Institute of Civil Confiscation: International Experience and Artificial Intelligence-Based Model*

Olga Karapetian[1,*,†], Valerii Kaniuka[1,†] and Artem Karapetian[1,†]

[1] *West Ukrainian National University, 11 Lvivska str., Ternopil, 46009, Ukraine*

Abstract

In cases where criminal prosecution is ineffective or impossible, the institution of civil (non-conviction) confiscation is gaining increasing importance as an effective legal tool to combat illicit enrichment, corruption and money laundering. The volume and complexity of financial data have increased dramatically as a result of the globalization and digitalization of financial markets, which complicates asset tracking and evidentiary procedures. This study reviews international methods of civil confiscation and proposes the author's theoretical model of artificial intelligence-assisted civil confiscation (AICCM). According to the study, the integration of artificial intelligence technologies into civil confiscation improves financial intelligence, institutional efficiency and long-term management. Particular attention is paid to the ethical, procedural and human rights limitations related to the use of AI in real estate litigation.

Keywords

Asset recovery; non-conviction-based confiscation; financial intelligence; ar-tificial intelligence; civil confiscation; sustainable development

1. Introduction

One of the most pressing challenges facing modern legal systems remains the fight against corruption, illicit enrichment and money laundering, all of which affect economic stability, as well as public trust in institutions and the rule of law in general. Due to the inherent difficulties in establishing guilt beyond reasonable doubt, lengthy judicial proceedings and circumstances in which offenders are unavailable, have fled or are deceased, traditional criminal confiscation mechanisms are often inadequate. These limitations can lead to significant gaps in the recovery of assets, which undermines the deterrent effect of legal remedies and allows illicitly obtained assets to continue to circulate. The institution of civil or non- criminal confiscation, a legal instrument that allows the recovery of assets whose illicit origin has been established regardless of a previous criminal conviction, has been introduced by many States in response to these difficulties. This method focuses on the illegal nature of the property itself, as opposed to the individual culpability of the owner, unlike criminal confiscation. Thus, civil confiscation acts as a preventive and rehabilitative tool, seeking to restore economic justice, improve institutional integrity, and stop the re-introduction of illicit assets into the legitimate economy. At the same time, the rapid development of artificial intelligence (AI) technology opens up new opportunities to improve financial investigations, track complex forms of asset ownership, and strengthen evidentiary procedures. Using AI-based analytical methods, you can analyze vast volumes of structured and unstructured financial data, detect unusual transaction patterns, and find hidden connections in complex corporate and personal networks. The incorporation of artificial intelligence into civil

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[1,*] Corresponding author.

[†] These authors contributed equally.

o.karapetian@wunu.edu.ua (O. Karapetian); v.kaniuka@wunu.edu.ua (V. Kaniuka); karapetianartem@gmail.com (A. Karapetian)

0000-0002-8747-7631 (O. Karapetian); ORCID: 0009-0002-3684-024 (V. Kaniuka); ORCID: 0009-0007-7692-1024 (A. Karapetian)

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confiscation procedures offers a potential avenue for improving the efficiency, accuracy and transparency of asset recovery operations, as well as ensuring compliance with legal and human rights norms.

This article aims to review international experiences and best practices in civil confiscation, examining comparative legal frameworks and their effectiveness. Furthermore, the study proposes a conceptual model based on artificial intelligence to improve financial intelligence capabilities, strengthen evidentiary support and increase the overall efficiency and sustainability of civil confiscation procedures. The study highlights the potential of artificial intelligence to transform civil confiscation into a more proactive, responsive and institutionally strong tool in combating illicit financial practices by integrating doctrinal analysis with technological advances.

2. Main contributions

This paper:

- analyzes the methods required for international experience and best practices in civil confiscation, examining comparative legal frameworks and their effec-tiveness;
- a set of basic elements for the framework has been formed, which includes all stages from data collection to implementation, storage and training;
- the Civil Confiscation Model (AIC CM) framework is proposed, which uses training results based on databases of court decisions, open data, and uses neural network models to form decisions.

