

## Blockchain Law

# Can blockchain participants act in restraint of trade?

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**In this edition of his Blockchain Law column, Robert A. Schwinger discusses a recent magistrate judge ruling in a dispute over actions taken by various parties in connection with a cryptocurrency “fork”, which addressed the question of whether those parties’ conduct constituted anticompetitive activity barred by federal antitrust law.**

Blockchain technology applications involve a number of different players interacting with one another as they play specific roles in the blockchain ecosystem. But because blockchain technology is still relatively new, the law still is not well developed regarding many aspects of how these players may—or must not—interact with one another as they perform these roles.

A recent magistrate judge ruling in a dispute over actions taken by various parties in connection with a cryptocurrency “fork” addressed the question of whether those parties’ conduct constituted anticompetitive activity barred by federal antitrust law. *United American v. Bitmain*, 2021 U.S. Dist. LEXIS 69525 (S.D. Fla. March 31, 2021), centered around a claim that a number of different defendants—who each occupied various roles with respect to the cryptocurrency Bitcoin Cash—had violated §1 of the Sherman Act (15 U.S.C. §1), by allegedly entering into an anticompetitive agreement to manipulate an alleged Bitcoin Cash market and take control of the Bitcoin Cash blockchain as Bitcoin Cash was about to “fork” into two separate cryptocurrency blockchains.

### The background of cryptocurrency mining

Central to the operation of cryptocurrency and the facts of *United American* is a critical blockchain process referred to as “mining.” Mining is used to maintain and develop the blockchain ledger underlying cryptocurrency and gives rise to the creation of new cryptocurrency.

Miners essentially audit cryptocurrency transactions to make sure that the digital currency’s owner is not purporting to spend it twice in different transactions. Their incentive for doing so is that when a miner has verified enough transactions (an amount referred to as a “block”), then the miner may be rewarded with newly-issued additional units of cryptocurrency if that miner is also the first to get the right answer to a complex computational problem involving a process known as “hashing,” the solution to which is then used to encrypt the new currency going forward. Mining requires large amounts of computing power with attendant high electricity costs, particularly since the more miners that are involved, the harder it

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is to be the first to solve the problem. Because of these high costs, groups of miners sometimes create “mining pools” in which they work together to verify blocks, coordinating their members’ resources and splitting the rewards. See generally E. Hong, **“How Does Bitcoin Mining Work?”** (Investopedia, updated May 4, 2021).

The software used by miners must follow certain protocols or rules, but sometimes those rules change. When this happens, this process is referred to as a “hard fork.” A hard fork results in two branches of the blockchain, one that follows the previous protocol and one that follows the new version (in contrast to a “soft fork,” where the software change is backwards-compatible). A hard fork often occurs during a software upgrade associated with mining procedures, after miners become dissatisfied with the existing blockchain implementations and desire a change in rules. See generally K. Peters, **“A History of Bitcoin Hard Forks”** (Investopedia, last updated May 5, 2021).

## The ‘hash war’ over a fork in Bitcoin Cash

*United American* arose out of a November 2018 upgrade of the software used by Bitcoin Cash miners. A dispute arose as to what rules would apply after the upgrade. Certain Bitcoin Cash miners decided to proceed with upgrades that no longer adhered to the same rules set as other Bitcoin Cash miners, which would lead to a “fork” in Bitcoin Cash. This dispute resulted in what is termed a “hash war,” in which Bitcoin Cash miners were required to choose their preferred rules by using their computing power to mine for their preferred fork. The rules set that was mined with the most hashing power would then become the Bitcoin Cash blockchain going forward, and the losing rules set would fork into a separate blockchain.

In this instance, the two competing variants were dubbed Bitcoin ABC and Bitcoin SV. The Bitcoin ABC protocol would preserve Bitcoin Cash’s structure to prevent major developments in the future. The proponents of Bitcoin SV wanted to increase the block size to allow for more transactions and lower transaction costs, which would scale up the Bitcoin Cash network. The Bitcoin ABC protocol ultimately won the hash war and established itself as the Bitcoin Cash blockchain.

