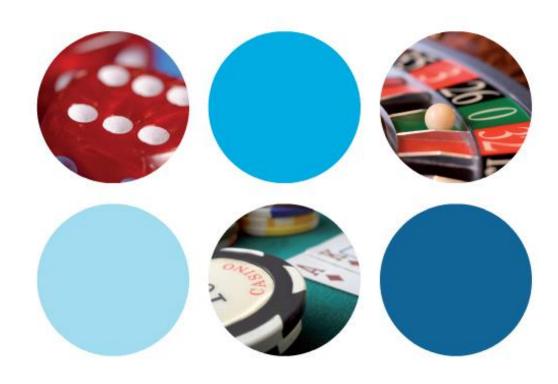


Coining it? Use of cryptocurrencies in gambling

GBGC Whitepaper on crypto-gambling July 2021



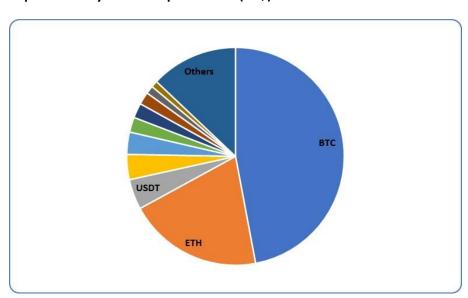
Introduction

The concept of Bitcoin and an associated decentralised payment system was first published in 2008, with the blockchain being initiated in January 2009.

In 2010, the first commercial transaction was recorded, when goods were purchased in exchange for Bitcoin. But it was not really until 2011 that commercial transactions became more widespread.

There are almost 2,700 active coins¹ (July 2021). But only 75 coins have a market capitalisation greater than US\$ 1 billion.

The market capitalisation of the top 50 coins amounts to US\$ 1,385 billion, but the top 3 coins – Bitcoin, Ether, Tether – accounted for 72% of that amount.



Top 50 coins by market capitalisation (US\$)

Gambling has often been an early adopter of new technologies, be it for communications or payments, and it has been the same for cryptocurrencies.

The first crypto-casinos began launching in 2013 but it was not always a smooth process. One early adopter of Bitcoin was the Malta-licensed casino Vera & John. It announced in January 2014 that it would begin accepting Bitcoin as a method of payment. By May that same year, however, the casino had removed Bitcoin as a payment option. The reason for this u-turn on cryptocurrency was regulatory concerns about Bitcoin from the Malta Gaming Authority².

This early episode encapsulates several of the issues that continue to influence cryptocurrencies and crypto-gambling today.

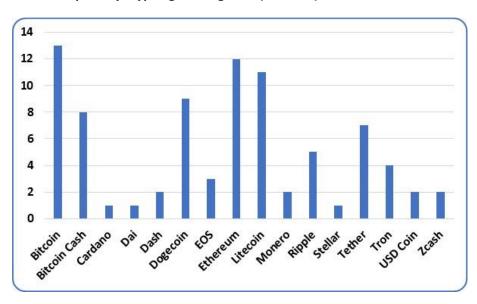
¹ https://www.investing.com/crypto/currencies

² https://coinbet.com/news/vera-john-no-longer-accept-bitcoin-63

Crypto-gambling in 2021

In 2021 there are several hundred gambling websites which accept cryptocurrency as a method of payment. Bitcoin is the dominant coin that is accepted, followed by Ether and Litecoin.

Coins accepted by crypto-gambling sites (selected)



Source: GBGC analysis

The Crypto Gambling Foundation currently has 14 members³. Five members are licensed in Curacao, whilst the remaining members do not display any information as to their licensing jurisdiction.

The mantra of the Crypto Gambling Foundation is "provably fair". It aims to bring greater transparency to online gambling and the process of random number generation⁴:

- Formerly, these random numbers were generated solely by the host of a game, leaving complete control in the hands of operators. Participants had to trust the host not generating results in favour of anyone. Casinos operating on these merits caused conflict of interest for those seeking a fair gambling experience.
- Due to lack of transparency, the essence of provably fair gaming was born. Corresponding concepts provide a way for both the operators and players to contribute to randomisation, which in turn removes any possibility of deception or cheating.
- The foundation of fair gaming algorithms were laid by pseudorandom number generators, utilising seeds which determine the outcome of wagers.
- A seed shall be equally influenced by players and hosts, meaning that the result of each bet at
 a provably fair casino is a team effort. The house is no longer in complete control of
 randomisation.

