

Cryptocurrency, Bitcoin and the Future Analysis

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Abstract: Cryptocurrency, an encrypted, peer-to-peer community for facilitating virtual barter, is a era advanced 8 years ago. Bitcoin, the primary and maximum famous cryptocurrency, is paving the manner as a disruptive era to lengthy status and unchanged economic charge structures which have been in area for plenty decades. While crypto currencies aren't possibly to update conventional fiat currency, they might trade the manner Internet-related worldwide markets have interaction with every other, clearing away boundaries surrounding normative country wide currencies and alternate rates. Technology advances at a fast rate, and the fulfillment of a given era is sort of completely dictated through the marketplace upon which it seeks to improve. Crypto currencies can also additionally revolutionize virtual change markets through growing a unfastened flowing buying and selling device without fees. A SWOT evaluation of Bitcoin is presented, which illuminates a number of the current activities and actions that might have an impact on whether or not Bitcoin contributes to a shift in monetary paradigms.

Keywords: Cryptocurrency, Bitcoin, Encrypted, Currency, Bitpay, Exchange Rates

Introduction

Bitcoin, the arena's maximum not unusual place and widely recognized cryptocurrency, has been growing in popularity. It has the identical simple shape because it did while created in 2008, however repeat times of the arena marketplace converting has created a brand new call for for crypto currencies a great deal extra than its preliminary showing. By the use of a cryptocurrency, customers are capable of alternate price digitally without 1/3 celebration oversight.

Cryptocurrency works at the principle of fixing encryption algorithms to create specific hashes which are finite in quantity. Combined with a community of computer systems verifying transactions, customers are capable of alternate hashes as though replacing bodily foreign money. There is a finite quantity of bitcoin so one can ever be generated, stopping an overabundance and making sure its rarity. Water, no matter its requirement as a lifestyles giving material, is usually ordinary as being unfastened or of little value due to the fact it's so abundant. If water turned into rare, it might be greater treasured than diamonds. Value exists for bitcoin due to the fact its customers have agree with that in the event that they be given it as payment, they might may want to use it someplace else to buy something they need or need (Kelly, 2014). As lengthy because the customers keep this faith, the valued item may be anything. Bitcoin's price exists in its atmosphere a great deal with inside the identical manner that wampum, a seashell, turned into the foreign money of the land for Native Americans (Kelly, 2014). Bitcoin does now no longer have intrinsic price like gold in that it can't be used to make bodily gadgets like rings which have price. Nevertheless, price maintains to exist because of agree with and acceptance.

Strengths

Bitcoin has electricity with the aid of using layout to make it a possible forex that has accelerated it in fame over the years, extra considerably the constant restrict of bitcoin so one can exist. Bitcoin may be mined with diminishing returns each 4 years till the most quantity of bitcoins are reached: a complete of 21 million (King, 2013). This issue of Bitcoin is crucial for its cost. Due to the constrained quantity of bitcoins, it's going to by no means grow to be inflated from an overabundance of bitcoins. Also, bitcoin and different crypto currencies are normally seemed as being blanketed from inflation originating from country wide authorities adjustments or restrictions (Magro, 2016). This creates a "secure haven" for buyers to position their wealth into, because it normally does now no longer lose cost primarily based totally on inflation. Bitcoin is quick displaying its electricity as a shelter in opposition to inflating country wide currencies. However, as is the case with maximum commodities, the fee can differ wildly primarily based totally on many different outside factors. The aggregate of call for for a secure haven alternative and its fee volatility helped Bitcoin to grow to be the high-quality appearing forex of 2015 the usage of the United States Dollar Index (Desjardins, 2016). This method helped Bitcoin turn into the very best valued forex within the complete global on the cease of final year. This isn't anyt any small feat in a international financial system with powerhouses like China and america walking the landscape.

