

Q&A NOTES - Panel – The New Age Crypto World

**Speaker response key:**

- R Vivekanand, Vice President and Head, TCS Financial Solutions, Tata Consultancy Services
- Shiv Kumar Bhasin, Chief Technology & Operations Officer, National Stock Exchange of India
- Lucas Landolt, Director Operations, Lloyd's & Partners AG
- Adrian C. Bürgi, Managing Partner, Lloyd's & Partners AG

1. Why didn't LIBRA move ahead despite so many prominent partners willing to commit partnership?

**AB:** It is one thing to set up a coin and launch it to the market, for it to judge its value, be it intrinsic or from the functionality it provides. Many have tried, very few have been successful. With LIBRA, the ambition was to establish a new currency on a wider scale. But "bigger" does not necessarily convince the market, but does alert national or international financial and governmental institutions, who may or may rather not be in support of such "commercial" initiative on such scale.

2. Do you see Crypto threat to existing currency market which is one of the most profitable business for banks? Need some view as I personally feel crypto and blockchain should redefine business for more ethical business practice

**LL:** No, I don't see any threat or even relief here. As long as full conversion between FIAT and Crypto is not guaranteed and Crypto is more widely accepted as a means of payment in the "real world".

3. Will the Indian government ban crypto considering it a threat or parallel to the current banking system? Is TCS contributing to advise RBI about it?

**RV:** Many players in India have made recommendations to allow crypto trading. This is currently under review and the Indian govt's position on this is likely to be clarified in the coming months. TCS is not advising the RBI or the Indian government on this.

4. Could you give some project based solutions where Quartz Blockchain can play a great way ahead.

**AB:** Sorry, even if this question is to be answered from TCS, it is too tempting: Banking IT systems are not designed to handle crypto or integrate blockchain solutions. Quartz is. It is a bit like the answer where Tesla can play a role in electric mobility – they are, others not.

**RV:** Quartz blockchain solutions are intended for customers across various domains – including Banking, Financial Services and others. We have worked with customers across the globe in projects related to dissemination of Corporate Announcements, Cross border settlements, KYC, Cross border remittances amongst others. You can find more information about Quartz on our website - <https://www.tcs.com/quartz-blockchain-solutions>, or write to us at [tcs.quartz@tcs.com](mailto:tcs.quartz@tcs.com)

5. Why do you need a bank in the future if blockchain and crypto evolves a few years down the line?

**AB:** You certainly in the very short future NOT need a bank, as we define it today from the customer's perspective. No need for a building and a counter – all is in your pocket. But all jurisdictions, to maintain the well-functioning of the financial industry and protect the public, do regulate and supervise activities relevant in this field. Only regulated and supervised entities are allowed to offer and provide such activities and such entities are called banks. So you may in future not need much of what defines banks from a client perspective today, but it is a robust estimations, that regulators will keep regulating banking activities and allow only "banks" to provide these.

6. Is there a specific cryptocurrency (Bitcoin, etc) that you think it might become the standard or most common in use?

**LL: I believe that asset backed coins and stable coins will prevail in the future.**

7. With banks under increasing regulation and compliance, taking a lot of operational effort, how will banks compete with the lack of regulation (KYC/AML), efficiencies and open source nature of decentralised finance? Surely DeFi will continue to be developed at a faster and global pace way beyond current regulations. To capture the benefits, banks would have to interface with DeFi quickly, or be left behind under the burden of regulations. Thoughts?

**LL: The question is more to what extent a community is formed that also demands these services from banks. The question also arises as to whether the community wants these transactions to be carried out only through banks.**

**I think we really have to distinguish between asset management and transactions in daily use. Alternative ecosystems can develop in daily payment transactions. Banking IT is still strongly focused on legacy. Fintech Companies can make a major contribution here by showing in specific areas how processes can be handled more easily and efficiently using technology.**

8. I learnt Swiz adopted cryptos for purchasing goods. How is that going? What are the findings of it? Could you guys explain it.

**LL: In Switzerland, this step was taken primarily in online trading with larger providers. These work together with payment providers who offer gateways. In future, no one can afford not to accept the most common means of payment in e-commerce. Currently, solutions from third-party providers are always used. These functions are used extensively, but still account for a small proportion compared to classic payments.**

9. What is the predicted move of India in the area of blockchain and cryptocurrencies? Can we match with other countries in the field of blockchain?