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³ https://cryptogambling.org/

⁴ https://cryptogambling.org/articles/provably-fair/

- Hosts shall provide transparency and proof of authenticity by revealing their actual seeds at the end of each game. Anyone in possession of a host's commitment may verify the immutability of the corresponding seed.
- Bets shall be reproducible once the host seed gets revealed. Players can constantly audit the behaviour of hosts by comparing random results calculated by a host and themselves.
- Proving that the outcome of a wager is computed fairly and transparently should be performed by anyone at any time. We strongly believe in widespread use of provably fair algorithms throughout the gaming industry.

Interest in cryptocurrencies is growing and the buying and selling of coins is becoming more mainstream, with the associated opportunities and risks.

Gambling using cryptocurrency is also benefitting from this widening ownership of various coins. Its growth could also be viewed as a reaction to the increasingly intrusive policies being implements by gambling regulators, which require ever more checks on customers, their spending and identity. This white paper will assess the opportunities, threats and issues involved.

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Crypto-Gambling & Regulation

- Many of the crypto-gambling websites assessed for this report did not make it clear on their website where, or if, they held a gambling licence.
- Curacao was the most common jurisdiction for those operators which stated they held a gambling licence.
- Choosing to operate without a gambling licence saves the companies money because of lower regulatory and compliance costs.
- There could be the perception that because crypto-gambling is 'provably fair' and more transparent with verifiable transactions, there is no need for a gambling licence.
- But using cryptocurrency is certainly gambling with 'money or monies worth', so most
 jurisdictions would class it as gambling and expect an operator to hold a licence, and comply
 with associated regulations like KYC, AML and social responsibility.
- The claim might be that crypto-gambling is 'provably fair', but things can still go wrong and, when they do, customers need to know who they can turn to for help. Unlike credit card payments, with which consumers get some protection from the card issuer, a feature of cryptocurrency transactions is that they cannot be reversed.

Case study: Ethercrash and the missing funds

In October 2020 the crypto-gambling site Ethercrash⁵ claimed that US\$ 2.5 million in digital currency had been stolen from its wallets. Allegations on social media claimed it was an 'inside job' because the funds were taken from a 'cold wallet' – one that was not supposedly connected to the internet.

But with no regulator seemingly overseeing the operator, and with little information about the company behind it, customers have few options to pursue.

Based on the website's very basic Terms of Service, Ethercrash seems to operating from Costa Rica.

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⁵ https://www.ethercrash.io/

Curacao

Curacao has historically been viewed as a jurisdiction with less rigorous regulation and oversight than other e-gaming jurisdictions because of its master licensor set up. It has become a favoured jurisdiction for crypto-gambling companies that wish to obtain a licence of some kind.

But the regulatory situation in Curacao is changing in 2021.

In its 2017 Annual Report, the Dutch Kansspelautoriteit criticised the gambling industry on the island, especially online gambling operators who illegally target the Dutch market. In December 2018, the government announced that the online gambling sector will be supervised by the Gaming Control Board. Previously, the regulator has only supervised land-based venues.

The COVID-19 pandemic has caused Curacao's finances to shrink and Curacao asked the Netherlands for help. The financial help the Netherlands is giving is conditional upon Curacao cleaning up both its land-based and especially online gambling sectors:

- By 1 March 2021, Curacao has to have a new licensing system for online gambling. The current system of master and sub-licences will be abandoned. Also, a new, independent regulator has to be established.
- By 1 September 2021, Curacao has to ensure that its gambling operators "act in accordance with the laws and regulations of the countries they target", meaning that, in theory, operators will not be able to target markets that prohibit gambling.
- Curacao is also obliged to ensure that all gambling operators pay the requisite taxes.

If the new regulations are implemented as foreseen, then crypto-gambling sites currently licensed in Curacao will have to bring in greater compliance measures. Otherwise, they will likely have to leave the jurisdiction.

Isle of Man

The Isle of Man is an e-gaming jurisdiction which has embraced both blockchain technology and cryptocurrencies.

