# BLOCKCHAIN TECHNOLOGY RISKS

Technology is the great disruptor of all industries, and now it is the financial services industry that is feeling the impact. Technology is transforming the way financial service providers operate as well as the services clients are looking for. BDO takes a proactive approach to exploring new business cases and technologies. We monitor the legislative landscape in which financial service providers operate and help clients find solutions. Using the knowledge and resources of our extensive international network, our specialists provide a wide variety of services to help clients focus on their core business and stay ahead of competitors.

Information technology is continuously evolving in fresh and innovative ways, providing businesses with the ability to streamline business processes, decrease operating costs and increase competitive advantage through digital disruption. Our knowledge of emerging technologies allows us to provide governance, risk and compliance assurance on an array of emerging technologies.

## ALLIANCE PARTNERS
- Risk assessment of all parties involved in the blockchain alliance

## OPERATIONAL AND IT RISKS
- Scalability
- Latency
- Integration with existing IT policies

## INFORMATION SECURITY RISK
- Blockhain security risk assessments
- Focused consensus security risk assessments
- Applicability to current information security policy

## THIRD PARTY RISK
- Understanding risk assessment processes in seletcing a vendor and selecting a consensus mechanism (e.g ethereum, hyperledger, corda)

## FINANCIAL RISK
Understanding the risk assessment around unauthorised transfers of value within the blockchain and associated controls.

## STRATEGIC, POLICY AND REGULATORY RISK
- Understanding how the solution fits into the strategic goals of the firm
- Understanding how the solution complies with policy and regulation

## LEGAL RISK
- Assessing legality of smart contracts in line with laws and regulations.
- Understanding legal contracts with regards to alliance partners

## IMMUTABILITY RISK
- Understanding how incorrect data entries in the blockchain will be handled through policy and procedures due to the inherent immutability of blockchain.

BDO

# IMPORTANT POINTS:

- Dependency on central databases (oracle)
- Distributed ledger risks
- Different type of consensus mechanisms – any risks here
- Crypto custody risk
- Scalability of blockchain solutions
- Safekeeping of private keys
- Regulatory compliance
- Onboarding to be inline with FICA and AML
- Transactional monitoring
- Integration risk (As blockchain integrates with other systems)
- Collaboration risk - Not enough parties involved in the environment, eg a Nedbank blockchain doesn't work for absa

Crypto Custody/Crypto Exchange cheat sheet

- Onboarding risk and allocation of crypto's
- Cold storage vs on-exchange
- Access controls
- Segregation of client crypto's from FS institution's crypto
- Pricing risk

# CRYPTO CUSTODY/CRYPTO EXCHANGE CHEAT SHEET

## ONBOARDING RISK AND ALLOCATION OF CRYPTO'S

- Implement strict legal and regulatory requirements (FICA and AML) to be fully complied with when onboarding (i.e. clients).
- Apply relevant standards on KYC (Know-Your-customer) and AML when accepting cryptocurrencies.
- Modify the AML program by including cybersecurity and customer protection to supports the organizations functionality and/or programs

## COLD STORAGE VS ON-EXCHANGE

- On-exchange storage provides on the go access to funds. However, because the crypto wallet is connected to the internet presents additional vectors of attack by malicious third parties.
- Cold storage reduces the risk of attack as funds are not stored on internet enable devices. However, cold crypto wallets may require users to keep track of an additional physical object and are less convenient for accessing your funds quickly or on the go.

## ACCESS CONTROLS

- Implementing effective key and digital-certificate management infrastructure and solutions in place to protect and maintain the public and private keys.
- Public permissioned blockchains will need to manage and protect the integrity of the consensus algorithm within their respective environments.

## PRICING RISK

Cryptocurrency prices are not stable. High jumps in prices which are beyond any investors guess may also mean that the prices can drop sharply, leaving a lot of investors empty-handed.

## SEGREGATION OF CLIENT CRYPTO'S FROM FS INSTITUTION'S CRYPTO

Custody Rule dictates that qualified custodians must segregate client assets into separate accounts or into accounts under the name of the investment adviser as agent or trustee for the client

# EMERGING TECH TOOLBOX

FOR FURTHER INFORMATION CONTACT

Nevellan Moodley
Partner and Head of Financial Services Technology
nmoodley@bdo.co.za

**BDO**