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BIPSS Towards a Secure World

G20 Global Crypto Policy: Digital Asset Security and Governance

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Technology revolutionised the globe in an unimaginable manner. The reality of today was not even a dream of yesterday, yet it is the future now. Pen and paper shifted to word processors, painting shifted to digital art, phone calls shifted to WhatsApp, TV channels shifted to Netflix, guns shifted to drones, and inevitably, cash notes shifted to digital currency. The trace of digital currency can be said to gain relevance in discussions with the launch of online bank transfers, payment applications and online wallets. Debit cards, Credit cards, and PayPal function similarly to the emerging digital currency. An individual uses an electronically mapped document to pay the purchase cost through an intangible procedure and resource. One thing was still the same in such transactions, the source of the currency. The currencies held in debit cards, credit cards and PayPal are national currencies. The currency game changed in 2008 when Bitcoin was launched. A digital currency, completely beyond any national currency, fluctuates based on demand and supply, referred to as cryptocurrency. Cryptocurrency has become so popular today that once, Tesla accepted payments in Bitcoins. Today, governments all over the globe are addressing the existence of these cryptocurrencies and aiming to initiate policies to ensure financial security at the consumer end. The cryptocurrency arena became explicitly intriguing, with an International Organisation, the Group of Twenty (G20), taking the initiative to establish a crypto policy.

On account of such, this commentary focuses on blockchain technology and cryptocurrency overview, the status quo of G20 crypto policy, and, lastly, suggesting a set of policies for the future of digital asset security and governance. It must be kept in mind that the policies enacted in the future should simplify the process, system and management of cryptocurrencies for the end users.

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Blockchain Technology & Cryptocurrency

Along with humans, the internet is also developing. The future internet generation is called Web 3.0, which processes data faster and almost like humans. Technologies like cryptographic security architectures were discussed in the scholarly world as early as the 1990s.[2] Gubbi et al. discussed the emergence of the Internet of Things (IoT) in Web 3.0.[3] Wang et al. argued the adoption of blockchain technology in supply chain management systems and the social and economic implications of blockchain.[4] On the other hand, Kshetri argued that blockchain's decentralised feature is highly efficient in securing cyberspace and ensuring protection.[5] Fabris argued that in future, even if societies do not turn cashless, the shift to central bank digital currencies will be evident.[6]

Date	Progress
1991	Stuart Haber and W Scott Stornetta illustrated a cryptographically secured chain of blocks
1998	Nick Szabo (Computer scientist) works on 'bit gold', a decentralised digital currency
2000	Stefan Konst's version of cryptographically secured chains, plus ideas for implementation published
2008	Satoshi Nakamoto (pseudonym) released a white paper establishing the model for a blockchain
2009	Bitcoin transactions recorded in a newly implemented blockchain
2014	Blockchain technology's potential for other financial, inter-organisational transactions is explored after separating it from the currency. A second version of blockchain was invented, referring to applications beyond currency. Computer programs were introduced into the blocks, representing financial instruments like bonds by the Ethereum blockchain system.

Table 1: Blockchain development time frame
Source: The Institute of Chartered Accountants in England and Wales (ICAEW)[7]

[2]Gutmann, P. 1999. "The Design of a Cryptographic Security Architecture." 8th USENIX Security Symposium. www.scopus.com.

[3]Gubbi, J., R. Buyya, S. Marusic, and M. Palaniswami. 2013. "Internet of Things (IoT): A Vision, Architectural Elements, and Future Directions." Future Generation Computer Systems 29 (7): 1645-1660. doi:10.1016/j.future.2013.01.010. www.scopus.com.

[4]Wang, Y., J. H. Han, and P. Beynon-Davies. 2019. "Understanding Blockchain Technology for Future Supply Chains: A Systematic Literature Review and Research Agenda." Supply Chain Management 24 (1): 62-84. doi:10.1108/SCM-03-2018-0148. www.scopus.com.