- Digital Isle of Man launched Blockchain Isle of Man, a hub dedicated to growing the blockchain sector in the Island.
- The Isle of Man Financial Services Authority ("IOMFSA") published guidance (September 2020)⁶ setting out its position regarding cryptoassets and tokens issued using Digital Ledger Technology ("DLT"), such as blockchain:
 - The IOMFSA looks to substance rather than form: it will regulate entities undertaking
 activity with cryptoassets and tokens that have the characteristics of securities or
 electronic money to the same extent as if they were issued in other forms.
 - Entities undertaking certain activities with cryptoassets and tokens that fall outside the regulatory perimeter – including cryptocurrencies, such as Bitcoin and Ether – do not require financial services licences but must register with the IOMFSA as "Designated Businesses" and comply with Anti-Money Laundering and Countering the Financing of Terrorism requirements.
- In the e-gaming sector:
 - The Isle of Man Gambling Supervision Commission offers a B2B Software Supplier licence for token and blockchain platforms and software.
 - Applicants for this licence must prove their understanding of the technology they wish to employ.
 - Tokens to be used must already be available at the time of application, and not just in development.
 - During the application process, there will be an embargo on news about the application. This is to prevent any inflation of a token's value on the news of a licence application, which might not ultimately be granted.
 - Isle of Man licensee Real Time Games Holdings (luckbox.com⁷) offers CryptoPay as a deposit method, alongside more traditional e-wallets.
 - CryptoPay allows deposits with: Bitcoin, Litecoin, Ether and Ripple.
 - Quanta Technology⁸ was awarded a licence in 2017 for what it claimed was the first "fully-licensed blockchain lottery". As of 2021, Quanta is not listed as a licence holder.
 - **Eminence Ltd** launched CasinoCoin (CSC) as a digital currency developed specifically for the e-gaming sector⁹.
 - **Shelgeyr Limited** has a licence for a pure Bitcoin betting website¹⁰.

⁶ https://www.digitalisleofman.com/news/isle-of-man-fsa-publishes-perimeter-guidance-on-crypto-assets-and-tokens/

⁷ https://luckbox.com/

⁸ https://www.quanta.im/

⁹ https://casinocoin.im/overview/

¹⁰ https://btb88.com/en-us/home

Malta

Since the MGA's initial regulatory concerns about cryptocurrencies in 2014, Malta has been investigating the use of Bitcoin for gaming and other sectors and is keen to position itself as a regulated virtual currency jurisdiction and centre for initial coin offerings (ICO).

The MGA issued an initial 'call for interest' in December 2017 for parties interested in cryptocurrency projects, with the aim of constructing a live test environment for exploring the use of cryptocurrencies in the i-gaming sector, in conjunction with the Malta Digital Innovation Authority¹¹.

This led to the hosting of the DELTA Summit in 2018, Malta's official blockchain and digital innovation event. At that summit, the framework for the test environment was published¹².

In May 2021 Moneybite¹³, a Bitcoin payment provider, was granted a Virtual Finance Assets (VFA) licence by the Malta Financial Services Authority. Moneybite's focus will be on offering its services to Malta's i-gaming operators.

Malta's test environment for blockchain and cryptocurrency technologies has been extended until 31 December 2021.

The regulation of cryptocurrencies, and associated activities, is following a similar path to internet gambling. The early adopters are the smaller, often offshore, island economies, whilst the world's larger economies are taking a more cautious approach.

The Isle of Man and Malta demonstrate that crypto-gambling firms can take a licence in a well-regulated, high-calibre jurisdiction.

As of mid-2021, however, it is clear that some crypto-gambling firms do not currently value the credibility being licensed can bring.

Users of cryptocurrency might like this stance because one of the appeals of cryptocurrency is that it is decentralised and outside of government control.

This situation might change as the sector matures, jurisdictions like Curacao improve their regulations, and the world's larger economies decide upon their strategy for cryptocurrency and its associated uses.

¹¹ https://mdia.gov.mt/

¹² https://www.mga.org.mt/wp-content/uploads/MGA-VFA-and-ITA-sandbox-v.3-Final-2.pdf

¹³ https://moneybite.com/

Customer benefits

Crypto-gambling offers several perceived benefits to customers:

- An outlet for coins: gambling represents one activity that coin holders can easily spend their coins on, with the added benefit that they might win more coins.
- Offers a level of anonymity: Licence holders in regulated gambling markets are increasingly required to obtain more information from customers as part of KYC and AML checks. Some customers resent this intrusion. Crypto-gambling sites which hold no licence can be seen as a less intrusive option.

