Summary of <https://scholar.sun.ac.za/handle/10019.1/103531>

This study intends to identify the most significant, ingrained risks posed to transactions in a digital environment and to understand how some specific characteristics of blockchain technology could potentially address those risks. Currently, the major risks with the exchange of digital assets are identified to be Lack of Trust, Double-spending, Repudiation and Theft (including fraud). In order to provide blockchain solutions, the author has first carefully studied the blockchain transaction process by splitting it into six stages. This has been further explained using the Bitcoin application as an example. The research focuses on how the characteristics of blockchain technology such as Peer-to-Peer (P2P) network, Distributed ledgers, Consensus mechanism, Asymmetric cryptography, Immutability could address the identified risks. The author has put together the risks and the corresponding blockchain characteristics in a mapping which serves as a quick reference matrix for potential users. Lastly, it is to be noted that blockchain brings into play additional risks, mainly associated with requirement of resources and lack of trusted third party, which should be considered before implementation.