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# The growing importance of expert evidence in crypto-related disputes*

Abstract

*The rapid development of cryptocurrency markets from a niche Bitcoin-focused activity into a global financial market has increased both the volume and complexity of disputes involving digital assets.*

*This article examines the growing importance of expert evidence in establishing causation, developing counterfactual scenarios and quantifying damage in crypto disputes. It highlights the multidisciplinary expertise required, combining finance, economics and technical knowledge of crypto markets, and explains why early expert involvement can be critical to the effective resolution of claims.*

Keywords

*Cryptocurrency disputes; expert evidence; causation; damage quantification; counterfactual analysis; digital assets; cryptocurrency exchanges; margin trading; liquidation events.*

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Disclaimer: The author has acted as an adviser in litigation involving the cryptocurrency sector.

## Introduction

Since emerging as a niche, predominantly Bitcoin-based market, the cryptocurrency sector has developed into a global financial market involving exchanges, retail and institutional investors, custodians and other intermediaries. Its operations have also become increasingly sophisticated, expanding beyond simple transfers and spot trading to include margin trading and derivatives. Traders can use crypto assets as collateral to increase their exposure, creating positions whose viability depends on collateral values, margin requirements and automated liquidation mechanisms.[1] This has increased leverage and interconnectedness, as well as the risk that sharp price movements will trigger cascading liquidations across assets and trading platforms.

Nevertheless, the sector remains in development, with its technologies, business models and regulatory frameworks continuing to evolve unevenly across jurisdictions.

## A growing source of litigation and arbitration

Against this background of rapid innovation, fragmented regulation and uneven operational standards, the crypto market has become a growing source of litigation and arbitration. As the complexity of the activities in the sector increases, so too does the need for technical expertise in crypto-related disputes.

Publicly filed crypto-related claims in England and Wales increased substantially after 2017, although the number of new claims has stabilised more recently. Only eight were filed in 2025, compared with almost 70 between 2022 and 2024.[2] These figures do not, however, capture the overall dispute landscape because crypto exchanges frequently require customer claims to be resolved through private arbitration.[3] Because arbitrations are generally confidential, their number cannot be measured reliably from public information.

Potential claims include disputed liquidations, unauthorised trading, inadequate customer due diligence, misleading disclosures and disputes concerning the ownership of digital assets. Operational incidents are particularly relevant. An outage during a sharp price movement may prevent a customer from closing a leveraged position, adding collateral or withdrawing assets. Similarly, problems with price feeds, collateral valuations or liquidation mechanisms may cause trades to be executed at anomalous prices or positions to be liquidated unexpectedly.

A recent example is the crypto market crash of 10 October 2025, when a market-wide sell-off resulted in substantial liquidations. On the Binance exchange, USDe, BNSOL and WBETH temporarily traded below their reference values, reducing their value as collateral and triggering forced liquidations for some of the exchange's users. Binance subsequently compensated eligible customers, revised its valuation controls and allowed other claims to be reviewed individually, without admitting liability. Customer complaints and reported arbitrations followed, although their scale remains unclear.

Resolving such disputes requires the parties to establish what occurred, what the platform's contractual terms required and whether the alleged failure caused the claimed losses. If a malfunction is established, quantifying damage also requires determining what would probably have happened in its absence.

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[1] Financial Stability Board, *The Financial Stability Risks of Decentralised Finance*, 16 February 2023. Available at: link.

[2] Solomonic, *UK Crypto Litigation: Trends, Volumes & Outcomes*, 27 April 2026. Available at: link.

[3] Reed Smith, *2026 Crypto Disputes Report*, 23 April 2026. Available at: link.

## The expert's key role in establishing causation

Expert evidence plays a critical role in establishing causation and quantifying damage. The expert's analysis generally involves three interconnected stages.

First, the expert assesses whether the claimant's allegations are supported by the available evidence. This may require reconstructing orders, trades, collateral balances, margin calls and liquidations using information such as exchange records, wallet data, blockchain transactions and independent market data. The analysis should aim to determine whether any losses resulted from the alleged malfunction or instead from market movements, leverage, insufficient collateral or the claimant's own trading decisions.

