrateof10.61%,whichwasshortlyafterthereturn ofassets,withanannualreturnrateof10.69percent.Themid-yearreturnforgoldin2020was 24.6 %, and it was second highest return on commodity prices for that year.

Gold, like all other precious metals, can be used as a counter-inflation barrier, inflation or inflation, although its effectiveness as it has been criticized; historically, it has never provedto be as reliable as a fence tool. The unique feature of gold is that it has no automaticrisk.

The finances of all major countries are under tremendous pressure due to severe government shortages.Themoremoneyisconcentratedintheseeconomies-themorecapitalizedprintsare

- the less money thereis.

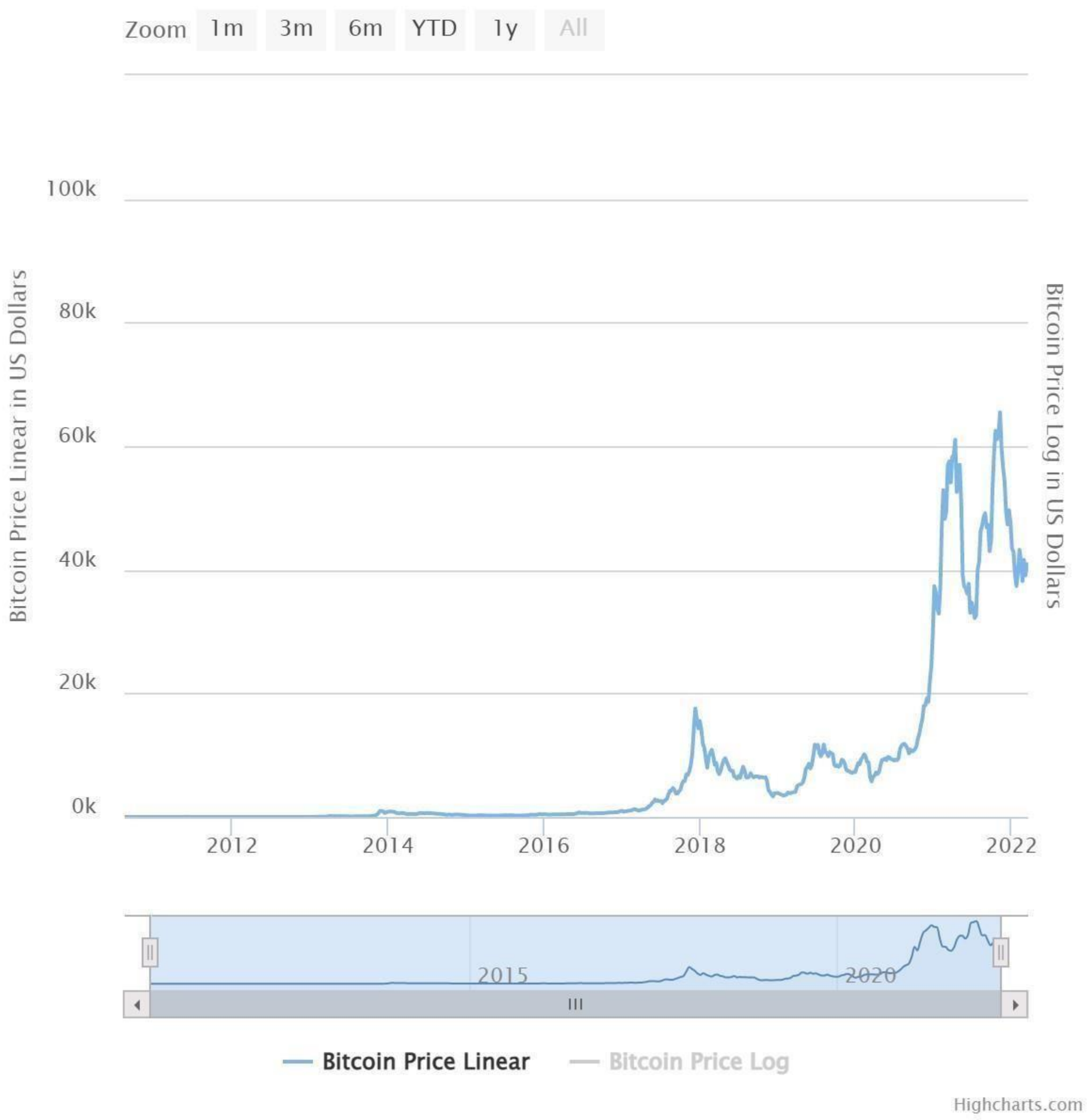



Fig 6- Bitcoin return 2012 to 2022.