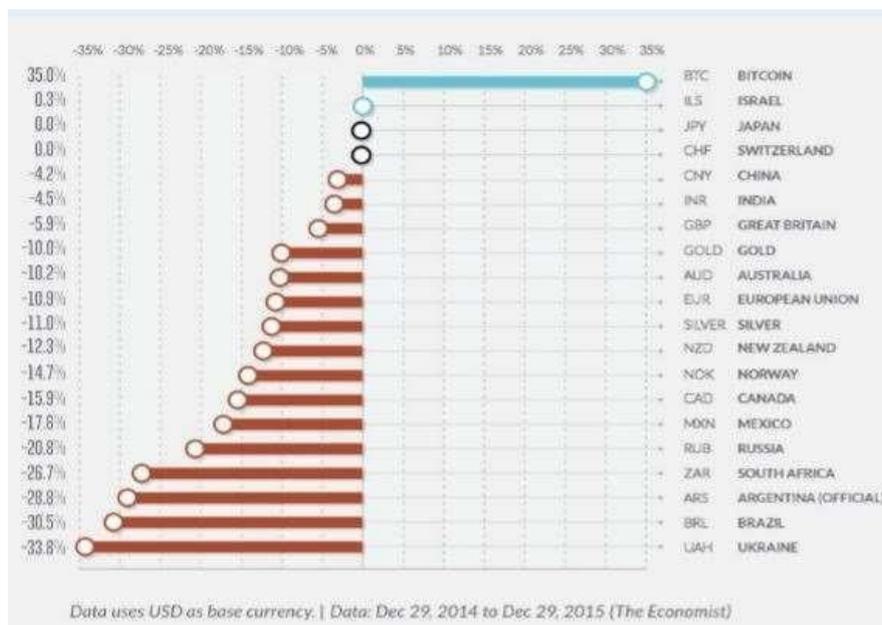


Figure 1: The Best Performing Currency of 2015 *Source: Desjardins, J. (2016, January 5)*

South America has visible a big boom in bitcoin transactions, growing 510% from 2014 to 2015 (Bitcoin: A New Global Economy, 2015). Argentina is a hotbed for elevated cryptocurrency utilization because of its extraordinarily excessive inflation price and excessive populace of unbanked residents (Magro, 2016). In the past, Argentines could convert their foreign money into US greenbacks to keep their cost. However, Argentina has currently placed regulations on what number of US greenbacks its residents can convert. As a result, each a black marketplace for getting USD at a better fee and elevated bitcoin adoption has arisen (Magro, 2016). The call for Argentines to maintain their foreign money cost has made itself very apparent, and crypto currencies are outstanding felony cars to fulfill that call for.

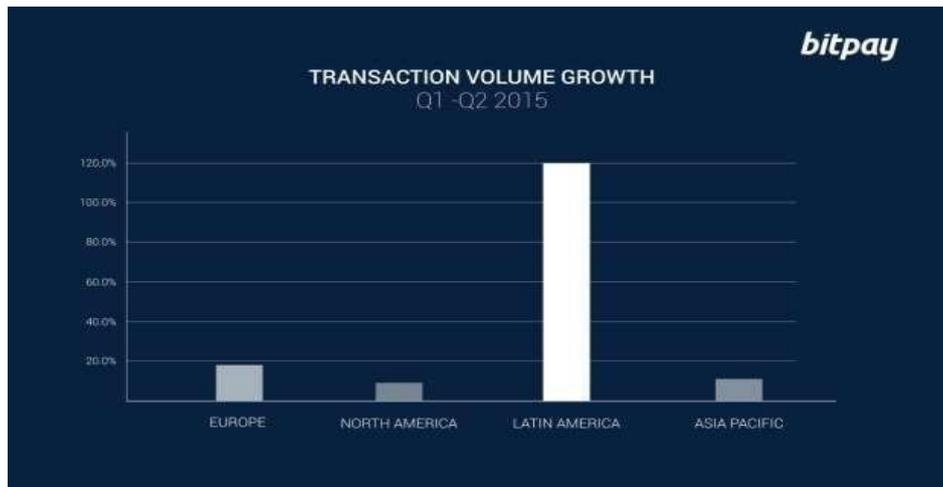


Figure 2: Bitcoin Transaction Volume Growth
Source: Bitcoin: A New Global Economy (2015)