Determining whether losses were caused by market movements or by other non-market factors involves analyses similar to those used in securities litigation. While such disputes are common in the United States, they are growing in the UK in the context of claims brought under Sections 90 and 90A of the Financial Services and Markets Act 2000. Although there is limited judicial guidance in the UK on the appropriate methodology for assessing loss causation in these cases, academic and practitioner literature generally supports the use of event studies and related econometric techniques to isolate the effects of the alleged misconduct from broader market and industry influences.[4]

The assessment must also reflect the applicable contractual framework. Exchange terms may allow changes to collateral requirements, authorise automatic liquidation and limit liability for outages or extreme market conditions. Although the expert does not interpret those provisions as a matter of law, the economic analysis must reflect the contractual mechanism identified by the court or tribunal.

Consider an illustrative case in which a claimant alleges that a platform malfunction caused an exchange to undervalue crypto-assets used as collateral, resulting in the wrongful liquidation of the claimant's positions.

The expert would reconstruct the sequence of events leading to the liquidations, including the claimant's positions, margin requirements, collateral valuations and liquidation prices.

The expert's comparison with contemporaneous prices on other exchanges indicates that the prices applied by the relevant exchange were materially lower, with the difference being statistically significant at the 5% level. This supports the conclusion that the malfunction affected the prices used to value the claimant's collateral.

## Constructing a credible counterfactual

Second, the expert constructs the counterfactual, or "but-for", scenario by considering the claimant's contemporaneous orders and trading history, together with prevailing market and exchange conditions. Relevant market factors include price trends, volatility, trading volumes and external events, while exchange-specific factors include liquidity, bid-ask spreads and order-book depth. These conditions affect whether and at what price an order could have been executed, as well as any slippage or price impact caused by the order itself. The counterfactual should also address whether the claimant would have maintained, reduced or closed the positions.

[4] Fisch, Jill E.; Gelbach, Jonah B.; and Klick, Jonathan, "The Logic and Limits of Event Studies in Securities Fraud Litigation" (2017).

The construction of a credible counterfactual is a core element of damage quantification across a wide range of disputes and is not unique to cryptocurrency-related cases. As discussed in Maier-Rigaud et al.[5], any quantification exercise requires a comparison between the factual outcome and the hypothetical "but-for" scenario that would have prevailed absent the event giving rise to the claim. The choice of counterfactual must be grounded in economic theory and market evidence, with appropriate comparator markets and suitable techniques according to the characteristics of the case.

Depending on the circumstances, the analysis may employ event studies, econometric analysis, matched-market techniques or scenario modelling. Where assumptions are unavoidable, their effect should be tested through sensitivity analysis. Presenting a range of results under alternative supportable assumptions may be more reliable than offering a single estimate.

Returning to the illustrative case, after concluding that the malfunction affected prices on the relevant exchange, the expert would assess whether conditions on the proposed comparator exchanges were sufficiently similar. If the analysis showed levels of liquidity, bid-ask spreads and order-book depth that were not materially different, the expert could use prices observed on those exchanges to revalue the claimant's collateral in accordance with the methodology specified in the exchange's terms. On this basis, the expert could estimate which positions would have been liquidated in the absence of the malfunction and the resulting counterfactual value of the claimant's portfolio.

## The value of multidisciplinary expertise

Effective expert work in crypto disputes requires a combination of expertise, including knowledge of securities, derivatives, margin trading and market practice, combined with economics and econometrics. It may also require sufficient technical understanding to interpret blockchain records, smart contracts and pricing-oracle data, and to understand exchange architecture.

A disputed loss may involve several interconnected factors, such as market volatility, platform outages, delayed transfers, thin liquidity, collateral revaluation and automated liquidations. Experts capable of analysing these issues within a coherent economic framework play an essential role in helping courts and tribunals determine what happened, whether it caused the alleged loss and how any loss should be measured.

Given the technical and evidential complexity of crypto disputes, parties should consider involving an expert at an early stage. Early engagement enables the expert to test the factual and economic basis of the claim, develop viable counterfactual scenarios and advise on the information that should be requested from the platform or opposing party.

Kroll's Commercial Expert Services and Competition and Regulatory Economics teams regularly provide expert evidence in complex securities disputes and arbitration, combining financial, economic and valuation expertise. Supported by Kroll's technical infrastructure, digital forensics and data analytics capabilities, the firm is well positioned to analyse complex trading data and digital asset activity. This multidisciplinary approach is particularly valuable in cryptocurrency disputes, where economic, market and technical evidence are often intertwined.

[5] Maier-Rigaud, F. et al., *Quantification of Harm*, ABC Working Paper No. 2026/08, 2026. Available at: link.