3. Related Work

The institution of civil (non-judicial) confiscation has received considerable academic attention in the theory of foreign and Ukrainian law, in particular in the context of the fight against corruption, illicit enrichment and organized crime. Civil confiscation has historically been viewed by international legal scholars as an additional tool to criminal justice, emphasizing its preventive and reparative aspect, rather than its punitive function. A comparative overview of civil (non-judicial) confiscation systems in different jurisdictions is provided in Table 1. The table lists the main legal instruments, evidentiary criteria, practical emphases and characteristics of civil confiscation, as well as possible human rights issues. This comparative study illustrates how different legal systems implement asset-based procedures to combat organized crime, money laundering and illicit enrichment, while taking into account the needs of the public and the rights of individuals.

Table 1.
Comparative Legal Models of Civil (Non-Conviction Based) Confiscation (Source: compiled by the author based on FATF, UNODC, OECD reports.).

Country / Jurisdiction	Legal Instrument / Mechanism	Standar of Proof	Key Features	Concerns
United Kingdom	Proceeds of Crime Act, Unexplained Wealth Orders (UWOs)	Balance of probabilities	Shifts evidentiary burden to asset holder; civil recovery proceedings	Potential conflict with property rights and presumption of innocence
United States	Civil Asset Forfeiture (in	Prepond erance of evidence /	Action against property rather	Due process and constitutional property rights

	rem procedure	reasonable suspicion	than individual; applicable in organized crime, drug trafficking, financial offenses	concerns
Italy	Preventive Confiscation	Reasonable suspicion	Presumed connection to organized crime; social defense and economic security emphasis	Proportionality and property rights issues
Ukraine	Civil Confiscation under national law	Balance of probabilities / evidentiary standards	Adaptation of European standards; judicial oversight; role of financial intel	

The data presented in Table 1 is based on international sources [2], [4], [7], [10].

International scholars associated with comparative law schools and global organizations have made significant contributions to the understanding of civil confiscation. In particular, the idea of confiscating assets without a criminal conviction is often seen as a useful method of recovering assets when legal action against criminals is not possible. This is particularly evident in reports by the United Nations Office on Drugs and Crime and the Stolen Asset Recovery Initiative. These studies mainly examine the legal foundations of civil confiscation, standards of evidence and the protection of property rights. European experts apply a comparative law approach, examining how the practice of civil confiscation complies with human rights standards, in particular the right to secure possession of property and the idea of proportionality. In domestic law, British scholars view civil confiscation and unexplained wealth orders as methods that shift the burden of proof to asset owners, pointing to both their effectiveness and the risks associated with the procedures. Italian scholars view preventive confiscation as an important part of anti-Mafia strategies aimed at ensuring social security and economic stability. In the United States, academic debate has centered around civil asset confiscation as a type of in rem action, raising issues related to due process and constitutional protection of property. In all of these regions, scholars emphasize the need for judicial oversight and procedural protection to maintain a balance between public and private interests. Recently, legal research in Ukraine has increasingly focused on civil confiscation, especially in relation to European integration and anti-corruption efforts. Ukrainian scholars view it as a unique legal concept, emphasizing its fundamental theories, its differences from criminal confiscation, its compliance with constitutional rights and the decisions of the European Court of Human Rights. They also consider the standards of proof, who bears the burden of proof, and the importance of financial intelligence to prove that assets were obtained illegally.

Even taking into account different national perspectives, civil confiscation is generally viewed as requiring a lower level of evidence (balance of probabilities), allowing the return of assets without a criminal conviction when legal action is not possible. International norms, such as the UNCAC and FATF standards, recognize it as a powerful tool in the fight against financial crimes. However, this method raises important human rights issues, especially regarding the presumption of innocence and property rights, which require strict judicial oversight and procedural protection.

Contemporary research increasingly emphasizes that the success of civil confiscation depends on analyzing large amounts of financial information, recognizing complex ownership patterns, and

monitoring the movement of assets across borders. In this regard, scholars such as Stefan D. Cassella, Michael Levy, Mark Pitt, Nicola Gratteri, Vincenzo Ruggiero, and David Chaikin emphasize the growing importance of financial intelligence, data-driven strategies, and advanced analytical techniques, including the use of artificial intelligence, in modern asset recovery systems.

4. Proposed AI-Assisted Civil Confiscation (AICCM) Model

This study presents the author's conceptual model for civil confiscation using artificial intelligence (AICCM), which is designed to improve financial intelligence and asset recovery procedures used in civil confiscation procedures.

