



DR RODERIK J P STROBL EXPLORES THE SWISS AND LIECHTENSTEIN CRYPTO VALLEY AND THE GROWING IMPORTANCE OF SMART CONTRACTS

The Swiss and Liechtenstein Crypto Valley is an international hub where blockchain is a 'mindset', enabling blockchain technology to change how the world interacts and transacts. It is the home of more than 1,100 crypto companies valued at USD611.8 billion collectively, with over 1,000 employees in the top 50 companies as of 31 December 2021. This is an increase in valuation of such companies of over 460 per cent compared to 12 months prior. Ethereum, which is legally a Swiss charitable foundation, was valued at USD438.18 billion in that same period and spearheads the list of the top 50 companies.

On 3 May 2016, the city of Zug introduced bitcoin as a means of payment. The initial coin offering boom during 2017 and 2018 attracted many blockchain projects, some of which were terminated by the Swiss Financial Market Authority (FINMA) because they were illegal. FINMA has approved two digital asset banks in Switzerland: Sygnum Bank and SEBA Bank. In 2021, the stablecoin CryptoFranc,¹ which is a payment token for the blockchain ecosystem, was introduced, including integrated payment platforms such as the bitcoin-based lightning payments infrastructure for over 85,000 merchants.²

The change of paradigm from proof-of-work to proof-of-stake blockchains has triggered demand for new, disruptive solutions, such as staking services.³ Non-fungible tokens disrupted and awed the blockchain world in 2021, specifically in their broad range of applications. However, risk-management issues related to security, storage, key management and the linkage between tokens and underlying assets remain a challenge for decentralised users.⁴

In September 2020, the Swiss *Federal Act on the Adaptation of Federal Law to Developments in Distributed Ledger Technology* was adopted by the Swiss parliament, and it came into force on 1 February 2021. It includes fundamental laws that allow the licensing of distributed ledger technology in Switzerland.

SMART CONTRACTS AND PERMISSIONLESS TRUST

Smart or intelligent contracts are programs stored on a blockchain. They run when predetermined conditions are met. Once they are on the blockchain, they execute automatically and cannot be modified. This aspect poses important challenges in the event of disputes or unenforceability. If any changes are desired by the developer of the smart contract, the entire contract needs to be cancelled or redrawn. Smart contracts are enforceable if they:

- include an offer, acceptance and consideration;
- include legally permissible terms; and

- are legally eligible for electronic signatures.

More businesses are using smart contracts around the world and this tendency is growing because they provide the parties an efficient way to digitise and execute their transaction.⁵ If similar or the same type of transactions are repeated, the existing smart contracts can be redrafted in a quick and cost-effective manner. Smart contracts imply permissionless trust because of the secure, non-alterable transaction protocol.⁶

Every transaction is recorded by every member of the network, called nodes, sharing one common ledger of all balances and transactions.⁷ Permissionless trust is created electronically by processing power to trust without the reliance on the word of an individual or third party. Any dishonesty would be discovered immediately and no record may be altered without the consent of a majority of network members.⁸ Only holders of the private keys can own cryptocurrencies. Securing the private keys is of pertinent importance. However, some academics have posited that permissionless trust on blockchain networks is unsuited to a decentralised internet because of potential system performance failures and pseudo-anonymity.⁹

CONCLUSION

Undoubtedly, the Crypto Valley is likely to grow in importance in the future because of its innovative drive. Smart contracts too are growing in importance and imply permissionless trust, subject to a failure-free blockchain technology.

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¹ Stablecoins are cryptocurrencies, the value of which is pegged, or tied, to that of another currency, commodity or financial instrument. ² CV VC Top 50 Report 2021 ³ Staking is the way many cryptocurrencies verify their transactions, and it allows participants to earn rewards on their holdings. ⁴ R J P Strobl, 'Tales from the Crypt', *STEP Journal*, Vol29 Iss6 (2021), pp.60–61 ⁵ Jonathan Herpy, 'Smart Contracts and the Law: What You Need to Know', *Forbes* (2022), bit.ly/3Ceh0KS ⁶ R J P Strobl, *The Key Factors that Influence Trust in a Swiss Family Office Banking Relationship: An Explorative Mixed-Methods Study in Swiss Private Banking*, Dissertation (2020), University of Southern Queensland ⁷ Saifedean Ammous, *The Bitcoin Standard*, 2nd edn (Hoboken: Wiley, 2021) ⁸ Above, note 6, at p.174. ⁹ P G Lopez, A Montresor and A Datta, 'Please, Do Not Decentralize the Internet with (Permissionless) Blockchains', *Proceedings – 19th International Conference on Distributed Computing Systems 2019*, pp.1,901–1,911



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