

Explain the definition, commercial uses and legal implications of Blockchain on the music and entertainment industries.

Blockchain is defined as “a type of database that takes a number of records and puts them in a block. Each block is then ‘chained’ to the next block, using a cryptographic signature. This allows block chains to be used like a ledger, which can be shared and corroborated by anyone with the appropriate permissions” (Government Office for Science, 2016). Similarly, a ledger is a book or collection of financial accounts that can be distributed and shared so blockchain could be considered a type of digital ledger technology. There are a number of advantages that blockchain can bring to people in the creative industries such as transforming publishing and the monetisation of music. Blockchain can enable music makers and rights owners to have “more control over how their songs and associated data circulate among fans” (PwC, 2018).

However, blockchain may have its drawbacks. The technology is still fairly new, and in the future, it could arguably reveal complications between music, songwriter and performer rights. This essay endeavours to discuss the pros and cons of blockchain and how the technology will undoubtedly affect the music and entertainment industries in the near future.

The potential value of blockchain in commercial fields is indisputable. By stockpiling data into digital ledgers, blockchain has the capability of storing digital payments, personal information and smart contracts (Khouri, 2017).

Figure 1 summarises how the technology works. Step 5 states that the chain “provides an indelible and transparent record of transactions” (Wild, Arnold and Stafford, 2015). The

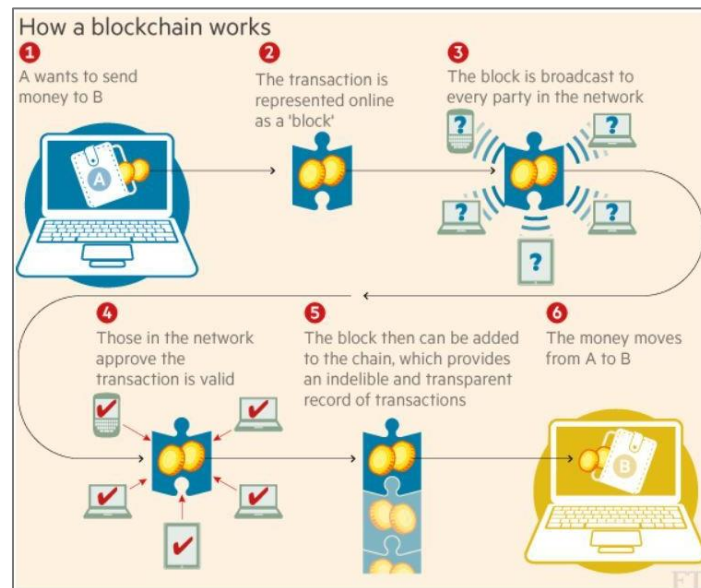


Figure 1 - A summary of how blockchain works taken from the Financial Times (Wild, Arnold and Stafford, 2015)

transactions are transparent because blockchain systems “include a fully auditable and valid ledger of transactions” that cannot be forged (Myler, 2017).¹ By being indelible and transparent, the transfer of money is always fair and secure. Step 4 states that the transaction needs to be validated by everyone in the network which ensures that transactions within the blockchain cannot be deleted or hidden. This will also prevent the addition of fraudulent transactions (Myler, 2017). Moreover, using an encrypted chain ensures that the data that is stored and managed is safe and secure (PwC, 2018). Therefore, steps 4 and 5 together emphasise that in a legal sense, blockchain technology is immensely beneficial to all companies in the creative industry.

It can be argued that by using the technology, royalty payments can be made more quickly and accurately. The greater accuracy of payments made via blockchain has the potential to save the industry billions by “revolutionising the rights and royalties process,

¹ Transparency is “the access and proper disclosure of financial information” (Chen, 2020).

ensuring artists, writers and publishers...[are] paid appropriately” (PwC, 2018). A further benefit of this accurate data stored through blockchain could also support tax authorities in tracing where and when VAT has been paid by companies, thereby reducing tax fraud and also making sure that the data provided is consistent (Schofield, 2016).

One reason for the resultant speedier payments is because territorial parameters are broken down when blockchain is used so rights ownership is no longer restricted (PwC, 2018). Furthermore, blockchain holds great value because without its use, royalty payments are restricted by licence agreements that are often subject to geographic territory (Miselbach & Nicholson, 2000). These agreements are regulated by local governments which can slow down the speed of transaction. Also, the overseas collecting societies, such as ASCAP and BMI in the United States, have their own administration rates for royalties and the royalties themselves can sometimes take up to three years to return to the artist (Whitrock, 2013).² Artists who are not signed to publishing companies with a representation abroad are susceptible to ‘Black Box Royalties’.³ These are unclaimed royalties where it is not possible to identify who has the right to these payments as the song needs to be registered with the individual societies from each country (Whitrock, 2013). It is difficult for publishers to establish direct relationships with every collecting society around the globe so, it is inevitable that with the current system, many artist performance rights and payments are impeded. By being a limitless data store, blockchain technology can arguably lower foreign fees related to administration as well as reduce the number of songs that become associated with black box royalties.

