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Article

Object Types and the Assessment of Value Equivalence in the Disposal of Criminal Virtual Currency

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Abstract: Liquidation is indispensable to the recovery and restitution of virtual currency in criminal cases, yet no standard exists for assessing whether liquidation proceeds are equivalent to due value. Where disposal occurs at a low price, the loss dissipates in the disposal process; it becomes impossible to judge whether the disposal was proper, and the diminution sustained by the state treasury, the victims and the judgment debtor leaves no basis for attributing responsibility. The difficulty stems from the divided value structures of objects of disposal. Stablecoins derive value from the issuer's redemption commitment and can be valued independently of market transactions, whereas non-stablecoins can only realize value through market transactions. The assessment of value equivalence should therefore be layered. Redemption-based value lends itself to substantive comparison against the redemption ratio and the peg relationship, while market-based value should be assessed through a procedural review of the timing decision, the fee rate and the price source, drawing on public data from major international exchanges and cross-platform weighted averages.

Keywords: Virtual Currency; Objects of Disposal; Value Equivalence; Stablecoins; Redemption-Based Value; Market-Based Value

1. Introduction

Virtual currency crimes have continued to grow in scale, with the amounts involved nationwide reaching RMB 430.7 billion in 2023[1]. Once a judgment takes effect, the virtual currency involved is to be liquidated and remitted to the state treasury or used to make restitution to victims. As individual cases grow in scale, a single case involving tens of thousands of coins is no longer rare. Liquidation has thus become an unavoidable step in fulfilling the duty of recovery.

The actual results of liquidation vary widely. The realization of both remittance to the treasury and restitution to victims depends on liquidation, yet judgments tend to address virtual currency only in general terms, and the disposal decision is left to the enforcement stage to make on its own [2]. Where disposal occurs at a low price, the purpose of recovery is compromised, and the disgorgement of illegal gains is not fully realized through the proceeds obtained. Victims in restitution cases may also see the full relief due to them reduced to partial compensation, and the expectation of recovering illicit assets and alleviating their losses is disappointed at the enforcement stage. The judgment debtor's property, in turn, suffers additional diminution through low-price disposal, and where the proceeds fall short of restitution, the judgment debtor must make up the difference from other property. Such losses dissipate in the disposal process without passing to any party, and the diminution sustained by the state treasury, the victims and the judgment debtor leaves no basis for attributing responsibility. In the absence of an assessment standard, whether a disposal was proper cannot be judged; disposal thus remains beyond normative constraint, and its legitimacy is ultimately unestablished.

A gap of time separates seizure from liquidation, during which the price of the virtual currency may deviate significantly from its original value; Bitcoin has been known to

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double or halve within months, and stablecoins such as Tether, though less volatile, are not immune to deviation. For virtual currency subject to sharp price swings, practice tends toward prompt liquidation, and scholarship has defended advance disposal from the standpoint of value preservation and safekeeping [3, 4]; prompt liquidation, however, is no guarantee that due value will be realized. Price movements are bidirectional and follow no settled course, and it is equally possible that disposal falls precisely at a low point before the market rebounds. The actual level of liquidation proceeds is further shaped by the timing of disposal, the fee rate of the liquidation channel and the data source of price determination, while the volatility of non-stablecoins makes the proceeds difficult to predict; the gap between proceeds and expectation is therefore difficult to attribute to any particular cause. Proceeds above due value are generally unproblematic, and only a shortfall below due value calls for an assessment of the disposal conduct. How due value is to be determined and where the reasonable boundaries of timing, fee rate and price source lie are questions on which existing norms are silent, leaving the evaluation of disposal results unresolved.

The difficulty stems also from the divided value structures of objects of disposal. Virtual currency is not a homogeneous asset; the value of stablecoins is supported by the issuer's redemption obligation and can be determined independently of market transactions, whereas the value of non-stablecoins can only be formed in market transactions, and the way due value is determined accordingly diverges by object type.

