VIEW POINT

RECONCILIATION IN THE AGE OF MACHINE LEARNING

Abstract

In the early 2000s, business processes, including reconciliation, were typically done in Excel or with the help of in-house tools. Today, technology has advanced, and businesses are automating and streamlining processes. The future of reconciliation is evolving with technology, and businesses need to be ready for change. Soon, inter-system reconciliation may be redundant, as technology will automatically identify and rectify errors. While the technology is not yet widely available, businesses can position themselves to use it when it is available. Machine learning can play an essential role in automating balance sheet reconciliation. This point of view will explore how automation and artificial intelligence can streamline reconciliation and take it to the next level.

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Introduction

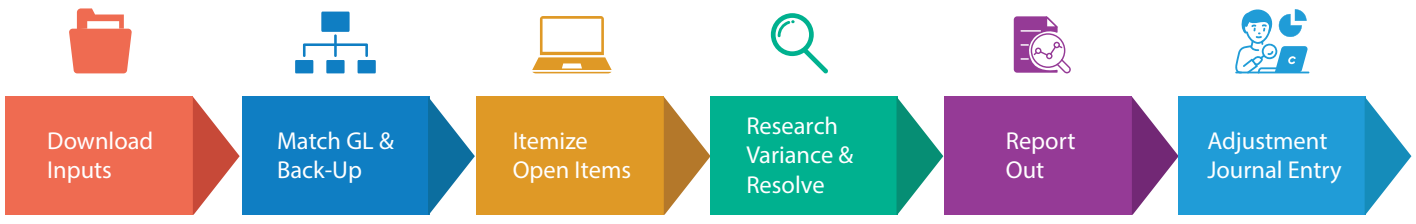
Reconciliation is an internal control mechanism that protects a company's assets and financials by verifying the accuracy of financial data. It validates the balance in various general ledger accounts, which are then represented in the balance sheet and profit and loss account.

Reconciliation can be defined as "the documented explanation and analysis of the ending balance of a general ledger account". It is a critical control point that helps to reduce or eliminate the risk factors in business operations. In the absence of reconciliation, financial fraud could occur, which could have an impact on the business.

Evolution

In the initial days' reconciliation used to be a complete manual process. It was not only time-consuming but also prone to errors.

Process Steps:



Over the past five years, the financial services industry has used digital transformation and robotic process automation (RPA) to extensively eliminate repetitive tasks across all F&A functions. However, automating the reconciliation process has been challenging due to:

1. Non-standardized data templates
2. Complexity of data in various categories of accounts:
3. Missing or inconsistent data
4. Lack of existing reconciliation policies and a non-harmonized way of reconciliation between different units

As a result of these challenges, the volume and complexity of reconciliation remain high, and the number of full-time employees (FTEs) required to complete the process on time remains high. There is also a high risk of errors due to the manual nature of the process. However, with the introduction of new tools and technologies, business services can now look forward to a feasible solution for automating and optimizing the entire reconciliation function.

Machine learning

Machine learning is poised to be a key player in the future of balance sheet account reconciliation. Machine learning techniques can be used to automate data matching, intelligent exception handling, real-time reporting, and predictive analytics.