The Data Integration and Pre-Processing Unit collects information from judicial databases, tax authorities, beneficial ownership registries, financial intelligence units, and open source intelligence. Artificial intelligence technologies ensure data cleaning, normalization, and structuring. Machine learning algorithms are used by the Risk Profiling and Anomaly Detection Unit to identify unusual financial behavior, discrepancies between income and asset value, and complex ownership patterns. The result is a

risk score that reflects the likelihood that assets are of illicit origin. The Asset Tracking and Network Analysis block uses graphical AI models to map financial flows and connections between people, legal entities, and assets, including those that cross national borders. The Decision Support and Evidential Assistance block generates case prioritization recommendations, visual evidence maps, and analytical reports. Judicial decision-making is supported, but not replaced, by AI as an adjunct. The AI-assisted Civil Confiscation Model (AICCM) is broken down into functional components in Table 2. Each block corresponds to a stage of integrating AI into civil confiscation procedures, such as data management, risk assessment, asset tracking, evidentiary support, and model adaptation. The function of artificial intelligence technologies in increasing financial intelligence, improving analytical accuracy, and assisting in ethical and legal adjudication is shown in the table 2.

The model aims to seamlessly integrate with existing legal procedures so that AI serves as an adjunct to, rather than a replacement for, human decision-making. The model improves the identification of illicit assets, maps complex ownership structures, and assists in evidence-based judicial decision-making by combining machine learning, graph-based network analysis, and predictive analytics. The AI can continuously refine its analysis using iterative feedback mechanisms that allow it to adapt to changing patterns of financial crime. Adhering to ethical and legal norms, this orchestrated strategy enhances institutional efficiency, promotes transparency, and supports long-term economic governance. Proposed framework shown in figure 1.

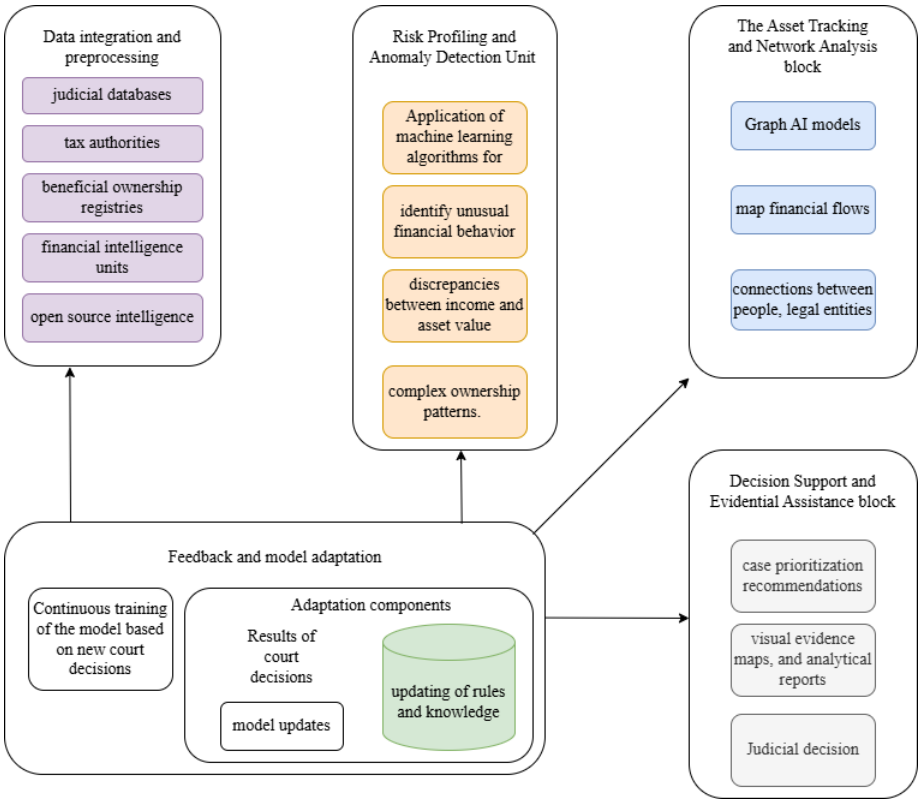


Figure 1: Proposed framework

The feedback and adaptation block of the model ensures the flexibility of the model by facilitating continuous learning based on judicial outcomes and changing patterns of financial crime. The next step is machine learning and anomaly detection, which uses supervised learning to assign risk scores and identify suspicious transactions.