**RV: Blockchain is already being explored extensively in India by multiple organizations, we are seeing huge interest from customers across various business domains. On Cryptocurrencies – it will have to be wait and watch approach for now since this is currently under assessment by the Govt/Policy makers**

10. Considering the fact that TCS launches a Crypto Platform, can we assume that TCS would have discussed with the concerned government authorities on the legality and regulatory framework of Cryptocurrency? what if Cryptocurrency will be banned (in India) in future as happened earlier?

**RV: TCS has launched a solution that enables trading and transfer of cryptocurrencies and digital assets and which can be used by customers in markets/countries where this is allowed. For more on this solution please visit: <https://www.tcs.com/tcs-launches-quartz-smart-solution-help-financial-institutions-offer-cryptocurrency-trading>**

11. Going forward, will the future of the FinTech industry in India be regulator driven or shall individual institutions be allowed to do MPV / pilot internally? Thank you

**RV: We see Govt agencies as well as private organizations leveraging fintech including blockchain for their needs, including in rolling out MvPs/Pilots. The technology does not need regulation – businesses do.**

12. How do you tokenize a project?

**RV: Tokenization of assets will require multiple aspects coming together – operations expertise, legal support, regulatory approval, apart from a robust IT platform which can manage the entire life cycle of tokenized assets. We have recently published a white paper on this subject, the link to which is given below:**

<https://www.tcs.com/content/dam/tcs-bancs/pdf/bancsprotected/Quartz-Tokenization-Newsletter-32.pdf>

13. What's the current thinking and initiatives in India around digital currency to enable full settlement process as cash leg seems to be a bottleneck in trading / settlement pilots driven by DLT?

**RV: Digital currency (Central Bank Digital Rupee, ie CBDR) is being explored by policymakers in India, given the focus towards moving towards a digital economy, and the value that digital currency can offer in terms of enabling instantaneous settlements, reduced handling of paper/coins, increased transparency among others.**

14. Is Crypto also earning tax? Build ecosystem, documentation, tokenisation is all going to increase footfall in usage, unless the crypto is taxed the government makes no revenue - please explain.

**LL: In Switzerland, all assets are taxed; this applies to income, assets but especially capital gains. Governments are therefore well advised to welcome crypto and decriminalise it. One question where there is still a lot of legal uncertainty or no case law in connection with crypto is that of inheritance and the handling of crypto in the event of bankruptcy.**

15. Can we have a certification programme on Crypto jointly in partnership with TCS and Swiss regulator? This will enable TCS to lead this change across the globe.

**AB: So far, there is not "certification" the FINMA (Swiss Financial Market Supervisory Authority) plans to establish. The FINMA realized quite soon that first Switzerland was too insignificant to have any influence on Crypto / Blockchain, and that second the role of a regulator was... well, to regulate. And regulating has only 3 main tasks\_ Secure the well-functioning of the financial market / protect the public (the clients) / prevent money laundering and financing of terrorism. One of the tools each regulator uses is to ensure that the banks comply with regulations. So FINMA adopted what they refer-to as a "technologically neutral" approach and clearly stated that it was not interested in the technologies used ... as long as the bank could credibly demonstrate that it could / how it will comply, using this or that technology. It is also for the applicant to prove that the technologies are used in a way compliant and not for the FINMA to certify any technology or function besides a clear application case. What however TCS is doing right now is to establish Crypto / Blockchain able IT systems in Swiss bank(s) and the FINMA is currently approving such systems and processes, thus confirming their being "compliant". This is, if I may say so, the knightly accolade for TCS, then able to provide factual evidence, that its systems ARE approvable. This, judging from the outside, it the most significant competitive advantage, differentiating TCS from all the other suppliers of IT solutions, many of them brilliant, but not able to prove that their solutions can be function within a regulated environment.**

16. Is it fair to say that currently the Quartz plan is to offer Corda-based DLT in a permissioned blockchain for multiple parties to settle and clear trades in real-time and in a compliant way? And anything that has to do with tokenisation of real-world assets etc. comes much later?

