

Cryptocurrencies: Property, Trust and Mistake

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[B2C2 Ltd v Quoine Pte Ltd \[2019\] SGHC\(I\) 03](#), a decision of Simon Thorley IJ sitting in the Singapore International Commercial Court, is one of the first instances to apply contractual principles and trust law to a cryptocurrency trading case. Notably, the judge ruled that virtual currencies can be considered as property which are capable of being held on trust. The judgment is also of interest as it analyses the doctrine of mistake in the context of contracts that are automatically entered into through computer programming.

Summary

B2C2 Ltd v Quoine concerned seven trades relating to the sale by electronic market maker B2C2 of the cryptocurrency Ethereum in exchange for Bitcoin in April 2017. These trades were automatically performed by Singapore-registered Quoine's currency exchange platform ("the Platform") in response to orders from B2C2's custom algorithmic trading software. The software installed on the Platform by Quoine receives external market prices from other trading platforms, and uses those prices to ensure trades take place at the relevant market rate.

Due to a defect in Quoine's software, the trades in question were executed at a rate approximately 250 times the Ethereum and Bitcoin market exchange rate, in favour of B2C2's trades. The counterparties to the trades were other users of Quoine's trading platform.

The trades were implemented with no human intervention, and B2C2's account was automatically credited with the proceeds of the sale. The next day Quoine's Chief Technology Officer reviewed the trades, realised a serious error had occurred, and cancelled the trades (the transactions being reversed).

B2C2 brought proceedings against Quoine, claiming that Quoine's decision to reverse the trades was a breach of the contractual terms between the two parties. B2C2 further argued that due to the way Quoine's platform operated, Quoine held the virtual currencies in B2C2's user account on trust, and its unilateral reversal of the trades (and consequent disposal of B2C2's assets) was a breach of that trust. In response, Quoine argued that it was entitled to reverse the trades as they had been entered into by mistake, and were therefore void.

In one of the first judgments to apply the law of contract to virtual currencies, Simon Thorley IJ found in favour of B2C2, holding that the trades were not void for mistake and, consequently, Quoine's intervention was a breach of contract.

The parties' positions

Breach of Contract

As regards B2C2's claim that Quoine's decision to reverse the trades was a breach of contract, Simon Thorley IJ viewed the case as straightforward.

The seven trades were generated and placed on the Platform due to Quoine's algorithmic software, and the accounts were debited and credited accordingly. The parties to the trades were then notified in the usual way through the Platform. It was noted by Simon Thorley IJ that the terms and conditions of the Platform expressly stated that "once an order is filled, you are notified via the platform **and such action is irreversible**" (emphasis added).

The Court therefore found that, unless the trades were void for mistake, Quoine's intervention was a breach of the express term under its own terms and conditions.

Virtual Currencies as Property and Breach of Trust

In order to determine whether Quoine was in breach of trust by unilaterally reversing the trades, it first had to be established that a trust had been created. Both parties accepted that there were three certainties that had to be present for the creation of a trust, namely:

- i. certainty of intention;
- ii. certainty of subject matter; and
- iii. certainty of object.

A key issue in *B2C2 Ltd v Quoine* was whether the cryptocurrencies were capable of being considered as property in order to meet the second essential criteria for establishing a trust.

Whether virtual currencies can be considered as property has been the subject of some debate. There is a view under English law that Bitcoin and Ethereum may not be considered as property as, in essence, they are no more than digital tokens stored on an electronic ledger. Case law has established that something which exists only in electronic form cannot be the subject of possession.¹ Consequently, it has been argued that cryptocurrencies would not technically be recognised as property by the English Courts, or any other common law jurisdiction, as the law does not recognise possession of intangible items.²

In *B2C2 Ltd v Quoine*, however, both parties were prepared to assume that the virtual currencies could be treated as property and Simon Thorley IJ agreed, taking the view that cryptocurrencies meet all the requirements of the classic definition of property, i.e., "*it must be definable, identifiable by third parties, capable in its nature of assumption by third parties, and have some degree of permanence or stability.*"³ He concluded that while cryptocurrencies are not considered legal tender in the sense of being a regulated currency issued by a government, they do have the fundamental characteristic of intangible property as being an identifiable thing of value.⁴

Despite accepting that cryptocurrencies could be property, Quoine disputed that there was sufficient certainty of intention to create a trust. Simon Thorley IJ disagreed. As the traded assets were held separately in a single offline wallet as "member assets" rather than as part of Quoine's trading assets,

¹ Armstrong DLW GMBH v Winnington Networks Ltd [2012] EWHC 10 (Ch)

² See, e.g., Jean Bacon, Johan David Michels, Christopher Millard & Jatinder Singh, *Blockchain Demystified: A Technical and Legal Introduction to Distributed and Centralised Ledgers*, 25 Rich. J.L. & Tech., no. 1, 2018 at <https://jolt.richmond.edu/blockchain-demystified-a-technical-and-legal-introduction-to-distributed-and-centralised-ledgers/>

³ As established by the House of Lords in *National Provincial Bank v Ainsworth* [1965] 1 AC 1175 at para 1248

⁴ *B2C2 Ltd v Quoine Pte Ltd* [2019] SGHC(I) 03, para 142

he determined that there was sufficiently clear evidence that Quoine intended to hold assets on trust for individual users of the Platform.