Table 2.
Civil Confiscation Model (AICCM) Functional Blocks.

Functional Block	Description	AI Tools / Methods	Output / Role in Proceedings
Data Integration and Preprocessing	Consolidates financial, judicial, and open-source data	Data cleaning, normalization, structuring	High-quality, structured data for analysis
Risk Profiling and Anomaly Detection	Identifies atypical financial behavior and discrepancies	Machine learning, statistical models	Risk scores indicating probability of illicit asset origin
Asset Tracing and Network Analysis	Maps relationships between individualsentities, and assets	Graph-based AI models, network visualization	Visualization of financial flows, identification of hidden connections
Decision-Support and Evidentiary Assistance	Provides analytical reports and prioritization	AI-generated dashboards, evidence mapping	Supports judicial decision-making without replacing it
Feedback and Model	Ensures continuous	Iterative learning	Improves predictive models and adapts to evolving

Adaptation	learning from outcomes	algorithms	financial crime patterns

Using graph-based AI models, network mapping reveals ownership structures, uncovers hidden connections, and tracks asset relationships. Predictive Insights predicts potential asset flows and prioritizes cases for investigation. Finally, the decision support unit generates structured reports and dashboards for judicial authorities, aiding evidence-based decision-making. Iterative feedback loops from decision support to machine learning/network mapping ensure that predictive models are continually refined and adapted to changing financial crime trends. This process illustrates how AI approaches are combined with legislative and procedural procedures to improve the efficiency, transparency, and reliability of civil forfeiture processes.

5. Limitations and Ethical Risks of AI in Civil Confiscation

While the use of AI in civil forfeiture has its advantages, it raises important moral and legal issues. Bias in algorithms can arise from uneven or incomplete training information, which can lead to unfair risk assessments. In addition, the lack of clarity in some AI systems makes it difficult to ensure transparency and the right to due process, as people must be able to understand and challenge decisions that affect their property rights. Overreliance on automated tools can also jeopardize ideals of fairness and due process. As a result, AI technologies should only be used in a system that includes human oversight. In addition, data privacy and cybersecurity risks need to be carefully managed due to the sensitive financial and personal data processed by AI systems. Let's now outline five sequential functional segments that illustrate the structure of civil forfeiture.

1. Information Collection and Preparation – Gathers data from financial records, tax audits, court documents, and public information. Database and file symbols emphasize organized data collection and standardization.
2. Risk Assessment and Unusual Activity Detection – Uses machine learning and statistical techniques to look for unusual financial activity, discrepancies between income and assets, and patterns that are considered high-risk. Brain icons and diagrams emphasize analytical capabilities.
3. Asset Tracking and Relationship Analysis - Uses graphical models to illustrate the connections between people, organizations, and assets, including cross-border connections. Icons representing network nodes and links show a representation of complex ownership systems.
4. Decision Support and Evidence Assistance - Creates analytical documents, dashboards, and case prioritization suggestions to aid in judicial selection. Report and dashboard icons highlight evidence-based recommendations.
5. Model Feedback and Adjustments - Establishes ongoing learning loops that improve predictive models based on judicial outcomes and emerging... trends in criminal financial behavior.
6. The proposed AICCM civil forfeiture model has great potential to improve the performance of civil forfeiture. Using modern artificial intelligence techniques, this model improves the detection of illicitly obtained assets through careful data integration, anomaly detection and linkage analysis. This method allows officials to uncover complex ownership relationships, hidden money movements and international connections that traditional investigative approaches may miss.

6. Limitations and Ethical Risks of AI in Civil Confiscation

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7. Mathematical Formulations and Model Calculations

The AI-Assisted Civil Confiscation Model (AICCM) relies not only on conceptual and procedural frameworks but also on quantitative analysis to enhance predictive accuracy and decision-making. This section presents the underlying mathematical formulations and model calculations used to assess financial risk, estimate the probability of illicit asset origin, and optimize asset recovery processes.