Studies have identified the characterization of legal attributes and the identification of responsible subjects as core challenges in the regulation of crypto-assets [5]. The construction of disposal procedures has been gradually explored [6, 7], while discussions of value determination focus on the amounts involved at the conviction and sentencing stage [8, 9]. The evaluation of value at the disposal stage, that is, how the value structure of objects of disposal bears on the assessment of equivalence, has yet to receive dedicated treatment. The analysis that follows takes the value structure of objects of disposal as its starting point and constructs layered standards for assessing value equivalence. Redemption-based value is compared substantively against the redemption structure and the peg relationship, while market-based value is assessed through a procedural review of the disposal process.

2. The Divided Value Structures of Objects of Disposal

2.1. Redemption-Based Value

Stablecoins are backed by fiat currency or asset reserves and maintain a relatively stable price. The issuer undertakes to redeem at a fixed ratio; holders enjoy a claim to redemption, and reserve assets secure the performance of that claim. Redemption constitutes the most essential difference between stablecoins and other virtual currencies. The right of redemption may not be burdened with excessively strict conditions, and the issuer is to redeem after deducting reasonable fees [10]. The redemption structure makes it possible to determine the value of stablecoins independently of market transactions, and market fluctuations remain constrained by the reserves and the redemption commitment. The Notice on Further Preventing and Disposing of Risks Related to Virtual Currency and Related Risks, issued in February 2026 (Yinfa [2026] No.~42), contains a dedicated provision characterizing stablecoins as performing part of the functions of legal tender in a disguised form, thereby confirming their quasi-monetary status at the normative level. The functional positioning of stablecoins extends risk transmission beyond payments to the level of monetary sovereignty and financial stability [11].

Seen from the standpoint of disposal, the liquidation of stablecoins offers two channels, redemption from the issuer and sale on the market, which differ in fees and prices yet share the peg as a unified value reference. Foreign-currency stablecoins introduce a further regulatory dimension, since their proceeds take the form of a foreign fiat currency and the entry of the funds requires settlement, which brings them within the

ambit of foreign exchange administration. The regulatory structure of stablecoin disposal is thus more complex than that of non-stablecoins.

2.2. Market-Based Value

Non-stablecoins have no issuer bound to redeem them, nor reserve assets to support them; their value is formed by market supply and demand. Holders exercise exclusive control through private keys, and the public ledger performs a public-notice function akin to that of a registry; comparative research likens Bitcoin's on-chain transaction mechanism to real-property registration and title assurance [12]. The technical features of this control structure do not change how value is formed, and prices are still generated in transactions.

The defining feature of market-based value is its dependence on timing. The value of one and the same non-stablecoin differs from moment to moment; price volatility is intrinsic to the mechanism of value formation and is not an abnormal condition of trading; in the disposal process, it presents a real obstacle to the freezing and recovery of virtual assets. In judicial practice, the pricing of case-related virtual currency relies mostly on market data from overseas exchanges, so that the choice of timing and data source directly affects the pricing conclusion [8]. Liquidation can only be completed through market transactions, which makes the timing of disposal a key variable affecting the level of proceeds.

2.3. The Normative Significance of the Divide

The distinction between redemption-based and market-based value turns on whether value can be determined independently of market transactions, and the divide is grounded in the different legal relationships on which value depends. Redemption-based value depends on the issuer's undertaking to pay, its certainty resting on the expectation of performance; market-based value depends on the holder's exclusive control over the asset, its realization resting on price formation in market transactions.

Existing typologies serve a different function from the divide proposed here. Prior research distinguishes stablecoins from non-stablecoins in designing pre-trial disposal procedures, a classification that serves to delimit the scope of advance disposal [6]; organizes pricing methods by a stratified characterization of legal attributes, responding to the need for standardized pricing operations [9]; and frames the timing benchmark of value determination within the context of conviction and sentencing [8]. These approaches address the pre-disposal stage and the pricing stage, whereas the question whether proceeds are equivalent to value once disposal is complete still awaits assessment standards. The divide of value structures, which takes the mechanism of value realization as its criterion, offers a starting point for the layered construction of such standards.