## Challenging the tactics used in the hash war

The plaintiff in *United American* was a developer of technologies for the execution of blockchain technologies and mining cryptocurrencies, which were used on the Bitcoin Cash network. Its businesses allegedly depended on continued efforts to scale up Bitcoin Cash, and thus it favored adoption of the Bitcoin SV protocol in the hash war. It brought suit alleging violations of §1 of the Sherman Act against certain miners and mining pools (Mining Defendants) who had favored the Bitcoin ABC protocol, as well as operators of certain cryptocurrency trading exchanges (Exchange Defendants) and the developers of the Bitcoin ABC protocol (Developer Defendants), complaining of various actions they took in connection with the hash war and charging that they entered into an unlawful conspiracy to hijack the Bitcoin Cash network.

Plaintiff alleged that shortly before the upgrade, the Mining Defendants temporarily reallocated up to 90,000 servers that had been mining a different cryptocurrency network to mine the Bitcoin Cash network, allegedly without authorization from their customers. These “mercenary” miners increased the Bitcoin Cash network’s hashing power by over 4,000% and thus diluted the “vote” of the existing miners on the network who already had been mining the network up to this point. Plaintiff alleged that this tactic violated the widely-accepted principle set forth in the 2008 Bitcoin whitepaper that miners on the network should be able to vote with their CPU power.

Plaintiff also pointed to actions by the Exchange Defendants. While some exchanges took a position of neutrality as between the Bitcoin ABC and Bitcoin SV protocols, the Exchange Defendants allegedly released a public statement before the outcome of the fork was known stating that Bitcoin SV did not presently meet their exchange’s listing requirements and thus was unlikely to be supported for transactions on their exchange.

Plaintiff’s amended complaint also alleged that shortly after Bitcoin ABC prevailed in the hash war the Developer Defendants implemented a “checkpoint” that allowed them, by virtue of having 51% of the hashing power, to

“cement control of the blockchain ledger” and “future changes to Bitcoin Cash functionality [and] consensus rules;” and that when “combin[ed] ... with the hashing power” of the Mining Defendants and other Bitcoin ABC backers “amount[ed] to centralization’ of control over the network.”

Plaintiff thus posed what was essentially a charge of collusion. Plaintiff claimed that the Mining Defendants colluded to manipulate the network so that they would be successful in the hash war, have Bitcoin ABC prevail, and take control of the Bitcoin Cash blockchain; that the Exchange Defendants made public statements to steer the outcome against Bitcoin SV; and that the Developer Defendants implemented checkpoints following the outcome of the hash war to allow anyone with 51% of the hashing power (such as the proponents of the prevailing Bitcoin ABC protocol) to then centralize and control the network. Thus, plaintiff claimed:

The conspiracy consisted of a continuing agreement, understanding or concerted action between and among Defendants and their co-conspirators in furtherance of which Defendants manipulated the cryptocurrency market for Bitcoin Cash, effectively hijacked the Bitcoin Cash network, centralized the market, and violated all accepted standards and protocols associated with Bitcoin since its inception, and fixed, maintained, suppressed, stabilized and/or otherwise made artificial the values associated with the Bitcoin Cash network.

Plaintiff claimed that these alleged collusive acts caused the combined value of both forks to drop below the value of Bitcoin Cash prior to the software upgrade. It thus sought damages and other relief from the defendants under Section 4 of the Clayton Act, 15 U.S.C. §15, for alleged per se and “rule of reason” violations of §1 of the Sherman Act.

## **The need to plead an illicit agreement among the defendants**

The defendants moved to dismiss the Sherman Act claims. The court first addressed whether the plaintiff in its

amended complaint had adequately pleaded a “contract, combination, or conspiracy in restraint of trade,” as required under §1 of the Sherman Act. It held that plaintiff had not.

The court held that plaintiff’s amended complaint was “silent as to whether Defendants engaged in either a horizontal, vertical or hub-and-spoke agreement.” In assessing each possibility, the court held that “[t]he factual allegations do not support a claim that the alleged conspiracy is entirely horizontal,” as only the Mining Defendants directly competed with one another. The facts also did not support a vertical agreement between the parties, as “there [was] no suggestion that all Defendants operate[d] at different levels of either the production or distribution chain of Bitcoin Cash.” Finally, the amended complaint did not adequately plead a hub-and-spoke agreement either, as not “one Defendant is common to all others, thus eliminating a hub, from a hub-and-spoke agreement.”

The court concluded that the amended complaint “lack[ed] facts that create a ‘reasonable expectation that discovery will reveal evidence of an illegal agreement.’” In finding that the plaintiff failed to allege an agreement, the court considered both (1) whether plaintiff had pleaded a direct agreement between the defendants, or (2) whether an agreement between the defendants could be established by circumstantial evidence from the facts alleged.