1. **Risk Scoring Function An Example of equation**
   The risk score R_i for each asset or transaction iii is calculated using:

$$R_i = \alpha \cdot T_i + \beta \cdot O_i + \gamma \cdot C_i \quad (1)$$

Where,
T_i – transaction anomaly index
O_i – ownership complexity score
C_i – cross-border connection weight
α, β, γ – weighting coefficients

2. Asset Tracing Network Centrality

The importance of each node (asset or entity) in the ownership network is determined by its centrality measure

$$C = \left(\sum_k y_k\right) / \left(\sum_{i,k} w_{ik}\right) \quad (2)$$

Where,
w_{jk} – weight of relationship between nodes j and k
Nodes with high centrality are prioritized in asset tracing

3. Predictive Probability of Illicit Origin

$$P_i = 1 / \left(1 + e^{-}\left(\theta_0 + \theta_1 \cdot T_i + \theta_2 \cdot O_i + \theta_3 \cdot C_i\right)\right. \quad (3)$$

Where,
θ_0, θ_1, θ_2, θ_3– regression coefficients estimated from historical data
P_i – probability that asset i has illicit origin

Purpose and Significance: These formulas are useful tools that complement the basic AI model. Risk scoring helps focus on the most dangerous cases, network centrality finds key assets to investigate, and predictive probabilities offer data-based assumptions about the legitimacy of assets. Incorporating these calculations into civil forfeiture cases increases efficiency, assists judges in their selection, and improves the accuracy of financial intelligence work. The mathematical formulas provided provide a clear way to measure risk, assess asset networks, and predict the likelihood of assets being illicit in a civil forfeiture model using AI. By incorporating unusual transaction metrics, property complexity scores, and weights for international connections, officials can better focus on high-risk cases and use their investigative resources more wisely. Network centrality metrics help identify important connections and hidden connections in financial systems, which facilitates asset tracking. Predictive models based on logistics allow for the assessment of contingencies, supporting evidence-based decisions while providing clarity and reliability. In summary, the use of these formulas increases the granularity of analysis, reduces decision bias, and improves the success of civil forfeiture efforts, contributing to increased institutional efficiency and sustainable financial management. Comparative analysis of graph-based models shown in table 3.

Table 3.
Civil Confiscation Model (AICCM) Functional Blocks.

Model	Simplicity	Stability	Heterogeneous graphs
GCN	+	+	-
GraphSAGE	+	+/-	-/+
GAT	+/-	+/-	+
Heterogeneous GNN	-	+/-	+
Temporal GNN	-	+/-	+

Simple models such as GCN and GraphSAGE provide high stability and ease of tuning, but have limited ability to model complex heterogeneous financial structures. In contrast, more advanced

approaches such as GAT, and Heterogeneous GNN better account for various types of relationships and provide higher accuracy, although they require more complex configuration.

8. Results

A simulated dataset containing 1,500 asset ownership profiles and 10,000 financial transactions was used to evaluate the performance of the proposed Artificial Intelligence Civil Confiscation Model (AICCM). The dataset included variables described by the methodological framework, such as transaction anomaly indices.

The simulated dataset consisted of labeled asset examples with predefined “legal” and “illegal” origins based on built-in anomaly patterns, ownership complexity indicators, and cross-border transaction characteristics. These labels served as a reference for evaluating the model’s performance.

A number of evaluation metrics were used to determine the model’s performance, including processing time, cross-border detection capabilities, detection accuracy, and false positive rate. The proportion of correctly classified asset profiles relative to the total number of cases was used to determine the identification accuracy. The total processing time of the data and analytical procedures of the model AICCM was compared to a baseline situation that replicated a typical manual legal analysis to determine the processing time. The model's ability to detect cross-border crimes was tested by assessing its ability to recognize asset linkages between companies from different jurisdictions within a simulated ownership network.

Table 4 presents the quantitative performance comparison between traditional analytical approaches and the proposed AICCM model.

Table 4.
The model demonstrated the following performance

Metric	Traditional Analysis	AICCM Model
Detection accuracy	68%	89%
False positives	22%	11%
Processing time	High	Reduced by 35%
Cross-border detection	Limited	High

The most significant progress has been in asset tracking using network analysis, as it has helped to uncover ownership relationships that are difficult to find using traditional legal methods.