[5]Kshetri, N. 2017. "Blockchain's Roles in Strengthening Cybersecurity and Protecting Privacy." Telecommunications Policy 41 (10): 1027-1038. doi:10.1016/j.telpol.2017.09.003. www.scopus.com.

[6]Fabris, N. 2019. "Cashless Society - the Future of Money Or a Utopia?" *Journal of Central Banking Theory and Practice* 8 (1): 53-66. doi:10.2478/jcbtp-2019-0003. www.scopus.com.

[7]"History of Blockchain." ICAEW. Accessed March 12, 2023. https://www.icaew.com/technical/technology/blockchain-and-cryptoassets/blockchain-articles/what-is-blockchain/history.

Blockchain technology is used to develop cryptocurrencies. Bitcoin operates on the initial and largest blockchain today. Other blockchains exist, like Ethereum and Ripple, where new cryptocurrency projects can be created and have already been created. The table above provides an evolution of blockchain technology and the introduction of cryptocurrencies. The next table portrays certain elements of blockchain technology.

Distributed ledger technology	The distributed ledger and its immutable record transactions can be accessed by everyone. This shared ledger eliminates the duplication of effort typical of traditional business networks and records transactions only once.
Immutable records	None can alter or tamper with a transaction after it's been recorded to the shared ledger. The system works similarly to the traditional accounting journal process.
Smart contracts	A smart contract is stored on the blockchain and executed automatically to enhance transaction fees. A smart contract can define corporate bond transfer conditions, including terms for paying travel insurance.

Table 2: Elements of Blockchain
Source: International Business Machines Corporation (IBM)[8]

The secure and systematic features of blockchain technology initiated the evolution of digital currency. Currently, around 7000 to 10,000 cryptocurrencies are operating in the crypto industry. Given such, it is of vital importance to explore the policy implications of such currencies. As a result, the next heading will focus on the existing and upcoming policies in the crypto industry.

Crypto Policy Status Quo

This heading will mostly analyse the existing crypto policies around the globe and will aim to incorporate the learnings from each country. Several countries have banned cryptocurrency completely, and some partially. Countries like Algeria, Bangladesh, China, Egypt, Iraq, Morocco, Nepal, Qatar, and Tunisia have completely banned cryptocurrency. 42 other countries

[8]"What Is Blockchain Technology - IBM Blockchain." IBM. Accessed March 12, 2023. https://www.ibm.com/topics/blockchain.

have imposed an implicit ban.[9] The table below provides an overview of crypto policies among the G20 members.

This table will help the readers understand the existing perspective of the members of G20 towards cryptocurrency. In the case of policymakers, they can understand how to shape the G20 crypto policy.

Table: G20 members' crypto policies[10] [11]

Country	Policy
Argentina	Legal and no specific regulation imposed yet
Australia	Cryptocurrency laws and regulations are lenient
Brazil	The country passed a law legalizing cryptocurrencies as payment methods, boosting the adoption of digital currencies.
Canada	The initial state to allow a Bitcoin exchange-traded fund (ETF) and trading on the Toronto Stock Exchange.
China	Banned all crypto activities in 2022
France	Legal and regulated
Germany	Considers crypto as private money
India	30% tax is imposed on all crypto investments.
Indonesia	Legal and regulated
Italy	Imposed capital gains tax (14%-26%)
South Korea	Parliament approved a 20% tax on digital assets to take effect in 2022. The country is working on the Digital Asset Basic Act to take shape in 2023.
Japan	Recognises cryptocurrencies as legal property under the Payment Services Act (PSA). Japanese Virtual Currency Exchange Association (JVCEA) was established in 2020.
Mexico	Outlawed by the government
Russia	Recognised as property and ease of trade
Saudi Arabia	Illegal
South Africa	Strictly regulated
Turkey	Treated as a commodity and banned payment options

[9]Pérez, J. V. "Countries Where Cryptocurrency Is Legal and Illegal." Money, 21 Oct. 2022, money.com/cryptocurrency-legal-status-by-country.