Anonymity is also helpful to customers based in jurisdictions where online gambling is not permitted e.g. Asia.

But some crypto-gambling operators which hold a Curacao licence claim they do not accept business from customers located in certain jurisdictions, including: USA, UK, Netherlands, Australia and Portugal.

Customers will be breaching the Terms of Service if they give the operator 'false or misleading' information regarding their location or place of residence.

- Speed of sign-up and transactions: cryptocurrency transactions can be completed almost instantly and can incur lower costs than other payment methods. New accounts can also be opened more easily, partly because fewer checks are conducted on sign-up. More KYC due diligence is done when a customer makes a withdrawal.
- Fewer bet limits & affordability checks: Licence holders in regulated gambling markets are
 increasingly being required to impose bet limits and conduct affordability checks to assess
 how much a customer can afford to lose. As with KYC checks, some customers dislike the
 intrusion into their affairs.

There are generally fewer limits and checks on crypto-gambling sites, although several sites do still have maximum bet limits (varying by coin) and maximum profit limits for some games.

- Caters for VIPs: linked to the fewer bet limits, crypto-gambling is better able to accommodate
 higher-spending VIPs indeed, some sites are invitation only without restricting bet
 amounts if a player has some winning bets. The threshold to even be classed as a 'VIP' is very
 high in crypto-gambling losses equivalent to US\$1.5m might not even be enough. VIPs also
 appreciate the privacy given by crypto-gambling.
- Easier movement of funds: cryptocurrencies have proved especially popular in markets like
 China where there are restrictions on the movement of capital. Cryptocurrencies offer a
 means of circumventing the restrictions, especially if there are difficulties in using traditional
 payment methods either to move funds or for gambling.

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Crypto-Crash games

One category of gaming that has been developed specifically for cryptocurrency gambling is crash games. Crash games are fast-paced, easy to understand and compelling to play.

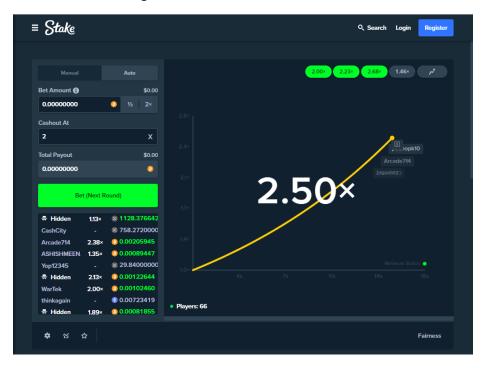
In each round of the game a player:

- Chooses how many fractions of their preferred coin they want to stake.
- Enters a multiplier they wish to cash out at (e.g. a 2x multiplier would result in a player doubling their stake).

The game then begins:

- A simple graph shows the multiplier level rising.
- The multiplier begins at 1.00x and begins to increase.
- If the multiplier level surpasses the player's selected multiplier before it 'crashes', then the player wins their stake multiplied by their selected multiplier.
- Some versions of the game also let players 'cash out' before their chosen multiplier is reached.
- But if the multiplier level 'crashes' before the player's level is reached (or before they cash out), the player loses their stake for that round.

Screenshot of Stake.com's crash game



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- A round can last only a matter of seconds, depending on how high the multiplier reaches before crashing.
- The return to player margin for some crash games is as high as 99%.
- Some games do have maximum staking limits and maximum profit limits, which vary greatly by operator.

Example of Crash game maximum bet and profit limits by coin

Coin	Maximum bet	Maximum profit
Bitcoin	100	5
Ether	1,000	150
Litecoin	3,000	300
Dogecoin	8,000,000	4,000,000
Bitcoin Cash	1,000	100

Coins accepted by Crash game operators (selected)

Operator	Coins accepted
Betfury.io	Bitcoin Ether Tron Binance Tether
Bustabit.com	Bitcoin
Crashbtc.com	Bitcoin
Nanogames.io	Bitcoin Ether Bitcoin cash Dogecoin Litecoin
Stake.com	Bitcoin Ether Litecoin Dogecoin Bitcoin cash Eos Tron

Crash Gameplay analysis

GBGC analysed the performance of one long-standing crash game.