Finally, the third certainty, which requires that the intended beneficiaries have to be identifiable (i.e., certainty of object), was also met as the beneficiaries were discernible from their individual member accounts.⁵

Accordingly, as a trust was clearly established, unless it was right to reverse the trades due to mistake, the Court held that the unilateral removal of Bitcoin from B2C2's account was in breach of trust.

Doctrine of Mistake

Quoine argued that it was right to reverse as the trades in accordance with the doctrine of mistake. Under English law there are three categories of mistake which are capable of voiding a contract:

- i. common mistake, where both parties make the same mistake;
- ii. mutual mistake, where both parties misunderstand each other and are at cross-purposes; and
- iii. unilateral mistake, where only one of the parties makes a mistake and the other party knows of his mistake.

As is the case in English law, in Singapore a contract is only voidable if the mistake relates to a sufficiently important or fundamental contract term and any analysis must consider the knowledge of the parties at the time of entering into the contract.⁶

In this instance, the mistake was the applicable Bitcoin-Ethereum exchange rate and Simon Thorley IJ had to consider whether a contract made by and between two computer systems acting as programmed, but otherwise without human intervention, could be void for unilateral mistake. If this was established, Quoine would not be in breach of contract or trust for reversing the trades.

However, as the parties only became aware of the transaction after it had taken place, the Court could not properly assess the knowledge of the parties of the mistake at the time of entering into the contract. Applying the law to a case where algorithmic trading decided the terms of the contract therefore raised novel questions for determination by the Court, including whose knowledge is relevant, and at what time that knowledge should be assessed.⁷

Quoine argued that the algorithms and computers used to execute the trades should be treated as legal agents of their human principles. Simon Thorley IJ disagreed. He held that as the parties had chosen to use computers as the means of entering the trading contracts, he could not consider what would have happened if the computer element was missing.⁸

Ultimately, when determining whether a mistake had been made, the Court considered it necessary to have regard to the intention of the programmer at the time of writing the program, as computers acting in accordance with the algorithmic program are themselves (in this case) “*no different to a robot assembling a car rather than a worker*” or a “*kitchen blender relieving a cook of the manual act of mixing ingredients*”.⁹

In this instance, it was determined that the programmer's intention was to protect B2C2 from certain risks, with no underlying intention to manipulate the market. Having considered the relevant facts, the

⁵ B2C2 Ltd v Quoine Pte Ltd [2019] SGHC(I) 03, para 143

⁶ It should be noted that while the doctrine of mistake in England and Singapore is similar, it is not the same in all respects.

⁷ B2C2 Ltd v Quoine Pte Ltd [2019] SGHC(I) 03, para 198

⁸ B2C2 Ltd v Quoine Pte Ltd [2019] SGHC(I) 03, para 204

⁹ B2C2 Ltd v Quoine Pte Ltd [2019] SGHC(I) 03, paras 209 -210

Court concluded that the counterparties to B2C2's trades had held the mistaken belief that they could never take place at the rates that were in fact applied. As B2C2 itself did not have knowledge of this mistaken belief, however, the trades were not void for mistake.¹⁰

Comment

B2C2 Ltd v Quoine is one of the first cases to consider issues of contract and trust law in the context of the trading of virtual currencies and contains interesting observations as to how the doctrine of mistake in common law or at equity may apply to such contracts. The relief sought is also of interest; the primary relief sought by B2C2 was specific performance coupled with damages, with B2C2 seeking to establish that damages alone would not be an adequate remedy because of the volatility of cryptocurrencies (and Bitcoin in particular), making the inherent value difficult to ascertain.

The Court disagreed, commenting that the Courts are accustomed to assessing damages in relation to volatile assets and cryptocurrencies were no different in this regard. Accordingly, B2C2's request for specific performance was denied as it would cause undue hardship to Quoine.¹¹

B2C2 was therefore entitled to a claim in damages for both breach of contract and breach of trust, with damages to be assessed at a later hearing, if not agreed. Given the volatility of the cryptocurrency market, with Bitcoin's price alone fluctuating by 75% between November 2017 to November 2018¹², the outcome of any damages assessment will be of interest.

Finally, the classification of cryptocurrencies such as Bitcoin and Ethereum as property in the legal sense may have broader implications. This point remains open for formal resolution in the English Courts, but if Thorley IJ's approach (and that of the parties in B2C2) is followed, then that may well have consequences for the remedies available (as can be seen from B2C2) and other areas of law, such as insolvency in the event of a virtual currency business becoming insolvent.

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¹⁰ B2C2 Ltd v Quoine Pte Ltd [2019] SGHC(I) 03, paras 231

¹¹ B2C2 Ltd v Quoine Pte Ltd [2019] SGHC(I) 03, paras 256

¹² <https://www.bbc.co.uk/news/technology-46263998>