Oracles

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An oracle feeds external information to a smart contract. Price oracles tell a lending protocol what collateral is worth, so that it can liquidate under-collateralised positions. Chainlink is the dominant provider and aggregates prices from many sources through its own network of nodes. The oracle is the point at which the deterministic world of the ledger meets the uncertain world outside, and it is therefore the point at which most disputes about automated performance arise. A stale or manipulated price can liquidate a solvent borrower in seconds.

Who is liable when that happens? The protocol cannot be sued. The oracle network's terms typically disclaim all liability. The node operators are pseudonymous. Under Swiss law the question is whether anyone owed a duty of care to the liquidated borrower under Art. 41 CO or whether the borrower assumed the risk by using a protocol whose code published the oracle dependency. Under Singapore law the analogous question is whether a duty of care arises under the two-stage test in Spandeck Engineering v Defence Science & Technology Agency, which Part J, Chapter VI applies.[1] For the lawyer drafting a tokenised bond or fund that relies on an oracle, the practical answer is to specify the oracle in the terms, state what happens if it fails, and give the issuer a manual override with a defined procedure.

Notes

1. Spandeck Engineering (S) Pte Ltd v Defence Science & Technology Agency [2007] SGCA 37, at [73]–[86] (the single test for duty of care in negligence).

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