Between the years of 1971 and 2019, gold had an average return rate of 10.61 percent, which was shortly after the return of assets, alongwith an annual return rate of 10.69 percent. The mid-year return of gold in 2020 was 24.6 percent, and this is the second highest return on commodity prices for that year.

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In 2020 the economy was shut down due to the COIVD-19-Bitcoin scandal and resumed operations. The cryptocurrency started the year at $ 6,965.72. The closure of the epidemic and subsequent government policy put investors' fears about the global economy and accelerated theriseofBitcoin.FinallyonNovember23,Bitcointradedat$19,157.16.ThepriceofBitcoin reached just under $ 29,000 in December 2020, up 416% from the beginning of thatyear.

Bitcoin took no time in 2021 to break price record it had in 2020, surpassing $ 40,000 in 7th of January 2021. In mid-April, Bitcoin prices reached a new high of more than $ 60,000 as Coinbase, a cryptocurrency exchange, appeared publicly. The institution's interest rate continued to rise in price, and Bitcoin reached a hike of more than $ 63,000 on April 12,2021.

In the summer of 2021, its prices dropped by 50%, hitting $ 29,795.55 at the lowest level on July 19th. Autumn saw another bull in September, prices dropping to $ 52,693.32, but a sharp drop to $ 40,709.59 in about two weeks.

Nov. 10 2021, Bitcoin also reached its highest value, $ 68,990.90. At the beginning of December 2021, Bitcoin dropped to $ 49,243.39 before further fluctuations as volatility uncertainty continued to irritate investors and the emergence of a new variant of COVID-19, Omicron.

Bitcoin &Tra ditional Assets ROI(v s USD)

| YEAR | BITCOIN | GOLD | S&P 500 |
|---|---|---|---|
| 1 year | +228% | -13% | +32% |
| 2 year | +301% | +15% | +53% |
| 3 year | +638% | +43% | +56% |
| 4 year | +1,195% | +35% | +81% |
| 5 year | +7,706% | +29% | -103% |
| 6 year | +16,892% | +56% | +112% |
| 7 year | +8,077% | +32% | +128% |
| 8 year | +47,188% | +31% | +162%- |
| 9 year | +386,618% | +7% | +215% |
| **10year** | **+437,171%** | **-0.25%** | **+277%** |

*Source:*Messario,io,bitcoinchart.com

Table 3- show Bitcoin outperformed traditional assets market. **In brief-**

- The correlation between Gold and Bitcoin prices is at recordhighs.
- Bitcoin and the S&P 500 index is also highlycorrelated.
- These correlations have historically swung back and forth from positive tonegative.

# CHAPTER 5

# COMPARISON OF BITCOIN, S&P , GOLD.

Goldisusuallyconsideredafenceagainstspeculativeinvestments.Rightnow,Bitcoinpriceis highly in correlation with both gold and stock prices. Why is BTC good for bulls and bears at the sametime?

As governments struggle to revitalize their economies while simultaneously halting the spread of coronavirus, hard commodities—those commodities that are mined or extracted— have become popular investments for experts and amateurs alike, who fear a possible loss of their purchasing power.

Gold,ofcourse,isthecommodityparexcellencewhenitcomestostoringvalue.Infact,during the coronavirus pandemic, the precious metal reached an all-time high in price and is still climbing. Its trading activity has been increasing since last year, but the massive printing of money by the US government has extended the pricespike.

In fact, over the last two months, gold and Bitcoin price correlation has increased to a record high, which means their price movements have become more indistinguishable