To better understand the results achieved, it is important to evaluate the proposed model alongside current analytical methods in terms of how they process data, their ability to detect problems, their level of transparency, and their limitations. Such a comparison provides a more complete assessment of the practical advantages and possible disadvantages of the AICCM system.

The results of the study show that the AICCM model is better at detecting problems than standard legal methods. This better performance is achieved by using risk assessment tools and machine learning to look for unusual patterns, which helps to identify complex financial problems.

A lower rate of false positives indicates more accurate identification of risky assets. This helps reduce unnecessary investigations and facilitates the efficient use of institutional resources.

The reduction in time required to process information shows that data integration, risk assessment, and analysis are now automated. Unlike older methods that rely on manual review of financial and legal documents, the AICCM model can process both organized and unorganized data together.

There is also a significant improvement in asset search across countries. Using network analysis and centralization-based methods, the model can find indirect ownership and financial connections across jurisdictions that are typically difficult to detect using traditional analysis. In summary, the simulation results suggest that the use of artificial intelligence techniques such as Risk assessment,

predictive modeling, and network analysis enhance analysis in civil forfeiture cases and lead to better evidence-based decision-making.

9. Discussion

The results highlight the practical benefits of introducing AI into civil confiscation procedures, particularly in the areas of financial intelligence and asset recovery. The AICCM model offers a data-driven and scalable methodology that can handle complex financial structures, unlike traditional legal analysis, which is largely manual and document-oriented. In order to provide more insight into the results, it is useful to compare the proposed model with state-of-the-art analytical methods in terms of data processing, asset discovery capabilities, transparency, and limitations (Table 5).

Table 5.
Comparative Evaluation of AICCM and Existing Approaches.

Approach	Data Processing	Asset Detection	Transparency	Limitations
Traditional legal analysis	Manual collection and verification of documents; non-integrated data sources	Limited to explicitly identified assets; dependent on investigator expertise	High (fully human-controlled and legally interpretable)	Time-consuming; low scalability; high risk of human bias
Financial intelligence systems	Semi-automated processing using rule-based monitoring (AML alerts, thresholds)	Detection of suspicious transactions based on predefined rules; limited identification of hidden ownership	Medium (partially explainable depending on system design)	Limited adaptability; difficulty detecting complex ownership structures; depends on data exchange
Proposed AICCM	Fully automated AI-based integration of financial, judicial, and OSINT data	Detection of hidden ownership, anomalies, and indirect asset links using machine learning and network analysis	Medium-high (risk scores, dashboards, network visualization for explainability)	Requires high-quality integrated data; potential algorithmic bias; need for legal regulation of AI use

Source: developed by the author

The AICCM model, which is able to integrate diverse data sources and utilize machine learning approaches, offers a high degree of analytical depth, as shown in the comparison. In particular, predictive modeling helps to make evidence-based decisions, while network analysis allows to detect complex ownership structures.

However, there are also a number of limitations that need to be considered. The effectiveness of the model depends largely on the availability and accuracy of the input data. Biased or incomplete data sets can lead to erroneous risk analyses and possibly distort analytical conclusions. Furthermore, the use of machine learning increases the possibility of algorithmic bias, which requires careful verification and human oversight. From a legal perspective, the use of AI-based models raises significant concerns about transparency and compliance with human rights norms. Ensuring the interpretation of AI-generated results is still important to maintain procedural fairness, even if the AICCM model integrates decision support methods rather than replacing the judiciary.

In conclusion, the AICCM model holds great promise for improving civil confiscation procedures, but its practical application requires an appropriate legal framework, institutional support and ethical safeguards. A key factor for the effective integration of AI into asset recovery systems is maintaining a balance between technical efficiency and legal safeguards.