Argentina's state of affairs isn't always an remote case. Over and over again, buyers have visible international markets crash (commonly for political reasons), and crypto currencies growth in fee and usage. The United Kingdom has currently voted to go away the European Union, popularized with the aid of using the term "Brexit". Before the vote, the rate of bitcoin dropped nearly 15% (Bovaird, 2016). After the United Kingdom voted to go away, the rate skyrocketed from \$550 to \$650 an afternoon later. Inversely, the world's globally traded markets noticed a large drop in fee as buyers misplaced self belief in what the Brexit vote might suggest financially. Cryptocurrency is powerful in this example as being the handiest foreign money that may be bought and offered expeditiously and nonetheless be used worldwide. Other fiat currencies may be exchanged, however that hobby calls for traveling a cash alternate in person, and that cash can't be spent except it's far regularly occurring regionally. For example, an American couldn't quick alternate USD for Japanese Yen, then use that foreign money to make a buy. Maybe they ought to go to a foreign money alternate, which may also require using to the closest global airport. Secondly, as soon as they've acquired the foreign money, they might have any manner to apply the Yen as it isn't always regionally depended on and identified foreign money. This state of affairs isn't always the case for Bitcoin (or some other cryptocurrency). To buy bitcoin, one handiest wish to installation an internet account with an internet alternate, make their request, and the transaction is generally finished in minutes. Once the bitcoin is of their virtual wallet, they might be capable of make purchases from lots of carriers worldwide. In this example, Bitcoin is the greater possible answer as short access and go out for foreign money which can quick benefit fee. Other fiat currencies may also come to be more potent and be greater desired, however they can't compete with cryptocurrencies' agility. Cryptocurrency is the disruptive generation that might be driven into reputation with the aid of using buyers who truly need a safe haven from sinking international markets. A growth in Bitcoin float will encourage supplier reputation to house consumer wishes. Theoretically, this will be a cyclical effect. As greater carriers undertake cryptocurrency generation, greater customers will use it to capitalize on its benefits.

Weaknesses

Bitcoin has pretty some inner weaknesses which might be a part of its layout and can't without problems be modified. The public ledger or block chain use methods that allow each consumer to see each transaction. There is semi-anonymity, in that the proprietors of bitcoin wallets can't be diagnosed outright, however it's miles barely nerve-wracking for a few ability adopters. The public block chain is shared with all customers, because of this that that it's miles liable to assaults because of clean access (King, 2013). So far, the Bitcoin community has been subjected to multiple "strain tests" that have been basically DDoS assaults (Hileman, 2016). These "tests" have been released through exchanges and miners to try and show a factor approximately Bitcoin's layout: that the community can't manage a excessive load transaction rates. The mere truth that the individuals of Bitcoin's operation can carry the community right all the way down to show a factor is an

unlucky layout function of the code. These components of Bitcoin's layout are indispensable to operation, and can't be changed. Adoption through reluctant customers ought to be in spite of those attributes. Bitcoin has advanced a questionable recognition via latest occasions. Stories like Silk Road can paint a terrible photograph of virtual foreign money in general, now no longer simply Bitcoin. Silk Road turned into an internet market buried within the dark-net, which allowed hundreds of drug sellers and almost 1,000,000 clients to make unlawful drug deals. Bitcoin turned into their number one method of transaction, because of the shortage of presidency monitoring and semi-anonymity. It ran from 2011 to 2013, and racked up almost a thousand million USD in sales (Bearman, 2015). People need criminals to have justice meted in opposition to them, so the semi-anonymity characteristic of bitcoin appears terrible to regulation abiding citizens. Without fantastic advertising closer to the fee of semi-anonymity for ordinary customers, the overall consumer base will assume that cryptocurrencies are most effectively utilized by criminals. Cryptocurrencies have additionally advanced recognition of getting questionable protection. Mt Gox, brief for Magic the Gathering Online Exchange, turned into the world's number one bitcoin trade till it went bankrupt after it turned into robbed through hackers in 2011 of about 460 million USD (McMillan, 2014). The CEO and essential programmer, Mark Karpeles, turned into now no longer the usage of model manipulate for brand spanking new code. He additionally might permit worm and protection fixes to languish for weeks (McMillan, 2014). These protection flaws and oversights allowed hackers to skim bitcoin from the trade. This breach significantly dropped Bitcoins fee whilst customers bought their bitcoin for worry of it getting stolen. Ethereum, any other shape of virtual foreign money, simply currently suffered a comparable shape of robbery to the music of a 50 million USD hack (Price, 2016). These hacks are normally focused at massive holders of cryptocurrency that don't hold their protection requirements as much as date. They are the primary motive that the fee of those currencies plummet, and do the maximum harm to the photograph of cryptocurrency. Until destiny businesses who trade cryptocurrency apprehend how protection flaws can cause those assaults, those occasions will preserve to avoid adoption. Investors are starting to realize that the bitcoin community has begun to stabilize, and instantaneously returns on funding aren't guaranteed. The supply code makes fixing the set of rules greater tough beginning in June 2016, growing the value of bitcoin mining. This is known as a "halving event", and it cuts the quantity of bitcoin back to miners through half. This ought to efficaciously push out 25% of the bitcoin community this is walking older pc hardware, as it might value greater to function the machines than might be earned from mining (Kar, 2016). This shift within side the mining network ought to make the community much less stable and greater susceptible to attack. It additionally makes it much less possibly for brand spanking new miners to go into the community because of the better overhead required and restrained returns on mining. s the halving occasions preserve, most effective the biggest miners will exist till all the bitcoin has been mined.

