

Valuing blockchain



About this issue

This issue is based on experience we have gained from valuations of brands, intellectual property (IP), intangible assets and businesses over the last 30 years. It also reflects the views of others involved in the blockchain markets.

We have a background of working for professional consulting firms and businesses rich in IP. Our specific skills and knowledge are in the fields of global business development, accountancy, finance, marketing, valuation and dispute resolution.



Introduction

Blockchain technology is not just for trading in cryptocurrencies. It is now widely adopted, as illustrated by the following examples across industries:

- a. banking and finance, to assist fund transfers and know-your-customer processes;
- b. retail supply chain, to trace each product from manufacture to retail. Retailers use blockchain to demonstrate where their products have come from, and counterfeiting can be tackled;
- c. healthcare, to safeguard data such as from clinical trials and medical records;
- d. insurance, to help share documentation; and
- e. travel, to increase customer reach and promote destinations.

Blockchain is now a major disruptive force across markets. Therefore it should now be securing market positions and opportunities. Conversely, enormous problems will be created by under investment in the technology. This needs to be reflected in the value equation.

Blockchain gives great value opportunities

When considering the value of blockchain technology it is first necessary to assess its key features:

Key advantages

Greater transparency

Blockchain's clearest characteristic is that its transaction ledgers for public addresses are open for all to see.

Improved security

Blockchain is relatively secure, as each transaction is encrypted and linked to the previous transaction.

Increased efficiency

Blockchain eliminates duplicated activities carried out by different businesses.

Audit trail

Each time a business transaction is recorded on blockchain, an audit trail is established. This can help improve security in exchange-related businesses, and can also help verify the traded assets.

Key disadvantages

Creates a risky environment

This applies particularly to Bitcoin and other value based blockchain networks, which can be volatile: See, for example, recent prices for the Ethereum cryptocurrency:



However the different types of security token offerings (STOs) that are now being launched, which are backed by assets such as property, debt commodities or equities are likely to be less volatile than the initial cryptocurrencies.

Complexity

There may well be challenges getting different blockchains to communicate with each other and thus be interoperable. This may slow adoption as some firms may prefer to implement public / open blockchains while other organisations opt for private / permissioned blockchain solutions.

Can be slow and cumbersome

Due to their complexity, and their encrypted, distributed nature, blockchain transactions can take some time to process compared with alternatives. This was especially true of blockchains such as Bitcoin and Ethereum although new protocols are being developed which offer much faster processing speeds such as EOS, Ripple and NEO.

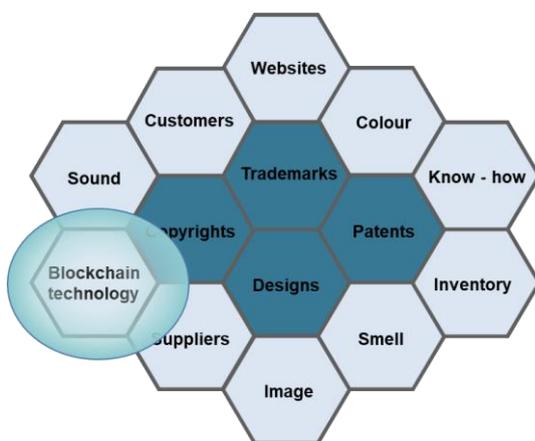
Vested interests

Existing market participants could be adversely affected by the successful adoption of blockchain, and their reaction might be to try and counter or avoid its use. To some extent we have seen this type of reaction with Facebook's Libra from central banks and government, only to now see the same institutions researching how to launch their own central bank digital currencies (i.e. People's Bank of China, Bank of England, and the European Central Bank).

Despite the disadvantages, blockchain increasingly offers real and sustainable advantages

Value is increased by improvements in market share and profit margin

When deployed effectively, blockchain should deliver a long term increase in market share and / or profit margin. This will likely ultimately coalesce as part of a brand asset, which can be seen as a collection of interrelated IP and intangible assets, such as:



IP and business valuations have many practical uses

IP and businesses are valued in practice for a number of reasons:

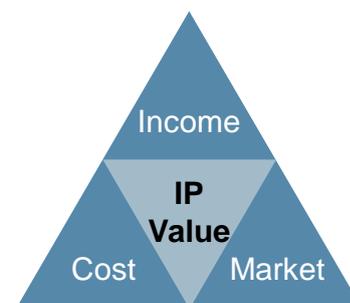
- business development, acquisitions, disposals, licensing and franchising;
- financing and lending;
- for information so that the value of a critical asset is measured and managed;
- dispute resolution; and
- accounting for acquisitions and impairment.

This is a subjective process, but valuation analyses can assist greatly in informing negotiations and discussions relating to value.

A well thought through valuation will be based on information and assumptions used for uncontroversial approaches to assessing value:

- by anticipating future income;
- benchmarking on market transactions; and
- assessing historic costs, the cost to recreate or the value of underlying tangible and intangible assets.