With respect to direct evidence of an agreement, the court held that “[n]either count of the Complaint expressly alleges that all defendants entered into an agreement, much less states the terms of the agreement.” While plaintiff alleged that the defendants did certain things in furtherance of a conspiracy, it did not allege any facts that all defendants entered into an agreement. Although plaintiff argued in its briefing that defendants entered into a scheme to “artificially pump[] up the chain implementation with computer hashes to dominate the temporary network,” and implement a “new software version with checkpoints that controlled and manipulated the value and quantity of the Bitcoin Cash network going forward,” the court noted that the amended complaint did not actually state this. The court additionally analyzed the

amended complaint as if the plaintiff actually had made such an allegation, and held that the lack of factual support in the pleading for the existence of an agreement was reason enough to dismiss the case.

With respect to circumstantial evidence that might show an agreement, the court considered whether the amended complaint pleaded parallel conduct by the defendants in combination with various additional “plus factors” in support of a conspiracy, as per the Supreme Court’s holding in *Bell Atl. v. Twombly*, 550 U.S. 544, 557 (2007), that a §1 violation can be pleaded and proven with circumstantial evidence that amounts to both “parallel conduct” plus “some further factual enhancement.” In assessing whether there had been parallel conduct alleged, the court rejected plaintiff’s broad argument that “all Defendants engaged in the parallel conduct of supporting Bitcoin ABC.” The court stated that “[t]his notion of parallel conduct is so broad as to make it meaningless,” noting that “the various Defendants favored Bitcoin ABC in different ways” and “did not all act in a similar manner.”

The court concluded that the only parallel conduct capable of supporting the conspiracy allegations involved the Mining Defendants and whether they communicated prior to the hash war regarding increasing mining capacity, as they and plaintiff were all competitors and pooled their servers to mine Bitcoin ABC shortly before the time of the hard fork. Yet, parallel conduct was only relevant to one aspect of the alleged conspiracy—hijacking the Bitcoin Cash network to win the hash war. The court held there were no factual allegations to support an allegation that the conspiracy was in furtherance of a scheme to centralize the market by using checkpoints, nor were there allegations the Exchange Defendants and the Developer Defendants engaged in any form of parallel conduct.

Even if the court had concluded there were parallel conduct by the Mining Defendants, it held that parallel conduct alone is not enough to support a claim of conspiracy. As per *Twombly*, 550 U.S. at 554, parallel conduct can also be consistent with rational and competitive business strategy, such as following a competitor’s price increase or change in strategy. The court therefore analyzed additional “plus factors” for each category of defendant, including but not limited to whether the Mining Defendants engaged in

advance coordination; whether public statements by the Exchange Defendants suggested their exchange would not trade Bitcoin SV, which supported an inference that the Mining and Exchange Defendants had communicated ahead of the fork; whether all defendants acted against their own economic self-interest; and whether the Developer Defendants’ implementation of a centralized checkpoint supported there having been an agreement.

The only plus factor the court thought could possibly give rise to a reasonable expectation that discovery would reveal evidence of an agreement was advance coordination between the Mining Defendants. However, the court noted that this plus factor would apply only to the Mining Defendants and did not support the broader agreement claimed by plaintiff that involved the Developer and Exchange Defendants. Thus, plaintiff’s allegations, “when taken together, do not allege facts that tend to exclude the possibility of independent action.” Consequently, “[b]ecause the Complaint fails to plead the essential first element of a §1 violation—an agreement—the Complaint must be dismissed.”

## **Inadequate allegations of ‘rule of reason’ and per se violations**

Because the plaintiff had alleged both “rule of reason” and per se violations of §1 of the Sherman Act, the court also addressed whether the amended complaint’s allegations sufficed to plead such claims even if there had been a properly alleged §1 agreement. It held there was not.

With respect to “rule of reason” claims, the court noted that the pleading needed to identify a relevant geographic and product market. While the parties agreed that the relevant market here was global, the amended complaint was vague as to whether Bitcoin Cash constituted its own market, or was perhaps a sub-market of a global cryptocurrency market. It did not make allegations about what distinct characteristics Bitcoin Cash had compared to other cryptocurrencies and what importance they might have to consumers, nor did it address whether there was any “cross-elasticity of demand between the market for Bitcoin Cash ... or other cryptocurrencies, or even fiat currencies.”