Opportunities

Cryptocurrency is in a completely unique function as a forerunner in a likely transformative generation to lengthy status monetary systems. By its very nature, it could fill gaps in contemporary monetary technology and be capable of assist remedy conventional banking issues with the aid of using being a peer-to-peer gadget. Napster, every other peer-to-peer gadget, converted the track enterprise with the aid of using slicing out the center man (Kelly, 2014). Transformative technology begins with the aid of using fixing a particular trouble in an enterprise. For instance, crypto currencies are poised to assist remediate the issues associated with unbanked consumers. Significant quantities of the populace in growing international locations are unbanked. In Latin America, 60% of six hundred million populations don't have any get entry to to financial institution accounts (Magro, 2016). Bitcoin's generation permits for people to change forex without having a 3rd depended on birthday birthday celebration, like a financial institution, to supervise the transaction. All this is had to use Bitcoin is a cell phone, which 70% of Latin Americans do have get entry to to (Magro, 2016). Due to bitcoin's ad-hoc networking capability, customers can alternate bitcoin with every different with the aid of using scanning QR codes displayed on their telephones published out with the aid of using the utility. This is a without a doubt specific option to a trouble that has existed for decades for a few people. This could perpetually boom because the person base grows, so the call for for higher cryptocurrency community and programs will come to the forefront. There is an widespread marketplace for cappable builders to create those programs, as this generation should have an effect on any enterprise that is predicated on a depended on third-birthday birthday celebration clearing gadget (PwC, 2015).

Any builders who boom usability via utility and GUI enhancements to bitcoin could be very a hit. Bitcoin's development into turning into a transformative generation is pushed with the aid of using its cappotential to remedy lengthy status issues, mixed with a supportive and developing network of builders and customers. Businesses are starting to see the fee in the use of cryptocurrencies for global transactions, specially while transactions want to arise fast in reaction to an emergency. Cryptocurrencies are totally placed to remedy this trouble way to the rate and simplicity of transaction withinside the peer-to-peer gadget. Money may be stressed out internationally, however usually arriving days after being dispatched and now no longer for the overall quantity (Team, 2016). The transaction may be hit with any quantity of unexplained charges because it crosses borders, making it hard to ship an appropriate quantity to every other commercial enterprise. A suitable instance of this sort of emergency want is an internet organisation that's laid low with a denial-of-provider assault and is seeking to get instantaneously safety from a community safety organisation (Team, 2016). In this scenario, pace is of transaction is of the essence, for each minute that the organisation's internet site is down, earnings are being lost. Cryptocurrency has a chief benefit over conventional currencies way to its agility in making rapid peer-to-peer transactions, especially in global commercial enterprise-to-commercial enterprise scenarios. Internet marketplaces were thriving and are proper contenders to conventional brick-and-mortar stores. Amazon.com has grown to a point that appears nearly unexpected. They have even started to hire "on-call for" transport drivers, who use their personal in my view owned car to supply well-known packages (Saito, 2016). This sort of boom suggests an try to similarly tighten manager of the organization's logistics costs, which enlarge exponentially with elevated commercial enterprise. Ebay.com already makes use of a paying gadget this is much like Bitcoin referred to as PayPal, and has been very a hit in the use of it to facilitate all purchases made on its site. Silk Road become every other instance of a thriving on-line marketplace, albeit it's very unlawful nature. It related customers and dealers who in general used bitcoin to finish transactions. This market confirmed how a virtual forex can join customers and dealers without lots interference with the aid of using presiding governments and nonetheless succeed. Online purchasing is thriving, and bitcoin is poised to increase its attain with green and clean bills for each companies and customers. General cause on-line searching for people accounted for almost 23 percentage of transactions processed with the aid of using Bitpay within side the 2nd region of 2015 (Kasiyanto, 2016). Cryptocurrency has the benefit over conventional card-primarily based totally for the seller in that it removes the ones charges. International legal guidelines concerning taxation were exceeded recently, developing validity for cryptocurrency as a mainstream device. Laws concerning the taxation of cryptocurrencies are required earlier than virtual forex will be taken into consideration a without a doubt legitimate shape of transactions. Towards the give up of 2015, the European Court of Justice introduced that it regarded bitcoin transactions as exempt from fee-delivered tax (Hileman, 2016). Steps like this could notably boom cryptocurrency flow. Some customers could refuse to apply forex without understanding how it'd have an effect on their tax statements, irrespective of what nice mild wherein they're regarded.

