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Précis Paper

Blockchain and the Law

A rare trove of insight into cryptocurrency, blockchain, the uncertain future of the world economy, and everything in between

Discussion Includes

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1. In this edition of BenchTV, Mark Toohey (Founder and Director of TBSx3. TBSx3, Sydney) and Monica Gebrael (Law Clerk, AR Conolly & Company Lawyers, Sydney) discuss the disruption that has been caused by the digital commerce industry, with a particular focus on cryptocurrency, blockchain, and what they mean for the world economy.

Background

2. Mark is the founder and director of TBSx3, a blockchain technology company that combats fake products in the supply chain.

3. Most people understand neither the scale nor how serious the problem of fake products in the supply chain really is.

4. Mark set out with the aim of strengthening blockchain technology.

5. Blockchain is a slow, albeit very secure, technology. So Mark went looking for a problem, and happened upon a statistic that astounded him, which was that a million people per year die from fake pharmaceuticals.

6. The Head of Customs Agencies Worldwide has since stated that he believes that we may have more fake medicine for sale in the world than real medicine.

7. Mark then came across reports of cancer patients in US hospitals being given fake chemotherapy. Fake antimalarials are also a big killer. Other examples of common fake products giving rise to huge risk of danger include:
    - fake fire extinguishers
    - mislabelled food products

TBSx3

8. The company's name 'TBSx3' stands for 'to be sure, to be sure, to be sure' – chiefly because the company has three layers of protection:
    - the first layer is cryptographic certainty – at which point an item's identity is verified in order to determine whether or not it is genuine
    - the second layer is logistics tracking – at which point the logistics movements of an item are checked all the way through the supply chain

- the third layer is blockchain – at which point the ID of an item is checked in order to determine whether or not the item has ever been used before. Blockchain has a feature called 'no double spend'.

9. As altruistic as Mark's blockchain technology company is, it has also proven to be a very important business for supple chain companies, because these companies want to know that they can provide a trusted service to their customers.

Crisis in Cyprus

10. Mark is also a lecturer of a masters degree course - specifically, the regulation of digital currencies - at the University of Nicosia in Cyprus.

11. Bitcoin was a response to the Global Financial Crisis. The whole banking system went broke, and the only reason it still exists is because the public bailed the banks out in most places in the world.

12. The people of Cyprus had a very bad experience in 2008. Essentially, they woke up one morning and were told by the government that 'anyone who has more than €100,000 in the bank must hand over whatever amount they hold in excess of the €100,000 to the government'.

13. It was a very bold move by the government of Cyprus, and the people of Cyprus swore that they would never let this happen to them again. They wanted a currency that was immune from government control. And so there was in Cyprus a natural interest in having an independent, global, digital currency: bitcoin.

14. There is no way to teach digital currency regulation because it changes every day. Instead, Mark tries to teach the trends, and very importantly, how to work with regulators. Mark's advice to those who do not like the regulations in their own country is to talk to the regulators, which is something that has in fact happened in Australia.

15. Regulators are sensible; and they listen. There exists a very deep mutual respect between regulators in Australia and the Australian digital commerce industry. The relationship between the two has been very productive, so the press is a bit ingenuous where it talks of bitcoin cowboys, shysters, etc.

16. There is no doubt that bitcoin cowboys and shysters exist, that there are a lot of them, and that they are a problem. But there are a lot of people like Mark who have been working in the area for many years trying to build a genuine industry, with a technology that they believe is going to transform the way in which governments and businesses run.

17. But such endeavours must be buttressed by solid fundamentals, which are already starting to be built.

18. Beneath all the hype and hysteria, there are a lot of positive steps being taken to build a real, solid industry.

Cryptocurrency volatility

19. There is a lot of volatility in bitcoin. But it is not as one-sided as the general public may think. There is plenty of volatility in other things as well e.g. oil, stock markets.

20. There is a real utility to an international digital currency that no government can control as a trusted way to settle payments. Whether bitcoin can embody this remains to be seen.