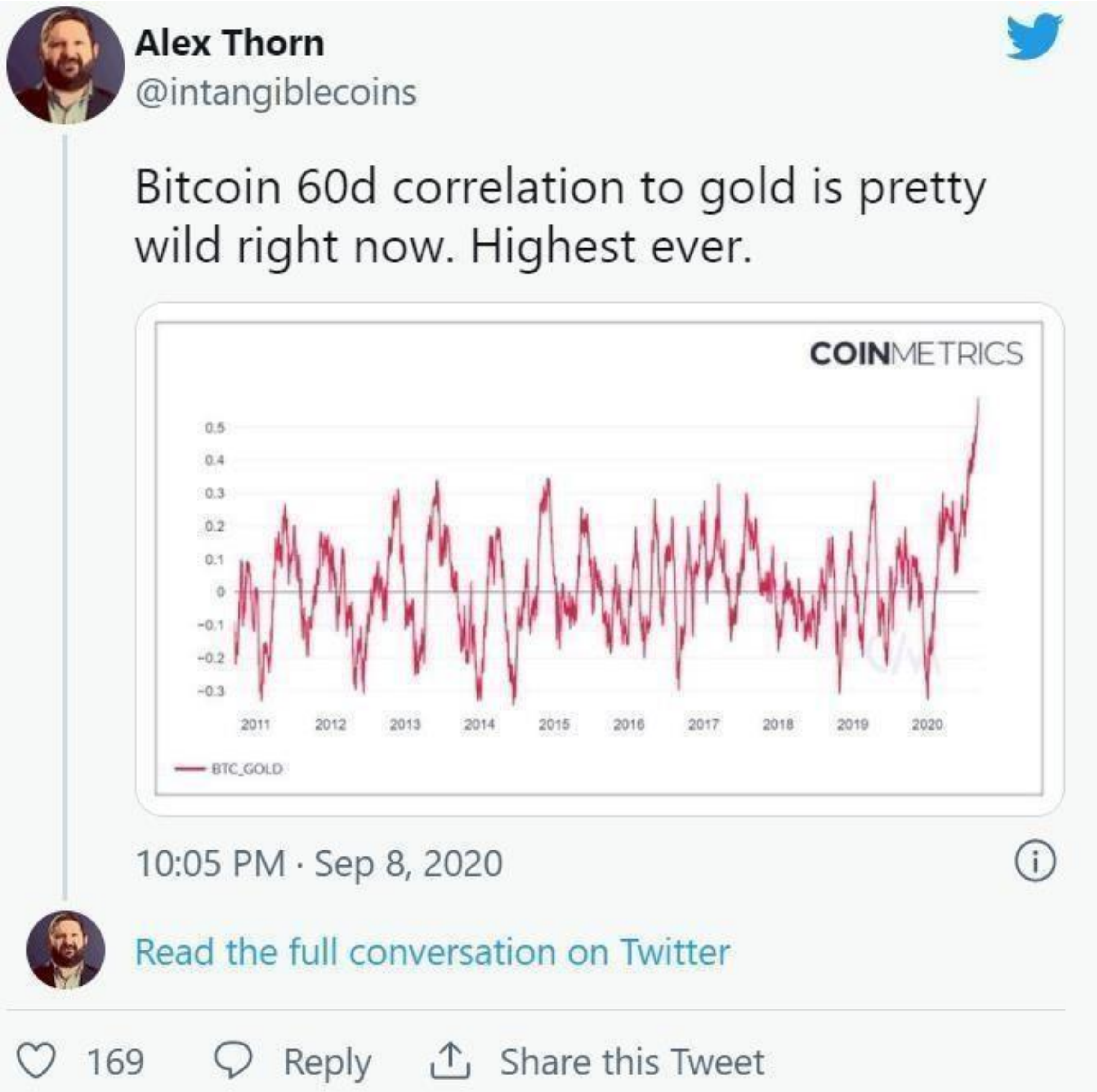


Fig 7- Tweet from Alex Thorn showing correlation with gold.