Threats

Bitcoin has pretty some hurdles to clean for consumer attractiveness to emerge as widespread. The cost fluctuations that plague cryptocurrencies places doubt in users, in addition to investors. Ultimately a restricting aspect in cryptocurrency is wellknown attractiveness. [PWC]. Value fluctuations lessen accept as true with that a consumer's cost could be retained on a each day basis, restricting religion withinside the currencies common worth. In a survey accomplished via way of means of PwC, 83% of these surveyed had little to no familiarity of bitcoin (PwC, 2015). The loss of significant possession of cryptocurrencies manner that any try to remediate this advertising trouble the use of classified ads ought to theoretically assist the making an investment company's competition. This isn't a super scenario for a advertising plan. Cryptocurrencies have additionally visible fraud and theft, usually because of defective machine setups via way of means of change companies. These hacks usually make the news, and may without difficulty persuade the layman that they may be hazardous places to place their money. There is likewise a massive hole in legal guidelines that cowl the usage of cryptocurrency. As lengthy as crypto currencies continue to be in a place now no longer usually protected via way of means of law, consumer attractiveness could be limited. User's want to accept as true with that any transactions the use of crypto currencies are prison and binding. Markets and governments are gradual to react to the brand new technology. Ultimately, all of those elements restriction consumer's accept as true with in bitcoin and cryptocurrency.

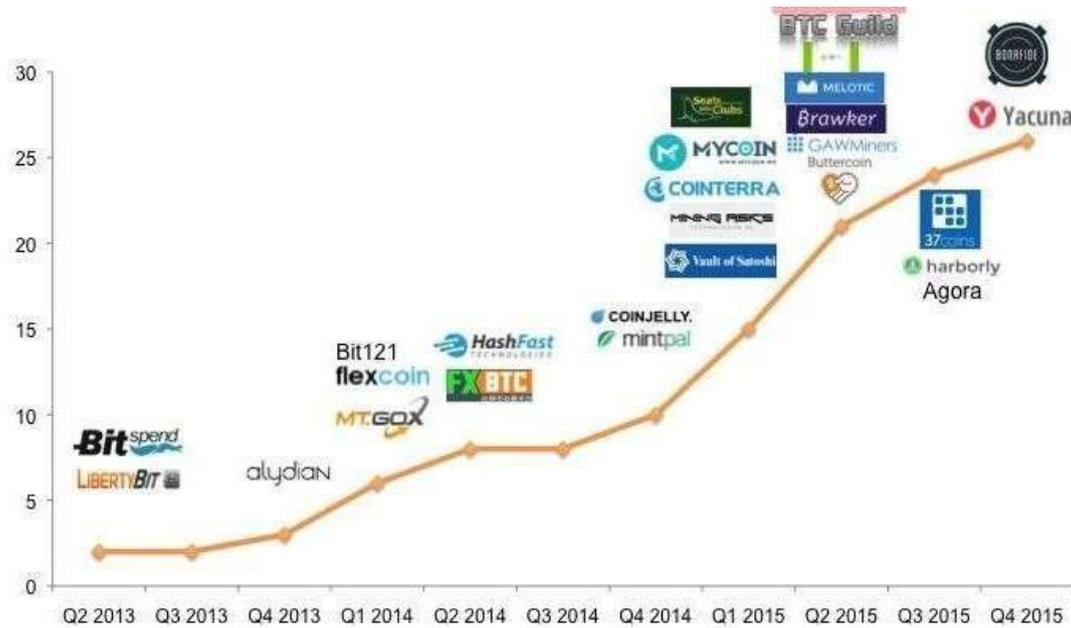


Figure 3: Bitcoin ‘Deadpool’ Grows to 26 Startups
 Source: Hileman, G. (2016)

