

Chess Replacement Consultation Paper Feedback

Executive Summary

Upon reading the April 2018 published ASX consultation paper in conjunction with Digital Asset's white paper I have three points of feedback relating to:

- The ASX's classification of the CHESSE replacement system as a "distributed ledger";
- The method of consensus that the replacement system utilises; and
- The level of security of the replacement system.

Points two and three flow from concerns relating to the first and most important point – the system's classification as a "distributed ledger".

At the outset, these points of feedback generally stem from the fact that distributed ledger technology is, at face value, a confusing concept. Furthermore, there has been significant proliferation of misinformation regarding the technology, with the term often used erroneously in the mainstream media. Despite the misinformation that exists, there are certain fundamental characteristics that distributed ledger technology has been accepted to possess.¹ It is my general submission that the CHESSE replacement system does not qualify as a distributed ledger. Therefore, if the term is to be utilised for promotional purposes then an explicit disclaimer regarding the system's characteristics should be communicated.

Classification of the CHESSE replacement as a distributed ledger

The consultation paper incites concern regarding the classification of the new system as a distributed ledger. The ASX's migration to a distributed ledger format has been widely publicised in the both the domestic and international media. However, the term distributed ledger has certain connotations that seemingly the CHESSE replacement system will fail to deliver. As such, this publicity is misleading. Furthermore, the system's failure to deliver these features only becomes apparent upon reading Digital Asset's whitepaper on the technology, suggesting that the ASX is averse to flagging the limits of the replacement system.

Use of a distributed ledger has the inherent implication that the process of verifying transactions is distributed, with distribution, by definition indicating that verification involves two or more parties. The ASX will have the sole capacity to verify transactions on the replacement system, and this fact is not apparent upon reading the consultation paper. Only upon reading the consultation paper in conjunction with the Digital Asset white paper is it evident that the ASX's system does not involve transacting parting verification. In this respect it is contested that the structure described by Digital Asset, that seemingly it is the intention that the ASX will utilise, whereby all parties, other than the committer node, have read-only access, does not meet the definition of a distributed ledger. By definition, a distributed ledger requires consensus. If only one party, in this instance the ASX, has the ability to verify transactions, then the process does not involve consensus, and the system is not a distributed ledger.

¹ A Simpson, 'Australian Regulation of Blockchain and Distributed Ledger Technology in Banking and Finance' (2018) 29 *Journal of Banking and Finance Law and Practice* 73.

Method of consensus that the replacement system utilises

Upon reading the consultation paper it was not clear what method of consensus the replacement system would utilise. However, upon reading Digital Asset's white paper it became apparent that there was no need for the ASX to disclose a method of consensus as the ability to verify rests solely with the ASX. As mentioned above, consensus is a fundamental characteristic of a DLT framework that seemingly the CHES replacement will not possess.

Level of security of the replacement system

Security is often cited as a key strength of a distributed ledger. However, this strength is contingent on the infallibility of the method of consensus employed by the system. Given that the CHES replacement will not involve a consensus process between parties, touting security as a reason for utilising a distributed ledger is misleading.

Conclusion

In conclusion, it is suggested that going forward promotion of the CHES replacement system as a distributed ledger be clearly qualified due to the planned replacement's lack of multi-party verification.