SINGAPORE COURT OF APPEAL ALLOWS CLAIMS AGAINST CRYPTOCURRENCY EXCHANGE

On 24 February 2020, the Singapore Court of Appeal handed down its decision on the first cryptocurrency litigation in Singapore. The decision provides important guidance on the application of the doctrines of unilateral mistake to the latest technology and assessment of the knowledge underlying the operation of a machine; it also sheds light on the relationship between a cryptocurrency exchange and its users.

BACKGROUND

The detailed background of this case was set out in our previous briefing discussing the decision of the Singapore International Commercial Court (SICC) in April 2019.

The dispute arose out of transactions which took place in April 2017 when a UK-based electronic market maker, B2C2 Ltd, placed orders on a Singapore cryptocurrency exchange, Quoine, to sell Ethereum in exchange for Bitcoin. Due to a "technical glitch" on Quoine's platform, Quoine's software closed out the positions of two margin traders (Margin Traders) incorrectly and placed orders to sell their assets to B2C2 at B2C2's offer price. B2C2's orders were executed at a rate approximately 250 times the precedent rate traded on the same day. Quoine noticed the error on the following day and unilaterally reversed the trades. B2C2 commenced legal proceedings, alleging that Quoine's unilateral cancellation of the trades once the orders had been effected was in breach of contract or breach of trust.

At the court below, B2C2 was successful in all its claims. The majority of the Court of Appeal dismissed Quoine's appeal on the breach of contract claim, but allowed its appeal on the breach of trust claim.

In this briefing we discuss the significant points from the Court of Appeal's judgment, including the application of traditional legal doctrines to the world of algorithmic trading and the contrasting approach advocated by Mance IJ in his dissenting judgment.

UNILATERAL MISTAKE IN THE CONTEXT OF ALGORITHMIC TRADING

The central contention in Quoine's defence was that the contracts underlying the disputed trades (Trading Contracts) were void or voidable for unilateral mistake at common law and in equity. Quoine alleged that the Margin Traders

Key findings

- Pricing abnormalities did not prohibit the customer's contractual entitlement to the proceeds of disputed trades.
- The counterparties' mistaken assumption as to how the platform would operate was not a mistake as to a *term* of the contract. The contract therefore could not be vitiated for unilateral mistake at common law.
- Where the knowledge underlying algorithmic trading is relevant for the purpose of legal analysis, it is the programmer's knowledge that is relevant (up to the time that the contract is formed).
- Segregation of a cryptocurrency exchange's assets from its customer's is insufficient to form a trust relationship.
- Parties involved in cryptocurrency trading should have properly drafted terms of business that sufficiently protect parties' interests in case of contingency events including technical abnormalities.

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entered into the contracts with B2C2 for buying and selling Bitcoin and Ethereum under the mistaken belief that they were transacting at prices that accurately represented or did not deviate significantly from the true market price; and B2C2 had actual or at least constructive knowledge of such mistaken belief.

Quoine had to prove:

1. In relation to unilateral mistake in common law, the relevant mistake must be about a fundamental term of the contract[1];
2. B2C2 must either have actual knowledge (for unilateral mistake in common law) or constructive knowledge (for unilateral mistake in equity) of the mistake;
3. In relation to unilateral mistake in equity, B2C2 was engaged in some unconscionable conduct in relation to the relevant mistake.

On the first question, the Court of Appeal disagreed with the court below that the alleged mistake was as to a *term* of the contract. Mindful that the prices at which the Trading Contracts were arrived at by operation of the parties' respective algorithms and that these had operated exactly as they had been programmed to act, the mistake in this case was a mistaken assumption on the part of the Margin Traders as to how Quoine's platform would operate (i.e. the platform would not fail). Such mistake was only a mistaken assumption as to the circumstances under which the Trading Contracts would be concluded, instead of a mistake as to the prices at which the Trading Contracts were entered into.

In respect of the issue of knowledge, the majority of the Court of Appeal confirmed that in the context of a deterministic algorithm[2], it was the programmer's state of knowledge that was relevant to be attributed to the parties. The relevant timeframe for assessing the programmer knowledge was deemed to be from the point of programming up to the point that the relevant contract is formed. Notably, Quoine relied on an email sent by B2C2's programmer the morning after the disputed trades had occurred, which stated in the subject line "Major Quoine database breakdown, please call us urgently". However this email, at its highest, only showed the programmer's state of mind after he became aware of the disputed trades, which was not part of the relevant timeframe.

The majority of the Court of Appeal considered that the relevant inquiry to be made was the following:

- When programming the algorithm, was the programmer doing so with actual or constructive knowledge of the fact that the relevant offer

[1] The question of whether unilateral mistake in equity can extend beyond a mistake as to a term of the contract was not fully argued. The Court of Appeal was satisfied that it was not necessary to determine this question in this case.

[2] A deterministic algorithm is one which always produces precisely the same output given the same input and does not have the capacity to develop its own responses to varying condition.

would only ever be accepted by a party operating under a mistake? and

- If so, was the programmer acting to take advantage of such a mistake?

Applying the law to the facts of this case, the majority concluded that B2C2's programmer did not have the requisite knowledge of the alleged mistake.

HOLDING CRYPTOCURRENCY ON TRUST

The decision of the SICC in this case was previously considered the first judicial reference to cryptocurrency as property, as it found that cryptocurrency satisfied all the requirements in the definition of a property right and proceeded on the basis that it was a species of property that was capable of being held on trust.

The Court of Appeal surveyed a wide range of authorities and academic writings on the subject. However, it refused to come to a final position on this question. Ultimately, it observed that there may be much to commend the view that cryptocurrencies should be capable of assimilation into the general concepts of property, but that there are difficult questions as to the type of property that is involved.

The breach of trust claim was eventually not accepted for the reason that there was no certainty of intention to create a trust. Contrary to the view of the court below, the Court of Appeal found that the mere fact that Quoine's assets were segregated from its customer's cannot in and of itself lead to the conclusion that there was a trust; in any event, the manner in which the Bitcoin was actually stored by Quoine suggested that there was in fact, no such segregation.

CONCLUSION

The Court of Appeal's analysis of how existing law should be applied to the latest technological developments and modern commercial realities illustrates that the debates around the issues arising from this case may be far from over.

The dissenting judgment of Mance IJ in the case is of particular interest, as it advocates for adoption of the law to the new world of algorithmic programmes and artificial intelligence, in a way which "*gives rise to the results that reason and justice would lead one to expect*". With reference to the email entitled "Major Quoine database breakdown" from B2C2's programmer the morning after the disputed trade had occurred, it would appear that as soon as B2C2 inspected the computer print-outs next morning, it knew at once that there had been such a mistake. Thus, applying the doctrine of unilateral mistake in equity, Mance IJ was of the view that relief should be available if it would at once have been perceived that some fundamental error had occurred.

The flexible approach adopted by Mance IJ has its appeal, in particular in light of his analysis on the relationship between machines and human. Computers (says Mance IJ) are outworkers, not overlords to whose operations parties can be taken to have submitted unconditionally in circumstances as out of ordinary as the present; the obvious malfunctioning of a computer-based system should not be given the dominance that B2C2's case implies.

Notwithstanding the potential role for the law of equity, the current solution for parties in the world of cryptocurrency trading lies in having properly drafted

terms of business and a contract that sufficiently protects parties' interests in case of unexpected events, be it a technical glitch or an accident in some other form.

Until such time as legislative intervention comes in to redesign the applicable legal framework, it is anticipated that the court will continue to adapt existing law to deal with technological advancement. The question of how humans should be held responsible for a machine's action will no doubt be under the spotlight again in the near future.

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