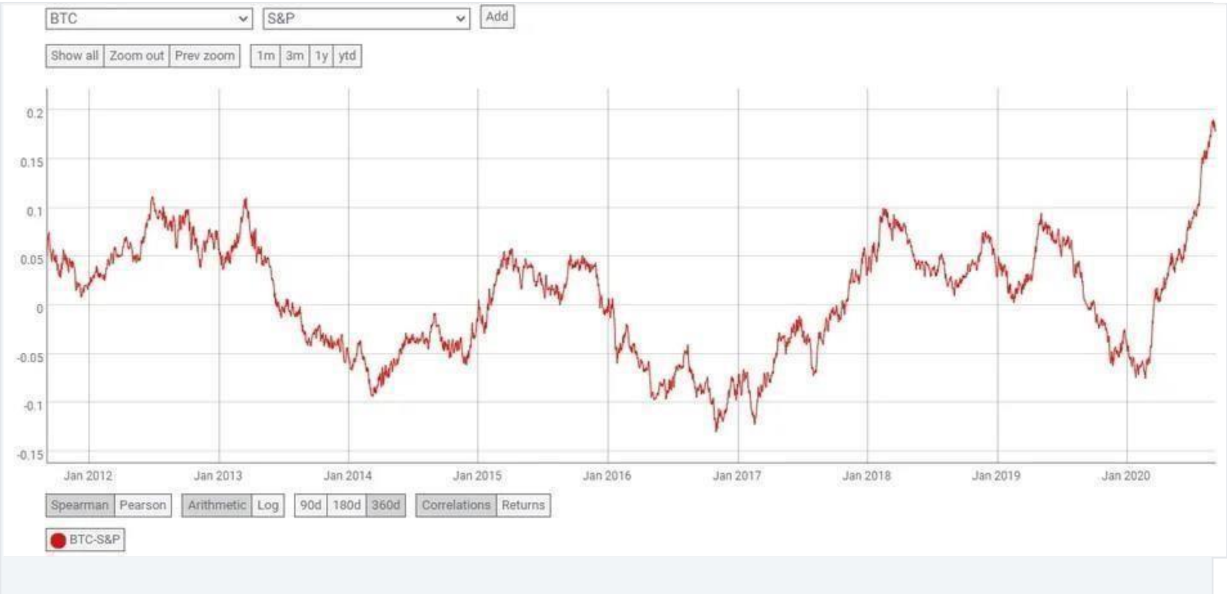


Fig 8- Historical correlation in pandemic of bitcoin and s&p 500.

Although they were previously separated during the gold rush, Bitcoin and the S&P 500 also found a historical connection during the violence.

The S&P 500 is an indication of how well American top companies are performing. Market balances are affected by a number of factors, including economic trends and geopolitics.

In the end, charts are nothing more than lines of descriptions of the past. And, in the past, the relationship only escalated to return to the wrong place, as both charts show. And no matter how good the analysis is, no one can see the future. However, with each passing day, it seems safe to say that Bitcoin will be a part of it for investors.

important difference: the price of Bitcoin, aka 'Digital Gold', has just exploded. But the price of real gold did not.

Over the last past days the price of Bitcoin has risen by about 12% ahead of the next half-day event.Ithit$10,000severaltimesinthepasttwodaysbeforedowntoitsactualprice,$9,600.
According to market the gold price rising from 1,700dollor per ounce to 1,718dollor.
The difference is even greater when you look back over the past month. Gold inflation was slow but steady, bringing in just over 4% profit over the course of the month, while Bitcoin increased by about 34% during that period.

Itisimportanttounderstandthatinorderforthefinancialsystemtoremainintactafixedvalue does not occur conceptually or can be specified. Goods and

Purchasing services will change over time as new technologies introducing new goods to replace old ones, and as conditions of provision once

the demand for different goods will vary over time. One of the main functions of the monetary unit will serve as the unit of measurement for economic assets, to whom

the value is constantly changing. It is therefore impossible to measure satisfactorily the price of money accurately, though over time, studies

like Jastram's could be an indicator of the overall medium trend of exchanges to hold its value, especially when compared to other currencies.

Recent data from the United States, focusing on the last two centuries, which has seen rapid economic growth over time set in Jastram's

data, shows that gold has risen in value in terms of assets, their prices have risen dramatically in US dollars. This is perfect

associated with gold being the hardest currency available. Easy to maintain increasing the availability of all goods than gold, so over time, all of these

some goods will be much more valuable than gold, resulting in a rising gold purchasing power over time.

# CHAPTER 6
# REGULATION AND FUTURE OF BITCOIN

El Salvador made an official tender for Bitcoin on June 9, 2021. It was the first country to do so, and it can be used for any transaction that businesses accept.

Bitcoin is not regulated as a legal tender, but you can invest in Bitcoin. You can also trade in bitcoins, You cannot exchange money as a payment, in my opinion in my research. In 20 years 2022. The new financial bill has passed. Our RBI Finance Minister said that you can Invest in Bitcoin by giving 30% of tax to the government. And soon, India will launch their own digital currencies. Maybe. It will be regulated as a legal payment in future when India's. announced there. their own digital currency.

**Bitcoin Futures**

The future of Bitcoin is available on the Chicago Mercantile Exchange (CME). There are futures contracts that allow the investor to purchase a single contract, equivalent to five bitcoins. Currently, there is only one future contraction regulatedandthatofbitcoin.Thisproductdoesnotallowtheinvestortouseforce. Therearealsoplansintheetherfuturescontractworkalthoughitisnotavailable from this writing. Investing in futures contracts requires that the investor be authorizedandabletoobtainanassetaccountandhasthesamerisksthatareoften associated with theasset.