A rationalisation based on these different approaches reduces and concentrates subjectivity. This enables value-based discussions to focus in on the impact of the inputs which really make a difference to the key drivers of IP value:



Value metrics for new technologies can be different

One of the metrics of IP value for social media businesses is the number of unique active users. Facebook for example regularly publishes this and its market capitalisation can be divided by the number of monthly active users to give a value per unique user. It has about 2.5 billion monthly active users and a market capitalisation of US\$450 billion. With tangible net assets of about US\$114 billion this implies that Facebook's intangible asset value is about 75% of its market capitalisation. It is therefore reasonable to estimate that this implies a value per Facebook monthly active user of US\$180. Given that Facebook's value does depend on the number and quality of its monthly unique users then the use of blockchain to reach and acquire or

retain such users would increase that value. The use of blockchain to improve customer services and / or reduce costs would also increase Facebook's value.

Businesses often raise money in tranches to fund the development of blockchain and associated IP assets. It is important to plan for the future revenues such investments should achieve, so that the focus becomes on return on investment rather than money burnt (money burn rates were one of the features leading to the dotcom bubble in the late 1990s). Return on investment is a fundamental product of an IP and business valuation, and is most neatly encompassed in future market share and profit margin.

IP value is reflected in the enhanced market share and margin that it drives

For Google and other search engines there is an extensive industry of Search Engine Optimisation (SEO) specialists, thought to be about 18 million people, working across the world to improve targeted placements in organic search engine results. Google would rather they were paid directly for advertisements, and is working constantly with algorithms to reduce the efforts of SEO, particularly those which are low quality. We have seen effective leveraging of blockchain to improve SEO results, which generated rapidly rising income once a reputation for effective SEO gained traction.

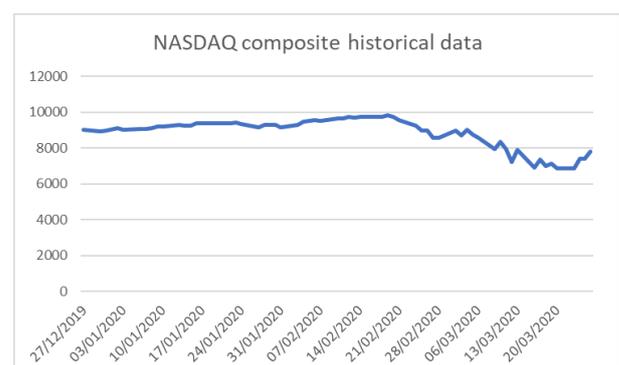
Like all technologies there is the potential for blockchain to be involved in shady activities. We are regulated under the Money Laundering, Terrorist Financing and Transfer of Funds (Information on the Payer) Regulations 2017 (MLRs). These require the reporting of any suspicions of money laundering or terrorist financing. Businesses carrying out certain cryptoasset activities need to comply with the MLRs in

relation to those activities and to register with the Financial Conduct Authority during 2020.

COVID-19 has an impact

The COVID-19 pandemic has had a significant effect on IP and business valuations, as expectations for future income (and the risks associated with such income) have changed, and will change, significantly. A direct example is an airline, where cancelled flights and bookings will be directly reflected in reduced income which cannot be immediately mitigated enough by reducing or deferring the cost base. Many airlines are run on a marginal basis and in such cases COVID-19 could eliminate any equity value fairly quickly. It is thought that COVID-19 contributed to Flybe collapsing into administration recently.

If the value of IP is correlated in some way to market transactions then the recent COVID-19 related market swings will need to be considered. These swings have been sudden and massive. Using the NASDAQ exchange as an example, the value of the NASDAQ composite index has changed significantly and quickly over the last few weeks:



In these circumstances opinions and assumptions will need to be made on the impact of this information when arriving at an IP or business valuation.

Conclusion

Blockchain will cause great changes in many industries across the world. Inevitably this will need to be reflected in IP and business valuations, especially for those organisations that are looking to raise further funds. Being able to value the IP and account for the capital that has been spent building a business, especially if a token was issued to fund the development, is important as this will help investors ascertain the real value of the tokens and therefore the business as a whole.

Leveraging blockchain effectively gives the potential for enhanced IP and business value in the longer term. Ensuring that investors understand how an organisation's IP is valued, and managing their expectations of the value, is an important role for directors of any software business (including those that are harnessing the power of blockchain technology). There has been considerable hype and speculation by some about what a huge disruption blockchains will have on different industries, and as we see greater adoption of this technology it will become more and more important to value the associated IP rigorously.



Valuation services offered by Intangible Business:

Our valuation services are based on professional and commercial knowledge and experience in accounting, marketing, investment banking, and research. We provide:

Analysis and opinions on

- Business value
- Brand, intangible asset and intellectual property value
- Share value
- Historic and forecast profits
- Related revenues and costs

Support in connection with

- Business development, acquisitions, disposals, licensing and franchising
- Financing and lending
- For information so that the value of a critical asset is measured and managed
- Dispute resolution
- Accounting for acquisitions and impairment



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