$CRYPTOCURRENCY

Crypto 101: Introduction to Cryptocurrency

Digital Money: What exactly is “cryptocurrency”?

The Concept:

The original cryptocurrency, Bitcoin, was created in 2009 as a form of digital money. The term “crypto” describes the complex cryptography programming code behind the technology while “currency” denotes its function as money. Cryptocurrency, as we know it today, is an electronic monetary system that employs some form of cryptography so that this digital money can be transferred between users securely. Typically, cryptocurrencies are initiated by a group of developers and are not issued or governed by any institution.

As cryptocurrency is increasingly recognised and adopted around the world, it is becoming a form of universal money that people can exchange to and from their domestic currency. Imagine using one standardised currency across the world – that is the idealised state of cryptocurrencies. However, with so many different cryptocurrencies popping up today, will we eventually reach the goal of one single universal currency or will cryptocurrencies flop terribly in the end?

The Game:

There are four different cryptocurrencies in the game besides Wonga, our in-game money, which is also the fiat currency in Banana Republic. Players can buy and sell the different cryptocurrencies using Wonga, and their goal is to maximise their net worth in Wonga at the end of the game.

Decentralisation: Why is cryptocurrency such a big deal?

The Concept:

One of the key characteristics of cryptocurrency is that it is decentralised. This means that the currency is not issued and controlled by any government, bank, or central institutions. All the transactions are also stored online and transparent to everyone. The benefit of decentralisation is that it takes power away from the centralised institutions so users are not restricted, monitored, or controlled in the ways that they use money. For countries with corrupted governments who print money loosely, cryptocurrencies may actually be more stable and reliable than their domestic currency.

However, with no institutional backing or support, it would mean that users are liable for the security of their own coins and are not protected at all if they lose their money. Cryptocurrencies have also become a vehicle for money laundering, which draws concerns that investors are inadvertently facilitating black market trades and funding terrorism.

Nonetheless, the technology underlying cryptocurrencies (distributed ledger technology) has much wider applications besides as a form of money. Decentralisation creates a system that allows peer-to-peer exchanges without an intermediary, so the middleman in many business transactions can potentially be cut out with this technology. Many industries have since hopped onboard the cryptocurrency bandwagon in the name of innovation.

The Game:

Any player can attempt to mine the four cryptocurrencies so as to create and own the new coins. Cryptocurrencies are not issued or controlled by anyone. There is transparency of information of the existing supply of coins and the ownership of coins, so players can assess for themselves how valuable these coins are.

Mining: How are new cryptocurrencies created?

The Concept:

While money is typically minted by the government, cryptocurrencies are created when users mine for them. This is similar to the physical mining of gold and minerals where miners have to put in an effort to dig the quarries so as to uncover the hidden gold. Likewise, cryptocurrencies are created when miners do their work, and they will receive the newly created coins as a reward.

What cryptocurrency miners do is to use their computers to solve complex cryptography problems. The algorithm is extremely complicated and can only be resolved by trial and error with a computer randomly plucking in answers (also called hashes). Many miners are trying to solve the same problem concurrently and only the first miner who successfully gets the answer will be rewarded with the newly minted coins.

Anyone can become a miner so anyone can participate in the creation of the new coins. That is why people often say that there is no fundamental backing to support the coin – anyone can print their own money and this will eventually be regulated or clamped down.

The Game:

When players attempt to mine the four cryptocurrencies, they have to play a probability game to draw the *Success* Hash Card. This mirrors the chance element of mining, and the more energy they devote to mining, the higher their chances of success. When a player successfully mines for a cryptocurrency, he is rewarded with the newly minted coins.

Transaction Fee & New Coins: How are cryptocurrency miners rewarded?

The Concept:

The purpose of mining is not just about getting people to use their computers to solve cryptography problems. What happens when miners resolve the cryptogram is that they are checking whether the balance of coins in all the new transactions tally with the total balance of coins previously accounted for. That is to say, all exchanges of the cryptocurrency and its total supply are being checked.

This is the validation work that miners do when they solve the cryptogram, which is similar to the role of auditors who checks and accounts for the financial balance in a company. Miners are responsible for the creation of the coins and for maintaining the ledgers. Hence, mining creates new coins, but that is meant to incentivise and reward miners for the audit work that they do.

For most cryptocurrencies, there is a maximum supply of coins that will be created. As more coins are being mined, the number of coins rewarded decreases until no new coins will be issued. This produces a scarcity effect where the limited supply makes the cryptocurrency valuable. It also attracts miners to be early adopters since they will be rewarded with more coins at the start, which may become valuable when the cryptocurrency is increasingly adopted.

When no new coins are created, the incentive for miners to do the validation work will be a small percentage of the total volume of transactions audited. In a sense, the mining reward of newly minted coins will be gradually replaced by transaction fees, with the assumption that there will be many transactions in future and the remuneration fees will be worthwhile for miners.

The Game:

Players who have mined successfully are rewarded with either the newly minted coins, the transaction fees, or both. Transaction fees are only awarded if there are active Transaction Cards for the particular coin that was mined. As the game progresses, players will find it increasingly difficult to mine for new coins. Mining will be rewarded with lesser coins and more transaction fees.

Exchanges: Where can you buy or sell cryptocurrencies?