**RV: Quartz refers to TCS's solutions that are built on blockchain technology. Quartz enables solutions to be implemented on multiple platforms including Hyperledger fabric, Corda etc. The product suite is designed to be technology neutral so as to offer choice/flexibility for our customers. More info on Quartz can be found at: <https://www.tcs.com/content/dam/tcs/pdf/product-details/Quartz/Quartz-Smart-Ledgers.pdf>**

17. Is it not possible to create a layer on top of legacy banking system that you were talking about and creating blockchain layer on top of legacy without intervention can be solution?

**AB: Again, from the outside and with limited IT know-how: Yes, you can lay your iPhone onto your Commodore 64. Possible but the top-layer is capable of doing all the “legacy” system is doing – better, faster, etc. To create all interfaces and translate all functions in-between these two systems, if technologically possible at all, is an effort not justifiable.**

**RV: It is possible to bring together traditional/legacy and new age technologies like blockchain cohesively, in order to ensure that the end result is more efficient, and achieved with minimal disruption, reusing existing investments in the best possible way. Quartz solutions are built on this principle of Coexistence, Integration and Interoperability. More info on Quartz can be found at:**

**<https://www.tcs.com/content/dam/tcs/pdf/product-details/Quartz/Quartz-Smart-Ledgers.pdf>**

18. Is TCS looking towards issuing Tokens?

**RV: No, TCS will not issue Tokens. We only develop and implement solutions that can help our customers leverage blockchain including for issuing tokens, invest and trade in crypto assets etc.**

19. How can a bank start offering digital assets to clients? Has any bank started offering?

**LL: Many banks already offer crypto transactions for their customers via third-party providers. However, in order to enable full conversion and to be able to use the virtual assets as collateral for loans, etc., banks must have their Virtual Assets Service Provider (VASP) service approved by the local regulator. They must therefore demonstrate that they comply with all the rules of local banking legislation and have the appropriate facilities, regulations and instructions, people with the appropriate know-how and, above all, adequate risk management.**

**Currently, there are only two banks in Switzerland that have this "extension of the banking licence", but they are also currently still limited by the regulator FINMA.**

20. With regards to retail banking converting currency to crypto currency, will it be successful for investing in the future?

**LL: Yeah, I think Stable Coins will prevail here.**

21. How can Quartz Solution can add value to existing companies in the Crypto space?

**RV: Quartz has recently launched a Crypto Services solution which can enable Banks, Investment firms and others provide services related to trading and transfer of popular crypto currencies and digital assets. You can read more about this solution at: <https://www.tcs.com/tcs-launches-quartz-smart-solution-help-financial-institutions-offer-cryptocurrency-trading>**

22. How can cryptos impact the current job market? As of now even decentralized organizations are not open to remote/global hiring? Can you please share your thoughts on this.

**LL: We live in constant transformation. Especially product know how is outdated extremely fast. In the area of Blockchain and Crypto we should build up concept know how as employees and the educational institutions should make an effort to impart this knowledge as soon as possible. Europe and America are still sleeping here, Asia is already very far away in some cases.**

23. Will the Indian government ban crypto considering it a threat or parallel to the current banking system? Is TCS contributing to advise RBI about it?

**RV: While Cryptocurrencies were banned earlier in India, this is a subject which is currently under evaluation by the Govt/Policy makers. We believe Digital currencies are likely to enter the mainstream economy in the future, timelines are not known at this time.**

24. Quartz is a Blockchain or Crypto exchange platform?

**RV: Quartz refers to product solutions being developed by TCS and implemented on blockchain technology. It is not a Crypto exchange platform. You can read more about Quartz as well as our Crypto Services offerings at:**

<https://www.tcs.com/quartz-blockchain-solutions>

<https://www.tcs.com/tcs-launches-quartz-smart-solution-help-financial-institutions-offer-cryptocurrency-trading>

25. When will the Indian government legalize CRYPTO CURRENCY?

**RV – See answer to Question 29**

26. How are we progressing in framing the crypto bill?

**RV – See answer to Question 29**

27. Is there a specific cryptocurrency (Bitcoin, etc) that you think it might become the standard or most common in use? And why?

**LL - See answer to question 6**

28. Similar like M-Pesa, Kenya's first mobile wallet launched in 2007 to seamlessly transfer funds throughout Kenya using SMS. How does similar initiatives bridge the gap of giving the banking services to the population outside banking services and use crypto currencies to create new and affordable services?