3. The Assessment of Value Equivalence between Liquidation Proceeds and Disposal Assets

3.1. The Benchmark for Equivalence Assessment

Equivalence assessment compares liquidation proceeds with due value. Due value is the normative benchmark for the value of disposal assets and denotes the value realizable under proper disposal; its normative basis lies in the constraints that public law imposes on the disposal of case-related property. Article 245 of the Criminal Procedure Law requires the relevant authorities to dispose of seized property and its fruits in accordance with the effective judgment, and the duty of disposal is performed by realizing the value of the property. This duty has been articulated at the level of safekeeping; safekeeping is not confined to preventing damage or loss but requires maintaining and realizing the value of the property with reasonable care [4]. The principle of proportionality further constrains the choice of disposal schemes; among the alternatives capable of achieving the purpose of disposal, the one entailing lesser value loss should take precedence. The standard of conduct for measuring disposal proceeds is thereby established, and its content turns on the reasonable selection of three elements, namely the timing of disposal, the liquidation fee rate and the source of price determination.

The amount determined in the judgment fixes the scope of illegal gains; it neither serves as a reference for comparison nor is to be re-determined at the disposal stage in light of market conditions, and proceeds above or below that amount do not in themselves show whether the disposal was proper. The timing benchmark for value determination discussed in existing scholarship belongs to the context of conviction and sentencing [8], whereas the disposal stage confronts a different question, the only object of assessment being whether the process of liquidation was proper.

3.2. Layered Assessment Standards

Due value in the case of redemption-based value can be determined substantively. The redemption structure supplies a reference benchmark, and the redemption ratio and the peg relationship, adjusted for reasonable fees, constitute the measure of due value. Where proceeds deviate from the reference value within a reasonable range of fees and spreads, the deviation is consistent with normal disposal; where the deviation exceeds that range, the disposal may be found defective. The choice of liquidation channel affects the level of proceeds; disposal should seek the channel that realizes superior value, and where the channel choice is manifestly inappropriate, the gap between the proceeds and the reference value may be attributed to the disposal itself.

Due value in the case of market-based value cannot be determined in advance, and equivalence can only be assessed through procedure. The price volatility of non-stablecoins makes liquidation proceeds unpredictable ex ante, and no fixed figure can serve as the measure of due value. Substantive evaluation by results lacks a foundation for attributing responsibility; price movements do not turn on the knowledge and effort of those conducting the disposal, and conduct can only be assessed on the basis of information available at the time of action. The object of review therefore shifts to the constituent elements of disposal conduct. The choice of timing should follow a plan established in advance, and an improvised decision cannot be justified. The liquidation fee rate should be commensurate with the market level of comparable services, and an exorbitant rate cannot count as a cost of proper disposal. The price reference should be drawn from verifiable public data, and the market prices of major international exchanges and weighted averages across platforms can both serve as benchmarks for verification [8, 9]. Where the relevant records are complete, the process by which the disposal decision was made becomes reviewable, and procedure allows discretion to gain acceptability where results cannot be predetermined; the rationale of legitimating discretion through procedure has its place in criminal enforcement, and the gravity of property-rights interference does not lower the demand for procedural protection on account of the enforcement setting.

Procedural review does not exclude necessary substantive constraints. Where the disposal involves manifest tunneling of interests or a low-price sale, the deviation between proceeds and value should still be rejected, the ground of rejection being the illegality of the disposal conduct rather than a failure of equivalence assessment.

3.3. Application of the Layered Standards

Application of the layered standards yields two types of conclusions. For redemption-based value, where the proceeds deviate significantly from the redemption value without explanation, the disposal is held not to have reached due value. For market-based value, where elements of the disposal are absent, the conduct cannot pass procedural review, and the proceeds so obtained cannot be presumed to represent due value as a matter of course; where, by contrast, the elements are complete and the process sound, the propriety of the disposal stands even if the proceeds fall below a later market price. The two conclusions share a common feature, in that equivalence is assessed on the basis of information available at the time of disposal.

4. Conclusion

The mechanism of value realization of objects of disposal precedes the norms of disposal, and the layered response of the norms should be grounded in object types. As

virtual asset types continue to expand, the assessment of value equivalence must ultimately return to the value structure of the object of disposal itself, and the typology built on the mechanism of value realization thereby remains open.

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