International Journal for Multidisciplinary Research (IJFMR)



E-ISSN: 2582-2160 • Website: <u>www.ijfmr.com</u> • Email: editor@ijfmr.com

# **Artificial Intelligence in Bank Reconciliation**

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#### Abstract

Reconciliation of banks ensures the accuracy of the financial records between internal ledgers and bank statements. The conventional process is error-prone and manual, but AI is revolutionizing this domain with automation, real-time analysis, and anomaly detection. In this paper, the use of AI in bank reconciliation has been discussed with secondary research and practical examples to articulate benefits, challenges, and future directions.

#### 1. Introduction

Reconciliation is an ongoing but required financial process, typically held up by manual entry, errors, and increasing transaction volumes. Artificial intelligence enables faster, smarter reconciliation through automation and pattern recognition. As businesses expand, AI becomes a critical answer to maintaining financial accuracy and integrity.

#### 2. Literature Review

#### 2.1 Historical Bank Reconciliation

Manual reconciliation is slow, time-consuming, and error-prone. It often struggles with inconsistent data and ties up significant accounting capacity.

#### **2.2 Emergence of AI in Finance**

AI has machine learning and automation accompanying it, with improved accuracy and speed. Financial institutions are applying AI to detect anomalies and reconcile automatically.

#### 3. Methodology

#### 3.1 Study Design

Qualitative review of existing case studies, white papers, and industry reports was used to examine the impact of AI on bank reconciliation.

#### **3.2 Data Collection**

Secondary data were collected from white papers by software vendors, industry reports, and case studies on AI-based reconciliation software such as Trintech's Cadency Match.

#### 3.3 Data Analysis

Thematic and comparative analysis was performed to identify differences and challenges for manual and AI-based reconciliation.

#### 4. Findings and Discussion

### 4.1 Benefits of AI in Bank Reconciliation

AI speeds up reconciliation, reduces human error, and enables fraud monitoring continually. It further



makes operational spending more streamlined by removing excessive repetitive labor.

One can see an example with Trintech's Cadency Match solution based on AI that reduces risk exposure by automating high-volume transactions matching. It has been reported by Trintech that organizations using Cadency Match have reported improved financial close cycles and greater reconciliation accuracy, especially in heavy multi-entity organizations (Trintech, n.d.).

#### 4.2 Challenges and Limitations

Excessive initial costs, data quality issues, and employee resistance to change could inhibit the growth potential of AI for streamlining reconciliation systems.

#### **5. Future Trends and Opportunities**

#### **5.1 Real-Time Reconciliation**

API connectivity enables AI platforms to reconcile transactions in real-time, yielding real-time insight into financial disparities.

#### **5.2 Blockchain Integration**

Blockchain and AI can be used together to enhance security, traceability, and transparency for multi-party reconciliations.

#### **5.3 Predictive Analytics**

Sophisticated AI will soon be able to forecast reconciliation problems prior to their arising, allowing for advance financial planning and risk avoidance.

#### 6. Conclusion

AI is revolutionizing reconciliation from a labor-intensive task into an on-demand, real-time process. Although there are some initial adoption issues, the long-term benefit in speed, accuracy, and intelligence is significant. As AI technology improves, so too will its role in finance, with smarter, more proactive reconciliation techniques on offer.

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