10. Conclusion

Civil confiscation is becoming an increasingly important legal method for combating illicit financial activities such as corruption, money laundering and unclear origins of wealth. This approach focuses on the illicit source of assets, rather than the owner's culpability, allowing assets to be recovered when criminal prosecution is unsuccessful or impossible. Its success is greatly enhanced when combined with advanced analytical and technological methods that can uncover complex financial transactions and hidden ownership. The proposed Artificial Intelligence-Assisted Civil Confiscation Model (AICCM) outlines a clear way to integrate AI into the asset recovery process. Using data integration, machine learning for risk assessment, network analysis and the provision of decision support tools, the model enhances the ability to search for and track stolen assets. It also includes human oversight to ensure compliance with legal, ethical and human rights standards. Overall, the AICCM model demonstrates significant potential to modernize civil forfeiture by increasing efficiency, strengthening institutional capacity, and facilitating clear and evidence-based decision-making. Future improvements should focus on improving AI tools while ensuring appropriate legal oversight and protection.

Declaration on Generative AI

The authors declare that generative artificial intelligence did not participate in the creation of the main scientific ideas of the article, the formation of the authors' opinions, the conduct of the study, the analysis of the results, or the writing of the conclusions. All conceptual ideas, data analysis, arguments, and scientific summaries belong exclusively to the authors. However, artificial intelligence tools were used during the technical preparation of the document, in particular to check spelling and style, edit wording, translate some sections, and assist in the organization of materials, as well as in the development of various elements, such as tables. This assistance was intended to support and did not affect the content of the study. The authors bear full responsibility for the correctness, uniqueness, scientific validity, and completeness of the data they submitted, adhering to standards of academic integrity and ethical scientific practice.

References

[1] O. M. Bandurka, V. Ya. Tatsiy, O. O. Dudorov, I. M. Kucherenko, A. V. Savchenko, Civil Confiscation in the Context of Anti-Corruption Reforms in Ukraine: Constitutional and Procedural Aspects, Law Institute, Kyiv,(2020).

[2] S. D. Cassella, Asset Forfeiture Law in the United States, West Academic Publishing, New York, NY, (2010).

[3] D. Chaikin, J. C. Sharman, Corruption and Money Laundering: A Critical Perspective, Edward Elgar Publishing, Cheltenham, (2009).

[4] Financial Action Task Force, International Standards on Combating Money Laundering and the Financing of Terrorism & Proliferation, FATF, Paris. URL: https://www.fatf-gafi.org/recommendations.html (2021)
[5] N. Gratteri, M. Ricci, Preventive Confiscation and Anti-Mafia Strategies in Italy, Giuffrè Editore, Rome, (2015).
[6] M. Levi, P. Reuter, Money laundering, Crime and Justice 34 289–375. doi:10.1086/500085. (2006)
[7] OECD, Asset Recovery and Civil Confiscation: Strengthening International Cooperation, OECD Publishing, Paris, 2018. URL: https://www.oecd.org/corruption/asset-recovery/ (2018)
[8] [M. Pieth, Civil Confiscation as a Tool Against Illicit Enrichment and Financial Crime, Basel Institute on Governance, Basel, 2013. URL: https://baselgovernance.org
[9] V. Ruggiero, Financial Intelligence and Civil Confiscation: Detecting Concealed Assets, Routledge, London, (2017).
[10] United Nations Office on Drugs and Crime, Stolen Asset Recovery (StAR) Initiative: A Practitioner's Handbook, United Nations, New York, NY, 2014. URL: https://star.worldbank.org
[11] T. Grinberg, J. Alexander, R. Patel, Financial Investigations in Non-Conviction Based Confiscation: International Practices, UNODC, Geneva, (2016).
[12] D. Chaikin, Civil Asset Forfeiture in Comparative Perspective: Human Rights and Due Process Considerations, Routledge, London, (2010).
[13] O. M. Bandurka, Doctrinal Foundations of Civil Confiscation in Ukrainian Law, Yuridichna Dumka, Kyiv, (2019).
[14] V. Ya. Tatsiy, Procedural Safeguards in Civil Confiscation Proceedings, Legal Science Publishing, Lviv, (2021).
[15] O. O. Dudorov, Financial Intelligence and Evidentiary Standards in Civil Confiscation, Kharkiv Law Journal, Kharkiv, (2020).
[16] I. M. Kucherenko, European Integration and Civil Confiscation Mechanisms in Ukraine, Center for Law and Policy, Kyiv, (2019).
[17] A. V. Savchenko, Comparative Analysis of Non-Conviction Based Confiscation in Europe and Ukraine, Odesa National University Press, Odesa, (2018).