Secondly, royalty payments are made more quickly via blockchain because of the elimination of intermediaries. The middlemen can disrupt fast, frictionless payments often

² ASCAP – The American Society of Composers, Authors and Publishers. BMI – Broadcast Music, Inc.

³ “Unclaimed royalties for which a publisher or writer is named but cannot be traced by a collection society. Writers who are owed royalties but cannot be found are often referred to as “lost” writers...” (Songtrust – Music Publishing Glossary, 2020)

making an immediate payment more difficult. Without the need to verify the authenticity of a transaction from a third party, micropayments can be collected and built up quickly until they can be used to pay artists and record labels. The system supports a global network because thousands of computers worldwide “can access a live version of the same ledger” or micropayment simultaneously (PwC, 2018). This speed of payment benefits all artists but in particular, session musicians and studio technicians gain a lot from the system because they are often only paid once and do not benefit from royalties (Hemming, 2018). The micropayments will be divided between each member on the track in a fairer way.

Faster royalty payment improves the current models that exist in the industry. What must also be considered is Blockchain’s potential to disrupt existing business models involving pricing and revenue optimisation (De Leon & Gupta, 2017). The current pro rata revenue model does not allow for dynamic pricing because the number of streams a user listens to contributes to the overall revenue. This revenue is then divided up by aggregate play counts which results in the artists who are not at the top being underpaid. (Luckerson, 2019). Blockchain could help establish a user-centric model so that the number of streams from users goes directly towards the artist that they have listened to. This would help fund regional music, up and coming artists and also support niche music which together represent a large proportion of the industry that is currently being neglected. However, this issue of remuneration will only be resolved once a deal is agreed between DSPs and the labels.

Not only could blockchain disrupt existing business models, but it also could create new ones. For example, fans could become promoters by sharing their favourite music for monetary rewards through micropayments (De Leon & Gupta, 2017). This would be a simple way for the industry to generate more revenue.

With the support of blockchain, micropayments can be divided up fairly with smart contracts. These contracts can automatically “dictate who gets what share of the money

generated” without the control from a central authority (Perez, 2018). The use of smart contracts also supports the reduction of black box royalties because they increase transparency and “simplify the management of rights with a single version of the truth, regardless of territory and rights ownership specifics” (PwC, 2018). Furthermore, the contracts are said to be completely ‘immutable’ because the records cannot be changed, and all shareholders have access to this single version of the truth.⁴ The contracts are able to store information such as song or album title, copyright owner, publishing year, the ‘International Standard Recording Code’ and the ‘Musical Work Code’, the wallet addresses, public value of the musician, the price of royalties to be paid to all parties and the IPFS hash which is the unique identity of that particular code.⁵ The characteristics of cryptographic hashes ensure that the information being stored in the chain is “deterministic, uncorrelated, unique and one-way” (IPFS, 2020). ‘Deterministic’ implies that the same input message always returns the exact same output hash. ‘Uncorrelated’ means that a minor change to the message generates a completely different hash. Lastly, hashes within blockchain are ‘one-way’ because it is very difficult to guess or calculate their input messages.

The smart contracts also reduce the time spent processing paperwork and correcting the errors that are often seen in manually filled in documents. Computer code is also more precise than the language used in traditional contracts (Gopie, 2018). Through smart contracts, the emerging artist may also be able to obtain a greater flexibility in IP valuation. Superior price optimisation models would allow the new artists that lack negotiating power with labels to gain better market value for their work by adjusting royalty rates and user pricing through blockchain (De Leon & Gupta, 2017). These combined characteristics of smart contracts shows how advantageous blockchain can be for the creative industries.

⁴ Immutable definition = Unchanging over time or unable to be changed.

⁵ IPFS stands for Interplanetary File System - a protocol and peer-to-peer network for storing and sharing data in a distributed file system.

Companies in music and entertainment could also improve their asset traceability with blockchain. Asset traceability refers to the “process of monitoring an organisation’s physical assets using scanning devices to read the barcode of QR code attached to these items” (Hyun, 2020). ‘Everledger’ is a company that has demonstrated blockchain is useful beyond the realm of cryptocurrencies. They have used blockchain to track the movement of raw materials such as diamonds, from its source to when they are sold (Austin, 2020). Blockchain is used to secure a permanent digital record of each diamond so that they know where it has come from and its unique characteristics. This type of asset management could be applied to metadata in the music industry so that songs can be monitored more accurately.⁶ This ensures royalties are distributed fairly and also it makes the cataloguing of musical information more precise (Griffiths, 2020).

An example of blockchain’s success is Imogen Heap’s platform ‘Mycelia’, a non-profit music-sharing program that uses blockchain technology. The company aims “to empower a fair, sustainable and vibrant music industry ecosystem involving all online music interaction services” (Mycelia, 2020). Heap has led the way with the technology to try and make payment fairer as well as redistribute wealth in the industry but for widespread change to happen, the larger stakeholders in the industry need to follow suit.