21. Bitcoin has all sorts of technical issues, including the fact that it:
    - is too slow
    - uses too much power
    - has a governance problem

22. The fact that it has no governance is simultaneously its greatest strength and its greatest weakness, because no one can make decisions. Whether some form of governance comes along later, only time will tell. But the bottom line is: bitcoin is a sensible idea.

23. It has been hijacked in recent times by speculators. In many ways, there has been a corruption of the original idea, because bitcoin is a payment system, and unfortunately, people are not using it to make payments now; they are using it as a store of wealth, and a speculative tool, which is a sad thing, because it is far better than that, and it was being built as something far better than that, and suddenly it was hijacked. Whether the price settles down and it can go back to being a useful international currency, again, only time will tell.

24. Another thing about the value of bitcoin is that there will only ever be 21 million coins. At the moment we are at about 17 million coins. So there is a scarcity built into the system. Where the price will go cannot be known.

Initial Coin Offerings (ICOs)

25. The fundamentals have never changed. Investors deserve, and are legally entitled to expect, sound use of the money they invest. It should be used for valid purposes, and investors should get a return on their investment. If an ICO does not meet these fundamentals, then it is a scam.

26. Around the world, there has been a standoff approach by regulators, mainly because of a lack of knowledge in this entirely novel and fast-paced area generally, and a lack of understanding of the technology that is necessarily involved. So regulators were daunted at first. But now they are starting to catch up to it.

27. We do not need to understand the exact technology. The basic principle still stands:
    - is it a security?
    - if it is a security, does it comply with securities law?

28. The big pushback we are starting to see in recent days is probably from the U.S. Securities and Exchange Commission. One of the Commission's leaders only very recently stated he has not seen an ICO yet that has not been a security, which may indeed be an overstatement, but nevertheless shows which way the wind is blowing.

29. The Commission has also formed a cyber task force, which is dedicated to tackling these problems. We are going to start seeing scammers being called to account.

30. The process for businesses should be as simple as this:
    - raise funds
    - be honest
    - inform investors adequately
    - have valid backing for any statements made

31. Already there have been plenty of SEC cases whereby assets of fraudulent businesses have been confiscated. The doors are starting to open wide to a very active period of litigation and prosecution - and rightfully so.

<u>Smart contracts</u>

32. No one fully knows just yet what the term actually means. There are so many different interpretations of the term. It is a very fluid concept at the moment. The idea of a smart contract is really just to automate a payment or a function in some way.

33. The fundamental elements of a contract still have to exist - offer, acceptance, consideration, etc. - in some form or another. The form may change because it is electronic. But at the end of the day, parties will want the contract to be legally enforceable.

34. There is a huge question of jurisdiction as well, and of which securities law to apply.

35. It is very possible to foresee in the future increased use of various standardised forms of agreement over those drawn up by different firms that vary to a small but significant degree.

36. This is what the banking sector is getting very excited about.

37. We may get to a point at which automatic payments can be made without any human intervention at all - reducing overheads, and speeding things up generally. The big question for the banks though will be whether or not they can keep up.

38. Already, some major banks are losing a significant amount of work to FinTech. The banks' greatest weakness can be sourced from the age and the complexity of most banking system software.

The legal profession threatened

39. Law as we know it is on its way out. There will be massive changes and disruptions in the industry. Prices for legal services will drop, and lots of work will be made redundant.

40. So what do we do to future-proof ourselves as lawyers? The answer is to seek out specialities in the law i.e. that which cannot be done in the law generically.

41. As processes become more and more automated, it is inevitable that certain professions will become more and more anachronistic. This growing challenge can be surmounted by a combination of self-analysis and deep market-analysis. But it is a challenge nonetheless - and certainly not one to be underestimated.

42. Anyone wanting to use blockchain should ask themselves the fundamental question: *why not just use a database?*

43. The answer to this is, most often, is that a database *should be used*.

44. Effective use and understanding of blockchain requires a fundamental shift in thinking. In essence, this is how blockchain works:
    - a whole bunch of transactions are bundled together
    - everyone who has a node (another version of the same information) is joined
    - a global network of computers uses blockchain technology to jointly manage the database that records the transactions
    - the transactions are analysed insofar as a consensus can be reached as to their validity, at which point a 'block' is formed
    - the block then joins a chain of blocks
    - each block contains the history of every block that came before it

45. The reason blockchain is such a step forward in security is due to the fact that blocks are created frequently (every 6-10 minutes in the case of Bitcoin), and so the blockchain is continually being renewed and updated. Anyone wanting to corrupt Bitcoin, for example,

has 6-10 minutes during which to do so, and must corrupt over half the computers in the entire network.