- Total amount wagered over +/- 5 years: <u>BTC 825,000</u> (equivalent to US\$ 29.3 billion 7/2021)
- Total Return to players (98.8%): BTC 815,000 (equivalent to US\$ 28.9 billion 7/2021)
- Gross win (1.2%): BTC 10,000 (equivalent to US\$ 355 million 7/2021)

GBGC recorded the rounds played over a 10-minute period (Bitcoin price = US\$ 34,294):

- 23 rounds completed
- Average players per round: 157
- Total Bits¹⁴ wagered: 742,410 (0.742 of a Bitcoin; US\$ 25,460)
- Highest wagering round: 84,374 Bits (US\$ 2,893)
- Largest individual wager: 45,576 Bits (US\$ 1,562)

Crash game gameplay analysis (July 2021)



Source: GBGC Analysis

- In the rounds analysed by GBGC, the total amount bet per round was an average of the equivalent of US\$ 1,100 (32,278 Bits). At a margin of 1%, the operator retains just US\$ 11 of the amount wagered per round.
- But the speed and frequency of play means that the gross win accumulates quickly. There are 2-3 rounds of the game every minute, 24 hours per day.
- Based on the current price of BTC, in a 24-hour period the gross win could amount to the equivalent of almost: **US\$ 40,000**.

¹⁴ Bit = one millionth of a Bitcoin

Threats and issues

Government and regulator attitude

Governments' attitude to cryptocurrencies and crypto-gambling will be central to how the sector develops.

The features which make blockchain-based cryptocurrencies attractive to users – decentralised, private and relatively anonymous – are exactly those features which cause governments and regulators concern.

Decentralised gambling applications ('dapps') built on a blockchain are especially attractive to gamblers in jurisdictions where gambling is prohibited or restricted to a monopoly operator.

Dapps deployed on the Ethereum blockchain network, for example, have the following features¹⁵:

- No owners once deployed, dapp code cannot be taken down
- Free from censorship
- Built-in payments
- One anonymous login
- Encryption
- No down time

Governmental concern is understandable. One of the earliest marketplaces for Bitcoin purchases was the Silk Road website, which was primarily a platform for selling illegal drugs. The website was shut down by the FBI in 2013. In Q4 2020 the US government seized bitcoin worth more than US\$ 1 billion, which were connected to Silk Road.

Gambling regulators' concerns focus on cryptocurrencies' ability to allow the circumvention of AML and KYC requirements, as well as instant and anonymous cross-border payments. Player protection could also be at risk from unscrupulous crypto-gambling operators.

Recent developments regarding cryptocurrency regulation

- May 2021: The US Treasury Department will require any cryptocurrency transfer worth more than US\$ 10,000 to be reported to the IRS.
- May 2021: China's State Council stated it will restrict Bitcoin trading and mining.
- **June 2021: El Salvador** officially classifies Bitcoin as legal currency. Every business must accept Bitcoin as legal tender for goods and services.
- June 2021: The World Bank rejects a request from El Salvador to help with the implementation of Bitcoin as legal tender, citing "environmental and transparency shortcomings" with Bitcoin.
- June 2021: Xinjiang and Qinhai, China introduced restrictions on crypto-mining.
- June 2021: The local government of Sichuan province, China issued a ban on crypto-mining. Sichuan was China's second main centre of mining after Xinjiang.

¹⁵ https://ethereum.org/en/dapps/

As with the regulation of internet gambling, the governments of major economies might appear slow and cautious in their approach to cryptocurrencies. But governments always have the advantage of time.

One trend that could develop is the launch of central bank-backed digital currencies:

- The People's Bank of China has been undergoing testing of its digital renminbi (RMB) since April 2020. One of the stated aims of digital RMB is to reduce money laundering, gambling, corruption and terror financing. It will, of course, be a digital currency over which the Chinese government has total control, unlike Bitcoin.
- In March 2020 the Bank of England published a paper on Central Bank Digital Currency (CBDC) and is seeking submissions from interested parties on the issue. It has not made a decision as to whether or not it will launch a CBDC.¹⁶

The issues discussed above give a hint as to how governments will seek to control and supplant the first wave of cryptocurrencies:

- Controlling the cryptocurrency mining or creation process attempts to licence or tax?
- Claiming environmental concerns about the energy-intensive mining process as a reason to restrict or control it.
- Require cryptocurrency transactions over a certain level to be reported to the tax authorities.
- Seek to launch their own digital currencies backed by a central bank, as a means of replacing the more volatile decentralised cryptocurrencies.