**LL: At the end of the day, the community decides which systems will prevail. At the moment there are so many concept ideas and offers on the market. Technology is secondary, primarily it is about a larger group of people joining together to form a community and formulating needs together, which can then be satisfied with a solution.**

29. Do you think there is a limit in the number of cryptocurrencies that can coexist in the ecosystem or only few will survive? If the latter, how do you see Libra playing out if successful? Could they dominate the market? (at least in the West)

**AB: The current technology can handle unlimited numbers of cryptocurrencies. In theory, there could be one cryptocurrency per human being, per corporation, even per asset. Yes, first crypto currencies (Bitcoin, Ethereum, etc.) compete on the same value proposition: ease of handling. On such equal cryptocurrencies there may well be a consolidation. But there is an unlimited number of cryptocurrencies possible, each having a very specific and unique function or value, and these may live next to each other without**

competing and displacing each other. It will then, and TCS does that already now, be for the IT systems to consolidate all these different cryptocurrencies and functions into one client user interface.

30. Blockchain is regulated by algorithms, so why is another regulator needed? Won't it defeat the purpose of decentralisation?

**AB:** Because there are two different meanings to "regulation". Yes, algorithms provide functions of controlling its processes in an automatized way and this can be referred to as "regulated" or "self-regulating". But each jurisdiction has its own laws and regulations which have to be adhered to by anyone offering to the public financial services. The governmental body supervising these financial intermediaries (banks, insurances, etc.) is called the "regulator" or "the supervisory authority". In very precise terms, the legislative power of a nation is the "regulator", as it issues the laws regulating activities of financial intermediaries and the supervisory authority, the "supervisor" is a governmental administration exercising the executive branch of power, making sure such laws and regulations are adhered to.

31. What are your and NSE's views on public blockchains?

**RV:** A Public Blockchain is permissionless and decentralized as no single entity controls the network. Public blockchains are more suitable for areas like Crypto Services, which enables transactions on cryptocurrencies such as Bitcoin, Ether etc. They are also preferred when an immutable record needs to be accessed by anyone outside the network, using a valid primary key (e.g. health record of a patient). Public blockchains are not suitable for business processes where speed, privacy and scalability are important.

32. Can you share what are the regulators opinion in Crypto assets in Middle East

**RV:** The Middle East is experimenting with blockchain technology in a big way. Except for a few countries, the regulators in the region are largely supportive with respect to digital currencies/blockchain initiatives. The UAE's Securities and Commodities Authority announced last year that they have approved a plan to introduce a specific framework to manage crypto asset operations. The Smart Dubai project is well known – the Dubai government is one of the early adopters of blockchain technology.

33. When can we invest in Quartz?

**RV:** Quartz is not a cryptocurrency like Bitcoin, Ether or Ripple. It is a suite of product solutions from TCS. Quartz is targeted at helping organizations across multiple domains leverage blockchain meaningfully for their businesses. For more information, please visit <https://www.tcs.com/quartz-blockchain-solutions>

34. I learnt Swiz adopted cryptos for purchasing goods. How is that going? What are the findings of it? Could you guys explain it.

**LL:** See answer to question 8

35. What is your view, will Crypto-assets compete with government assets (T-Bills and G-Bonds) and non-government assets (Fixed Income and Money Markets assets).

**RV:** Crypto assets are gaining popularity in some countries such as Switzerland, Australia while they are relatively slow to take off in other countries. This is mainly due to the stance taken by regulators in different countries. Investors in most countries are in general showing interest to hold crypto assets as part of their

portfolio since these assets provide many benefits including portfolio diversification, lower transaction costs, flexibility, and better accessibility (24/7). Crypto assets will therefore become one more asset class along with traditional asset classes such as Equities, Debt instruments.

36. Currently, there are more than 4 thousand cryptocurrencies and currently, users enjoy anonymity and decentralization of the system without any bank (I don't say that it is good practice). Sorry for a silly question, but where is value-added appears for your customers of the crypto bank? - compliance with regulators, exchange between cryptocurrencies and between cryptocurrency "regular" currencies, possibility to make a safe investment, maybe you will use your own stable cryptocurrency no which we could rely on.