46. Blockchain has thus prompted both an architectural shift and an attitudinal shift in the way that supply chain management software traditionally works.

47. Everyone wants transparency of other people's data, and confidentiality of their own. The search is on to find a perfect balance between the two.

48. Blockchain is a long way away from being fully mature, and having these sorts of things fully worked out. There are still a lot of tools and a lot of integration that we need to build into the technology before it reaches its full potential. How quickly this will happen remains to be seen.

49. Some examples of practical areas in which blockchain could be of huge use include:
    - doctors' prescriptions
    - insurance

50. Once the people are provided with the means for collaboration, together with the guarantees of transparency and certainty, all sorts of new things can happen, and happen quickly.

51. Bitcoin is only pseudo-anonymous. Bitcoin really did solve problems that existed and still exist today. We are now starting to see all the gyrations in the stock market, and to experience quantitative easing as we adjust to the fact that there is no easy capital to be taken advantage of anymore.

52. The damage that quantitative easing has done to property prices round the world is significant. This was in fact one of the things that bitcoin was trying to remedy.

<u>Central bank digital currencies</u>

53. There are about 90 central banks around the world that are looking at creating their own digital currency. The Bank of England and the Bank of Canada have been pioneers in this. Both have stepped back a little bit, and have decided to let the technology mature a little more - but they have not stepped back from the idea.

54. Barbados has issued a digital dollar, and central bankers from Caribbean nations are currently looking at following in Barbados's steps, and maybe issuing a joint Caribbean digital dollar, which would give their economies much more strength.

55. The two countries that are most interested in creating digital currency are Russia and China. The control that a digital currency can give to a government is a big reason for their interest. China is talking about putting their social security system onto a blockchain.

56. Venezuela has just decided to release the petro, which is a cryptocurrency claimed to be backed by the country's oil and mineral reserves.

57. These are some concrete examples of the fundamental shifts in thinking that are starting to occur.

An uncertain future

58. Paradoxically, the whole idea of blockchain was to give people freedom from governments; central bank digital currency, when introduced, could however become the most totalitarian thing we have ever created.

59. In the same vein, although decentralisation is at the moment touted as cryptocurrency's greatest feature, we may all too soon see it become the most centralised thing we have ever sustained in human society.

60. Imagine a world in which there is no way to spend any money without it being known. Such a thing could end up being a very powerful tool for surveillance. We need to wonder whether central bank digital currency would be a step forward or a step backward.

61. There are a lot of scam ICOs out there. Regulators have a very legitimate job - and that is to stop these sorts of illegal, criminal activity.

62. Regulators will be forced to act, so it is important for the industry to, when the time comes, be in frank conversation with them, and to offer help, information, etc. Cooperation between the industry and its regulators is already happening; people in the industry are already working with regulators to arm them with the knowledge they need to perform their job.

63. Something important is shifting in our economy. We need to really understand it, and build rules around it that address all the concerns that might be had, but also allow for freedom of innovation. So we cannot kill it off in its infancy. We must let it flourish, but under controlled circumstances.

64. Maybe central bank digital currencies will be the turning point. As we become better familiarised with the idea and function of digital currencies, and once we break through the psychological barrier that still seems to exist in the mentality of the general public today, we are going to see all sorts of new things happen at wildfire-like speed

BIOGRAPHY

Mark Toohey

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Mark is the founder and director of TBSx3, a start-up that harnesses blockchain technology to combat counterfeit products. Mark is also a founder of Adroit Lawyers, providing commercial and corporate services to a breadth of clients. Prior to this, Mark was a General Counsel for Global Television Limited, Group General Counsel for Davnet Limited and solicitor for Henry Davis York and Gadens Lawyers. Since 2015, Mark has lectured at the University of Nicosia for a masters course on Digital Currency Regulation.

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