The court also held that the amended complaint did not meet the requirement of adequately alleging “actual or potential harm to competition in the relevant market.” The court noted that the plaintiff “makes no claim that a change in price, output, or something else, harmed competition in that market.” Rather, plaintiff claimed that the alleged conspiracy caused antitrust injury “because it resulted in a deterioration in the quality of Bitcoin Cash.” Plaintiff claimed that the quality of Bitcoin Cash “rests on its integrity, which depends on the market being decentralized,” meaning no one participant or group having more than 51% power over it, because otherwise “competing developers who wish to propose innovative ways to improve” Bitcoin Cash mining “will be unable to do so to the detriment of all participants in the Bitcoin Cash network.” The court rejected these allegations as “conclusions loaded with assumptions” that did not set forth “the ‘how’ and ‘why’ allegations that might give this meaning.”

The court likewise found insufficient plaintiff’s allegation that “the Developers’ checkpoint ‘will allow anyone with 51% hashing power to quickly cement control of the blockchain ledger;’” holding that this claim “begs for allegations that explain how.” The court also noted that “[t]hese allegations assume all Defendants will continue to act in unison” but that “there are no non-conclusory assertions in the Complaint that makes this plausible,” with some allegations potentially even inconsistent with it.

For these reasons, the court concluded that plaintiff had failed to plead a “rule of reason” §1 claim. The court then proceeded to hold that none of the allegations fell into the limited category of §1 claims that are deemed per se antitrust violations.

The court held there was no allegation of bid-rigging because not all the defendants were horizontal competitors. Despite whatever coordination was alleged against the Mining Defendants, the amended complaint did not allege that they “formed an agreement to eliminate competition among them by coordinating bids to a third party.” The court also held there was no group boycott, despite the amended complaint’s allegation that the claimed conspiracy was “‘in the nature of’ a group boycott.”

It noted that there was no horizontal agreement among direct competitors, and no allegation that plaintiff was threatened with deprivation of goods or services because of refusal to accede to the group’s terms.

Thus, because the antitrust claims were not adequately pleaded, and because an earlier plaintiff’s original complaint had been dismissed previously, the court dismissed plaintiff’s amended complaint with prejudice, both as to its per se and “rule of reason” §1 counts.

## **Conclusion: Is antitrust law relevant to blockchain disputes?**

*United American* illustrates that courts may have difficulty correlating the roles that various parties play in blockchain and cryptocurrency ecosystems with the roles in commerce that antitrust law typically addresses, such as competitor, supplier, service provider, customer, consumer, and so on. The ruling also suggests that courts may be reluctant to equate alleged violations of claimed customary norms in the blockchain arena—such as the allegation that the Mining Defendants had gamed the Bitcoin Cash hash war by temporarily flooding the network with additional miners—with the kinds of market misconduct that the antitrust laws seek to address. Moreover, lack of specificity regarding the dynamics of how and why various players in the blockchain ecosystem can and do interact with one another—a subject that is not typically part of the general background knowledge possessed today by courts—may make it difficult for courts to treat allegations of alleged effects in that system as being anything more than conclusory.

Still, *United American* does not foreclose the possibility of antitrust laws being applied to issues of competitive dynamics and claimed consumer harm in the blockchain industry. For example, the court did not rule out possible antitrust claims, even per se claims, based upon allegations of conspiratorial agreements entirely among horizontal competitors in the system like miners. The court did not have occasion to address issues regarding how a “rule of reason” analysis might be applied in the face of detailed allegations about the nature of interactions among parties in the blockchain ecosystem and how and why

they allegedly led to harmful effects. The court also was not called upon to decide whether departures from the letter or spirit of the system's underlying whitepaper could constitute a sufficient basis for claiming an unreasonable restraint on competition if harmful effects were shown. Given the deficiencies the court found in the amended complaint, the court did not need to address what kinds of claimed disruptions to a blockchain ecosystem, and what economic effects upon its various players that might flow from those disruptions, would constitute the kind of injury that would support the existence of antitrust standing. For example, the plaintiff's theory that a loss of the total value in Bitcoin Cash following the fork evidences an antitrust injury must await adjudication some other day.

What *United American* does show is that when confronted with antitrust claims in the blockchain context, courts will apply long established precedent and turn to standard case law principles about the nature of such claims and what is required to plead them adequately. Lawyers attempting to craft antitrust claims in this area cannot afford to disregard antitrust law fundamentals, regardless of the novel and rapidly evolving nature of this industry.



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