There also are competition to crypto foreign money which might be trying to offer an opportunity to virtual foreign money. Apple is one of the principal competitions with their product Apple Pay. They are leveraging their infrastructure and hardware to provide customers the cap potential to price their debit or credit score playing cards related to their iTunes account with their telephones. Traditional credit score card businesses like Visa and MasterCard are thankfully becoming a member of ApplePay’s infrastructure as are allowed to hold their fees (Gerber, 2015). Bitcoin will continually have a hard time competing with those family names. PayPal has been very a success because the eBay replacing system, and will doubtlessly be moved into cell charge. Companies like Apple, Google, and Amazon have whole advertising budgets with a foothold within side the cell software marketplace, giving them a large gain over Bitcoin’s relatively small time players. Mobile purchasers need to have the ability to shop for matters with telephones directly, and bitcoin could have a difficult time rallying collectively as a network to conquer out competition. Another severe hazard to crypto foreign money is the maze of US guidelines that could want to be traversed earlier than mainstream consumer acceptance. The US authorities has but to even classify what kind of asset bitcoin is, in an effort to save you maximum marketplace members from adopting crypto foreign money-primarily based totally enterprise models (PwC, 2015). Crypto foreign money may be categorized as a security, capital asset, commodity, or a foreign money, and every could have a exclusive impact on how bitcoin is adopted. International perspectives of bitcoin range via way of means of country however appear to be regarded definitely primarily based totally on Bitpay’s evaluation of transactions. In Europe, transactions have reached an all-time excessive at 102,221 consistent with quarter (Patterson, 2015), which can be the reason guidelines being surpassed concerning bitcoin and crypto foreign money. Bitcoin transaction has grow to be exempt from fee delivered tax via way of means of the European Court of Justice, efficiently spotting it as a valid method of charge in Europe (Perez, 2015). This method ensures that bitcoin transaction will now no longer be taxed in Europe. While top notch information for European bitcoin customers, different fundamental markets are nonetheless lacking critical law concerning bitcoin taxation. Legislation within side the United States ought to negatively have an effect on how bitcoin transactions are processed, turning in a intense blow to legitimacy as a foreign money.

Conclusions

Crypto forex appears to have passed beyond the early adoption section that new technology experience. Even motor automobiles skilled this phenomenon. Bitcoin has started to carve itself a gap marketplace, that may assist develop crypto currencies in addition into turning into mainstream; or be the primary reason of it failing. Crypto currencies are nonetheless of their infancy, and its miles hard to look if they may ever discover

authentic mainstream presence in global markets. The Bitcoin network is striving to push into the mainstream thru innovation and fixing vintage problems. Other styles of crypto forex have already emerged and feature received followings in their very own, and every barely one of a kind from Bitcoin and arguably as valid. Some countries like Iceland have even started to begin their very own country wide crypto currencies (Hofman, 2014). It viable that the destiny holds an area for crypto forex as a primary forex solution, and Bitcoin could be instrumental in paving the manner for the ones currencies to flourish. The European and Latin America markets are exploding with Bitcoin transactions, signifying authentic validity. Further subjects to discover concerning Bitcoin and crypto currencies are pretty numerous. Extensive research ought to be executed at the monetary results of Bitcoin's impact on lengthy status fiat forex performance, and examine the effects to international locations which are starting to undertake country-backed crypto currencies. The capacity for crypto forex to carry out micro transactions can also additionally permit it to bridge an monetary hole that conventional country backed currencies could now no longer be capable of solve, however calls for a far deeper marketplace and monetary evaluation to determine. Also, the block chain era that acts as Bitcoin's spine has ability makes use of in different ways, including clever contracts (Hileman, 2016). These contracts are programmed bills that arise whilst a hard and fast circumstance occurs. Predetermined fee contracts are generally performed through a whole accounting branch of a company, making this an incredibly exciting subject matter of in addition transformation. Lastly, crypto forex is a made from the use of cryptography to create virtual belongings. The frontier of virtual belongings become popularized through the song industry's shift to a cloud-primarily based totally infrastructure. This frontier remains pretty new and unexplored, in particular populated through one of kind styles of media. Other styles of virtual belongings can also additionally come to be as famous as song and crypto forex. Eight years ago, virtual cash become absolutely unheard of, and the author of Bitcoin unmarried handedly modified that. Cryptology, the foundation technology below bitcoin and all crypto currencies, can be the mechanism at the back of the frontier for brand new and thrilling virtual inventions.

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