The Concept:

Cryptocurrencies are bought and sold on coin exchanges. These exchanges are like our money changers whom we visit to change from one currency to a different one. There are over 1,000 different cryptocurrencies available in the market.

As there is no basis for pricing cryptocurrencies, their prices are based purely on market supply and demand. Most cryptocurrencies are programmed to have a finite supply, while the demand for cryptocurrencies is largely speculative. Their demand is dependent on their perceived usefulness, the likelihood of acceptance and adoption of the currencies, and their expected growth value.

Traders, gamblers, and investors alike, their goal of buying a cryptocurrency is to wait and hope that its price value appreciates and then sell it for a profit.

The Game:

The Market Board contains information about the price and supply of the coins and is where all the trading action happens. Prices of the cryptocurrencies are influenced by Rumour Cards, and also by the buy and sell actions of the players.

Uncertainties: What are the dangers of cryptocurrencies?

The Concept:

The riskiest aspect of cryptocurrency is that it is not supported by any institution and is currently unregulated. This means that users and speculators bear the risk of holding these coins that may be worth a lot or may be worth nothing. As no one knows where the market is headed or whether stricter control measures will be enforced, they have to endure the massive price fluctuations meanwhile.

Prices of cryptocurrencies are based on the best guess of investors and traders. As such, big players with a lot of money can manipulate the market by buying or selling a huge volume of coins, and thereby influence the market sentiments with big price movements. Furthermore, unscrupulous users have made use of the newness of the technology and the ignorance and greed of the less savvy investors to make profits.

For example, there are many scam coins on the market. These are usually pyramid schemes with a seemingly feasible business model that promises huge returns. When the cryptocurrency has amassed a substantial number of users and its price increased exponentially, its creators and earliest adopters will sell off their coins for profits. Prices will then plummet and the late, ignorant investors will be left stranded with worthless and useless coins that were bought at a premium. Other fraudulent methods include hacking the cryptocurrency systems and using phishing websites.

Many people thus label the cryptocurrency market as the “wild wild west”. Not only are you subjected to rapid and unpredictable price changes, scammers and thieves lurk at hidden corners to try to steal your coins. It is highly advisable to do your homework and understand what cryptocurrency is about before buying any of them.

The Game:

At the end of the game, at least one of the four cryptocurrencies will be declared a scam coin. This reflects the market situation where most cryptocurrencies are unlikely to survive, and only the legitimate coins will last. The Event Cards at the end of each round also replicates the uncertain environment and forces players to adjust their gameplan accordingly. These serve as a poignant reminder for players to tread carefully should they choose to buy any cryptocurrencies.

Jobs & Economy: What is the impact of cryptocurrency on society?

The Concept:

Cryptocurrency deviates greatly from what we know as money today. As a form of universal money that is decentralised and transparent, cryptocurrencies threaten to replace traditional financial intermediaries. For example, cryptocurrency is a cheaper alternative for e-commerce payments dominated by the likes of MasterCard, Visa, and PayPal who charge between three to five per cent in transaction fees. Overseas money transfers via Western Union, SWIFT, or multiple bank transfers that usually takes days and around 10 per cent in fees can be shortened to minutes and made cheaper with the use of cryptocurrency.

As a technological advancement, cryptocurrency is often touted as the next Industrial Revolution or Internet Revolution. Cryptocurrency is an innovation that transforms our economy by changing the way we transact. Whether it is the exchange of money, service, or physical goods, there will no longer be a need for a trusted intermediary.

As a result, a host of new job opportunities have arisen. Governments and private companies looking to innovate can employ distributed ledger technology, also popularly known as Blockchain, into their workflow. New job positions from developers to marketers, which leverage on blockchain, have since opened up. Cryptocurrencies have had positive impacts on society despite the negative news of a potential financial bubble and many investors losing their money to the cryptocurrency market.

The Game:

The cryptocurrency economy has created opportunities for new types of jobs. Players can employ different Expert Cards that are representative of the new economy, which include managment, coding, IT security and media related jobs.

Rumors: What impacts do news reports have on cryptocurrency prices?

The Concept:

The cryptocurrency market is generally riskier than most other types of investments. This is because there are no definite ways to quantify the price of a cryptocurrency yet. It is mostly speculation at work. On one hand, it signifies a new technological revolution that may be extremely profitable for early adopters and investors. On the other hand, there are plenty of downsides and risks that investors have to stomach while the technology and its uses are still being developed.

Prices are also heavily influenced by news and media. For example, a false rumour of the death of Ethereum's co-founder sent prices dropping by 20 per cent, and news of regulations in China caused a month-long panic with the market crashing by over 60 per cent. Potential investors should do as much homework as possible to learn about the technology and understand the risks involved. Most importantly, they should invest only what they are prepared to lose.

The Game:

Rumour Cards are the pieces of news that can affect prices of the various cryptocurrencies. When placed faced up on the Rumour Tracks, it immediately leads to a corresponding price change. On the other hand, the faced-down Rumour Cards creates an asymmetry of information for different players and allows them to make speculative or manipulative plays, just like in the actual market.

This educational article was contributed by Hansel, who aims to introduce players to basic concepts about blockchain technology. Hansel is a freelance writer who blogs about cryptocurrencies, blockchain, and distributed ledger technology. For more information visit www.herzigansel.com.

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