These measures could curtail the appeal of crypto-gambling to customers and/or make the operation of crypto-gambling sites more difficult and less profitable.

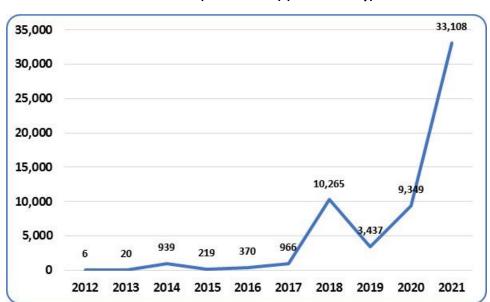
¹⁶ https://www.bankofengland.co.uk/research/digital-currencies

Volatility

Bitcoin is currently the coin most widely used and accepted for crypto-gambling. The price of Bitcoin over the years demonstrates another issue with accepting cryptocurrency as a means of payment – volatility.

In January 2012, one BTC was valued at US\$ 5.5. By January 2021, one BTC was valued at US\$ 33,108.

In the first six months of 2021, the value of Bitcoin has been at a low of US\$ 29,333 and a high of US\$ 63,365.



Value of 1 BTC versus US Dollar (2012 – 2021) (as at January)

This volatility can cause issues at the point when cryptocoins are exchanged for fiat currency (dollars).

- Some Asian-based crypto-gambling operators reportedly pay employees' salaries in Bitcoin –
 month on month price fluctuations can result in great changes in the purchasing power of one
 Bitcoin in relation to fiat currency.
- A customer might mentally calculate their winnings at the current fiat exchange rate. But, at the point they convert any crypto-winnings to fiat currency, the exchange rate could have changed substantially either to their benefit or detriment.

Banking and fiat currency

Banking continues to exert a strong influence on internet gambling, and this is true of crypto-gambling too.

- Banks have the same concerns as governments and regulators about cryptocurrency complying with their AML, KYC and Source of Funds requirements.
- Combine this with another activity which banks are wary of gambling and banking and payment processing are key issues for crypto-gambling.
- At the Betting on Football conference in 2019, gambling operators on the payments panel believed that the use of cryptocurrencies for the regulated gambling operators is being held back by the fear of losing their conventional banking arrangements.
- The US Treasury Department will require any cryptocurrency transfer worth more than US\$
 10,000 to be reported to the IRS for US citizens. Banks could have a role to play in this
 reporting if fiat funds are deposited or withdrawn from a customer's bank account as part of
 the transfer process.
 - At the time of writing, US\$ 10,000 equates to 0.29 of a Bitcoin.
- Owning a bank is an extreme but effective solution for crypto-gambling firms to solve this crypto/fiat currency problem.
- But, if that is not an option, a sector is developing to facilitate B2B cross-border cryptocurrency payments and the processing of crypto-fiat/fiat-crypto transactions.
- Coinbase¹⁷ is one company that states its mission as being to "build the cryptoeconomy", which it describes as "a more fair, accessible, efficient, and transparent financial system enabled by crypto."
- When Coinbase first started, however, it struggled to obtain banking facilities and in 2014 offered stock warrants to a bank in order to secure automated clearing house (ACH) services.
 The situation has improved since then but traditional financial institutions are still cautious of cryptocurrencies.
 - In 2020 Coinbase has secured ACH services through JP Morgan, after a thorough vetting process by the bank. In the arrangement, JP Morgan does not handle cryptocurrency transactions directly but handles US dollar transactions and provides cash management services.
- Cryptocurrency payments do have benefits for crypto-gambling operators:
 - No fraud
 - No chargebacks
 - Low payment processing costs

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¹⁷ https://www.coinbase.com/

Confiscation of coins

The FBI's ability to recover Bitcoins paid as part of the Colonial Pipeline ransom in June 2021¹⁸, showed that it is possible to track Bitcoin and its transactions through different wallets. The equivalent of US\$ 2.3 million was seized from a currency wallet using a court order.