In consideration of blockchain’s sound digital framework, its benefits to royalties and the disruption of business models, there are arguably a number of potential problems that could arise from the technology. Blockchain technology is still in its infancy so a legal framework has yet to be fully established protecting its usage (Agurto, 2020). The number of blockchain start-ups is promising but unfortunately there is “no industry-wide standard yet” as government

⁶ Metadata = a set of data that describes and gives information about other data.

policy is not up to date with the technology (Khoury, 2017). Once local governments are up to date, it is uncertain whether the existing legislation will be compatible with the technology and also an agreement needs to be made on who decides what data is included and stored in the system (and also who regulates this data). In other words, anything technological “ultimately [still] requires human intervention” (Tam, 2019). This is particularly apparent in smart contracts because being an algorithm, the technology will still require the support of lawyers and judges to interpret contracts and prosecute its violation (De Leon & Gupta, 2017). Therefore, issues related to intellectual property, piracy and smart contracts cannot be completely be eliminated by the introduction of blockchain. It may solve a number of legal issues regarding fair payment but with any new technology new complications can emerge.

For the system to work efficiently, all parties in the music industry need to be involved. Different areas of business such as royalty collection, asset management start-ups, streaming platforms and data arbiters all need to work together to construct a system that benefits everyone equally (Walden, 2016). The ever-increasing number of blockchain-based platforms might “reduce the possibility of creating a unified global repertoire” because the different platforms are competing against each other (Tam, 2019).

The transparency that blockchain brings to payments may not in fact benefit all involved. For example, those that profit from the current lack of transparency in the music industry or the big tech companies that prefer to monopolise rather than share information will disapprove, or at least not fully support the new blockchain-based platforms because blockchain may reveal information that they are not willing to share. For example, Imogen Heap’s song ‘Tiny Human’ from 2016 revealed on their platform called Ujo Music the percentage cut each person received on the track in royalties (Hemming, 2018). This full disclosure of rights distribution similar to what was seen with ‘Tiny Human’ may put musicians

under pressure on different fan platforms such as on social media because the fans do not agree with how much one person is getting paid over others (Hemming, 2018).

The removal of middlemen with blockchain does have its benefits for the artist but one could argue that a “lack of brand and marketing support by the intermediaries” may lead to “less positive marketing effects and thus reduce overall earnings” (Tam, 2019). Without the support of record labels and publishers the music may not get enough exposure to fans. Intermediaries such as labels and PROs also provide artists access to recording equipment and other operational support. Moreover, the monitoring and management of copyright infringement from intermediaries at this stage may still be needed because of the possibility of a blockchain register being stolen from its rightful owner (De Leon & Gupta, 2017). New blockchain platforms need to establish a balance that ensures artists have control over their royalty cut but still receive support from the middlemen. It is paramount that the artist has full control.

Choon is an example of a blockchain-based streaming platform that highlights the drawbacks in the technology. The company’s revenue was generated through the cryptocurrency (or tokens) called ‘NOTES’ which both artists and consumers used on the site. The company went bankrupt in December 2019 due to liquidity trouble. The company ran out of cash because their business model of crypto-based streaming was unstable and the fluctuation in value of the crypto-tokens was too great (Svarda, 2019). A major drawback of virtual currency is that its value can often fluctuate (Tam, 2019). It appeared that the company failed to convince enough artists to share their music on the platform as well as not establishing enough users. In other words, the platform was not user-friendly or practical enough to your everyday consumer. It is much easier for people to consume their music through well-established DSPs such as Spotify, Apple Music or YouTube (Sanchez, 2018). By only keeping 20% commission to try and benefit the artist, Choon failed to generate enough revenue which

ultimately led to its downfall. For a platform to be successful, its website and related blockchain technology needs to be adopted by the masses. To gain a mass following, the technology requires financial support from the major labels so that there is a steady source of income. However, models based on blockchain technology could prevent the majors from taking excessive commission from artists. Therefore, it will always be difficult for the start-ups to find financial backing whilst at the same time ensuring that they are artist focused (Sanchez, 2018). Moreover, the major labels make up a considerable market share of recorded music sales, so it will be hard for new platforms to promote a technology that could ultimately bring about the demise of the major labels and PROs.

Another way to gain a mass following is to offer something that other streaming services do not provide. Choon, as well as other blockchain-based platforms fail to do this because consumers can easily access their music and thousands of other songs through existing services such as Spotify or Apple Music already for a very affordable monthly cost.

In conclusion, it will take time for blockchain to work effectively and become conventional. The technology still requires a great deal of investment for it to benefit the creative industries. The principles are there, but it needs to be built from a new business model that goes against the current structure of the music industry. For blockchain to be used by a larger proportion of the general population, there needs to be a wide-scale movement away from the well-established streaming services which at this point in time, still seems quite far off. In other words, if blockchain is added to the existing models of the current system, the technology may augment ongoing problems the industry faces today. If steady investment is given to blockchain, record labels will then be able to trust the system and invest further into its development which would create a positive feedback loop. Long term confidence in its security will only come once the labels and publishing companies establish a model that will benefit themselves and artists simultaneously.

The rate of digitalisation of the music and entertainment industries will continue to develop rapidly, and the emergence of new digital technology is inevitable. Although blockchain may not be the answer to all of the industry's problems, there is certainly room for the technology to be impactful and play a pivotal part on its future.

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