**LL: We live in a world where all cash flows for the legal purchase of goods and services are monitored (AML). Traditionally, banks have always been responsible for the transport and safekeeping of assets in the system. Whether gold, paper money or virtual currencies, what is the difference? The future for digital assets will be black and white. white = legal = banks / black = illegal = unregulated providers**

37. Considering the fact that TCS launches a Crypto Platform, can we assume that TCS would have discussed with the concerned government authorities on the legality and regulatory framework of Cryptocurrency? What if Cryptocurrency will be banned (in India) in future as happened earlier?

**RV: TCS has not launched any platform for trading of crypto assets, TCS has only launched an IT solution that can be implemented by banks and financial institutions in order enable their end customers to buy, sell and transfer cryptocurrencies. The banks will need to comply with the regulations in their respective jurisdictions.**

38. Would you agree the only regulation that can be applied to crypto services is more or less on simply taxing?

**AB: Not really. A regulation is a control by the executive branch of power of a jurisdiction, which makes sure that the laws and regulations are adhered to. If however you refer to "regulating" as to somehow control the growth or tax a value created or services provided, then yes, taxation is one of the theories which can be applied – transfer of funds to be taxed is one of the not so new taxations theories but which has regained momentum.**

39. Is TCS is in touch with policy makers from Indian government to bring positive regulations in this space?

**RV: Regulations in India are expected to be published after the ongoing evaluation on cryptocurrencies is completed by the Govt/policy makers.**

40. When it comes to regulations (KYC, AML, etc.): don't you think Luxembourg is not a place to go as an alternative to FINMA, BAFIN, etc. regulations?

**LL: If you are happy there and are well connected, why not. However, Luxembourg is also subject to the EU and the cards are being reshuffled with the brexit in the financial market. Switzerland is and remains politically and economically stable and independent.**

41. How can cryptos change the current job market? As of now many decentralized organizations worldwide are not open to remote/global hiring? Please share your thoughts on this

**LL: See answer to question 27**

42. What kind of blockchain problems are going to be solved by Quartz?

**RV: Quartz is targeted at helping organizations across multiple domains leverage blockchain meaningfully for their businesses, in order to eliminate issues related to duplication of information, reconciliation, delays in settlements, lack of auditability of transactions, lack of transparency. For more information, please visit <https://www.tcs.com/quartz-blockchain-solutions>**

43. Can TCS provide Trust Wallet for India?

**RV: Yes. Our solutions today provide the ability to store and manage crypto assets securely, incorporating cryptographic key management. You can reach out to us at [tcs.quartz@tcs.com](mailto:tcs.quartz@tcs.com) to discuss further in case of interest.**

44. Will quartz be involved with the regulators to get better regulation for Crypto Assets?

**RV: TCS is primarily focussed around providing IT solutions that can help our customers leverage blockchain in their businesses. Our Crypto Services solution is designed to be used by Banks/Investment firms in countries where regulation permits their customers to transact in cryptocurrencies/digital assets. We work with Regulators when requested, as part of our Consulting services and to help the Govt/Policy making institutions evaluate the benefits of adopting latest technologies.**

45. How can a bank start offering digital assets to clients? Has any bank started offering these?

**LL: See answer to question 24**

46. How will the Cryptocurrency effect the Entertainment Industry? Like Music and Digital Art Industry? Are there any banking products related to artists as India has one of the world's biggest creative talent pools?

**RV: India has one of the largest use of smart phones by citizens globally. The use of digital currencies/Crypto in the mainstream economy is likely to pick up once this is approved as a valid payment option. Banking products are available to handle requirements of SMEs, Retail and also to enable Financial inclusion.**

47. What kind of Gateway does Quartz provide to the customers? is it a payment solution for crypto? or anything else, would like to know more about it.

**RV: Quartz Gateway enables organizations across various domains to easily integrate their existing applications with blockchain ecosystems/networks, using APIs. It is not a payment solution for Crypto or a Crypto exchange. For more information, please visit <https://www.tcs.com/quartz-blockchain-solutions>**

48. How do businesses connect to Quartz?

**RV: Information on Quartz is available at <https://www.tcs.com/quartz-blockchain-solutions>. You can also reach out to us at [tcs.quartz@tcs.com](mailto:tcs.quartz@tcs.com) to discuss your requirements around implementing blockchain.**