**Crypto Options and Exit**

There are a number of options for investing in crypto assets (pun intended). Options are available through the Chicago Board of Options Exchange (CBOE), theonlyregulatedvehicleforinvestorsintheUnitedStates.Therearealsooption contracts available from a firm like LedgerX, which offers a full set of bitcoin options contracts in a controlled environment. All trading options apply forceto aninvestmentproduct.Theinvestormustbeanaccreditedinvestorinordertobe able to use these investmentvehicles.

**Crypto Venture Funds**

There are also crypto venture funds that specialize in recent investments within the crypto space. These funds are invested in companies to gain both equity and tokens in crypto businesses. Ventures investments typically have a term of 7 to 10yearsanda5to7yearclosure,andinvestorsshouldnotonlybeaccreditedbut also eligible. A qualified investor owns assets of up to two million or more, excluding his or her primaryresidence.

**Crypto Hedge Funds**

There are many crypto hedge funds focused on investing in crypto liquid assets. My company, TRADECRAFT Capital, is one of the crypto hedge fund funds. Theseinvestmentvehiclesareanindependentinvestmentthatcanbemanagedby a limited number of investment partners. There are many different investment strategies that can be used for a crypto hedge fund, such as in a traditional hedge fund.Othersincludeinvestmentstrategiessuchas:flexibility,arbitrage,longterm only, long-term bias, long / short, quantity, choice, and preference for opportunities. Like crypto venture funds, crypto hedge funds require investors to beprofessionalinvestors.Cryptohedgefundsusuallyclosefor12-24monthsand are more liquid than their business counterparts, although both have long-term investment periods. Also, a qualified investor has a total value of $ 2 million or more in assets, excluding his or her primaryresidence.

**Direct Crypto Asset Investment**

The purpose of this book is to educate investors and to create a strong debate on direct investment. The main way to invest in crypto assets is direct investment. Opening an account in a trade like Coinbase or Gemini and investing or trading incryptocurrenciesgivesanyonethatopportunitytogainexposuretocrypto.This methodwilltakemoreeducationbecauseyoucanlearnalotaboutinvestingin crypto assets. Because of its low regulatory requirements and its high costs, as well as its ability to profit from a few investment strategies, direct investment offers opportunities that would not otherwise be available.

# CHAPTER 7

## CONCLUSION

We have made a proposal for an electronic transactions system without relying on reliability. We started with a standard framework for digital signatures, which provides strict patent control, but is not complete without a double check. To address this, we have developed a peertopeer network using work credentials to record a public history of quickly statistically significant activity so that the attacker changes when reliable nodes control most of the CPU power. The network is strong with its uncomplicated simplicity. Nodes work simultaneously with minimal communication. They do not need to be identified, as messages are not transmitted anywhere and need to be delivered with the best possible effort. We are in a new wave of long waves of this technological change and we are ahead of time. As the famous investor Mark Yusko puts it, “The greatest wealth is created by being the fastest investor in innovation. To make that investment requires belief in something before most people can understand it. You will be laughed at, ridiculed, and criticized for your disagreement. And, it really is worth it! ”

Crypto assets are the building blocks of the new digital financial system and the Independence Period.AlthoughAI,IoT,androbotsmakeupthebulk,blockchaintechnologyisbeingusedas the crypto assets of a completely new type of system - a system that allows and promotes a greaterdegreeofautonomy.YoucansearchforcomputerresourcesinAmazon’sAWSsystem today, but it is not the same as designing and deploying a collection of independent contracts thatworkwithoutpermission,24/7,ofpublicinfrastructurethatcanuseandexpand,allwithout human intervention. As the world becomes more independent, it will become increasingly difficult to compete without them. If you wait too long, you may run out oftime.

Crypto assets are subject to change. They return more participation in the investment process because the owners / owners of these assets need to be involved in their governance. Participation is not necessary, but I think you will find that if you choose to do so, the rewards are great. I mean both in terms of a sense of return and a sense of belonging. The whole world will change in the next 40 years to take advantage of this important opportunity. After reading this book, I hope you understand why the opportunity exists, what the future holds, and how you as a beginner investor can reap the rewards by investing in crypto assets.References


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# CHAPTER 8

# APPENDIX

## QUESTIONNAIRE1.

**1.Why Do You Want to BuyCrypto?**

**2. What Is Your RiskTolerance?**

**3. Where — and How — Do You Plan to BuyCryptocurrency?**

**4. Which Cryptocurrencies Would YouBuy?**