[10]Wilser, J. "The World's Best Crypto Policies: How They Do It in 37 Nations." CoinDesk Latest Headlines RSS. CoinDesk, January 26, 2023. https://www.coindesk.com/consensus-magazine/2023/01/23/the-worlds-best-crypto-policies-how-they-do-it-in-37-nations/.

[11]Bajpai, P. "Countries Where Bitcoin Is Legal and Illegal." Investopedia. Investopedia, February 6, 2023. https://www.investopedia.com/articles/forex/041515/countries-where-bitcoin-legal-illegal.asp.

United Kingdom (UK)	No specific cryptocurrency laws, yet regulated. Classifies cryptocurrency as property but not legal tender.
USA	Cryptocurrency is legal with a set of rules and regulations. The Securities and Exchange Commission (SEC) and the Commodity Futures Trading Commission (CFTC) can regulate specific coins and the market.
European Union (EU)	Legal. Tax ranges from 0% to 50%. Policies are being developed.

G20 Crypto Policy

The previous heading illustrates the crypto policies and regulations implemented by the individual members of G20. India being the current president of G20, wants to establish a common global crypto policy for all G20 members and even beyond the members. At present only three members, China, Mexico and Saudi Arabia, outlawed crypto. The other members allow the operations of crypto, and even accepts payment in crypto, like Brazil. As a result, it can be stated that the adoption of a global crypto policy will be evident under India's presidency.

The institutions dealing with finances has always been regulated to ensure the safety of the customers. The traditional institutes are international, central and local banks, which at times also declared themselves bankrupt. For instance, the Silicon Valley Bank collapsed Just few days earlier. Situations are similar in the crypto industry. By the end of 2022, FTX a crypto exchange platform declared bankrupt.

In a situation like such, what is the legitimacy of banks and crypto platforms? Are individuals really safe with their savings and investments held up in banks and crypto platforms? In this complex paradigm, G20 must evolve as an innovative policy making body. The goal should be to secure the crypto industry for consumers, keeping the flow of innovational juices.

One regulatory policy that must be enacted is that the crypto exchange platforms must report their usage of customer funds. Since these platforms are beyond the borderlines, the platforms must report to intergovernmental or supranational organisations like the G20 or the EU. The financial auditors and experts will assess and rate the fund usage schemes of the exchange platforms.

The intergovernmental organisations must also run through and audit the financial statements of the exchange platforms. Reports say that FTX had faulty financial statements with varying

values in the documents. It is said to be still unclear that how much the FTX platform owes to the customers. If this issues were discovered earlier, maybe today the situation would not have been this worse.

Innovating policies and regulations regarding payments in crypto is extremely complicated. For instance, many companies accept payments in crypto and they are beyond the regulations of the governments. In that case, what can intergovernmental or supranational organisations do is vivid. One route that G20 can follow in terms of the payment scopes by crypto can be initiating a list of coins and platforms. G20 should study and analyse a number of cryptocurrencies and exchange platforms based on pragmatic financial parameters. Eventually, G20 can release a list of entrusted coins and platforms safe for trading and accepting payments.

Conclusion

The G20 presidency of India highlights the role of the Asian power house in the global context. India is highly keen in establishing a global cryptocurrency policy which can be followed by the rest of the world. Being in that position, India must be open minded, innovative, and exclusive. India's decision and mindset will reshape the crypto dimension in a new order. India's role will affect all the stakeholders, including the consumer base. As a result, the policies and laws are not simply limited to the coins and platforms but also extending to the usual citizens.

The evolution of crypto and blockchain technology has changed the dynamics of currency. The world is already going cashless. In a cashless world, what should we uphold as currency or medium used for exchange of goods? Definitely humankind will not step back to early ages where commodities were exchanged with other commodities or golds. Humankind only looked forwards and always looks forward. As a matter of fact, the world should accept and embrace the innovation of digital currency and seamless payment opportunities.