The FBI did not reveal exactly how it had been able to trace the specific coins. It said it had reviewed the public Bitcoin ledger and had somehow obtained the private key to the specific wallet into which the funds had been transferred.

The FBI stated that criminals will often use US infrastructure at some stage during their criminal activity, which gives the US authorities the legal ability to act to seize the funds.

- The ability for law enforcement entities to track and seize cryptocurrencies could become a problem for crypto-gambling websites and their customers.
- Neither operator nor customer can know whether the coin has been earned as the result of criminal enterprise.
- But a player could find their winnings being seized from their wallet at a later date, if the coins paid out by the operator had previously been used to pay a ransom, for example.
- Similarly, a crypto-casino could be ordered to forfeit cryptocurrency deposits, if a player has obtained the funds through criminal activity.

The appeal of cryptocurrencies and crypto-gambling is partly in their anonymity and privacy. Action against criminals and ransomware attackers in the US has demonstrated that the anonymity and privacy is not absolute.

Law enforcement's ability to track cryptocurrency transactions and access the wallets where the coins end up will only improve over time.

If a disproportionate number of illegally earned coins end up going through crypto-gambling sites, it could disrupt the business model and lessen customer interest if coins are frequently being seized as part of criminal investigations.

GBGC understands that crypto-gambling sites already change their Bitcoin deposit address frequently to prevent tracking or hacking activity.

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 $[\]frac{18}{\text{https://www.justice.gov/opa/pr/department-justice-seizes-23-million-cryptocurrency-paid-ransomware-extortionists-darkside}$

Conclusion

- After a decade of cryptocurrencies, there could be as many as 150 million Bitcoin users worldwide, with 18.7 million Bitcoin currently in existence.
 - There are different methods of trying to calculate the number of Bitcoin 'owners' but the nature of the cryptocurrency means it is very difficult.¹⁹
- Many users simply buy and hold cryptocurrencies as an investment, so are not particularly 'active'.
- Other are traders, buying and selling on the price movements in various coins, but not seeking to use cryptocurrency to purchase goods or services.
- The market capitalisation of the top 50 coins stands at US\$ 1,385 billion (July 2021), although exactly why the coins are worth this valuation beyond investor sentiment is less clear.

"I am often asked by people, 'What is the explanation for the price of Bitcoin and other digital tokens, when so few people actually use the coins in daily life?'

And I tell them the truth - there is no good answer. For most of the market, there is no good answer."

Jimmy Nguyen, President, Bitcoin Association

CoinGeek Conference, Zurich, June 2021

- Gambling is one activity that holders of coins can spend them on.
- Hundreds of gambling websites have launched to offer crypto-gambling services, catering for various coins.
- Many of these sites appear to hold no gambling licence but the apparent privacy and anonymity they claim to offer, combined with the 'provably fair' concept, is attractive to a certain category of gambler.
- Crypto-gambling's growth is partly a reaction to the constant stream of new gambling regulation, which seeks to obtain more and more personal information about gamblers' identity, income and behaviour, and limit people's spending until the information is provided.
- For this reason, VIP gamblers find crypto-gambling particularly suited to their needs.
- Large volumes of coins are clearly passing through these sites. Establishing what fiat 'value'
 these coins have is difficult, given the volatility in coin prices versus the US\$. Some of the
 larger operators could be earning the equivalent of US\$ 300 million in net profit.

¹⁹ https://www.buybitcoinworldwide.com/how-many-bitcoin-users/

- The traditional tier-one gambling operators do not appear to be promoting crypto-gambling at this stage. There could be a fear as to the regulatory and compliance risk of getting involved with cryptocurrencies.
- Governments in the major economies are still formulating their approach to cryptocurrencies
 their regulation and taxation.
- What they decide will ultimately determine the future of cryptocurrencies and associated activities like crypto-gambling.
- In an era where 'global corporate tax rates' are being muted, there are good arguments for both:
 - The continued demand for decentralised cryptocurrencies as a store of wealth and;
 - The likelihood that governments will not allow cryptocurrencies to remain a source of wealth hidden from the sight of regulators and tax authorities.

-Ends-