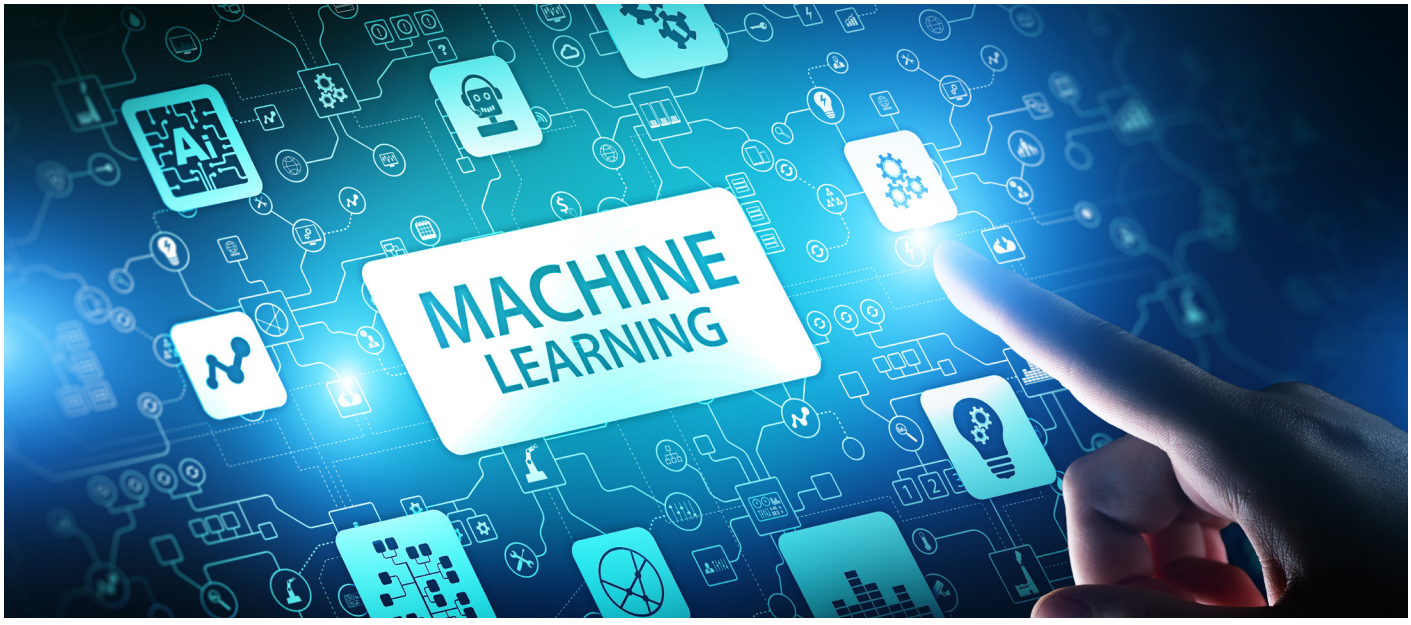
1. Automated data matching: Machine learning algorithms can be used to identify matching transactions between different data sources, such as bank statements and accounts payable/receivable systems. This can help to streamline and expedite the reconciliation process, reduce errors, and improve accuracy.

2. Intelligent exception handling: Machine learning algorithms can be trained to detect and flag transactions that do not match expected patterns or that are outliers. This can help accountants quickly identify and investigate potential problems, leading to faster resolution of discrepancies.

3. Real-time reporting: Advanced machine learning models can be used to analyse and categorize transactional data in real-time. This can help businesses to quickly identify and address potential risks, as well as to ensure that the reconciliation process is completed on time.

4. Predictive analytics: Machine learning can be used to predict possible discrepancies and areas of potential risk. This can help businesses to take proactive measures to prevent problems, such as fraud or financial loss.

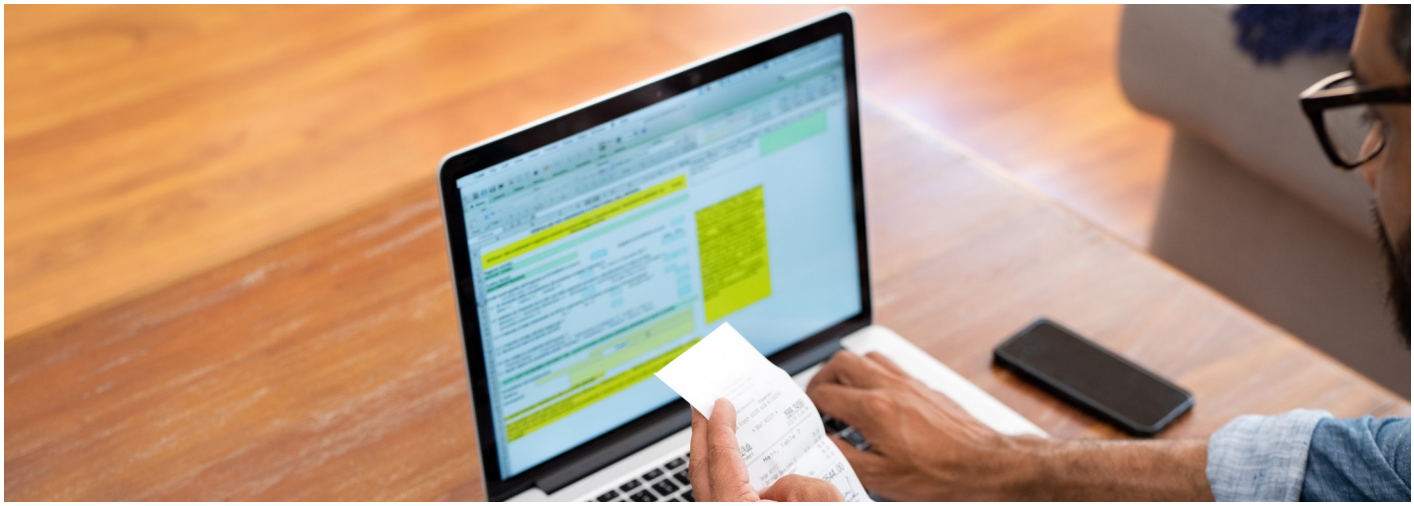
Overall, the use of machine learning in balance sheet reconciliation has the potential to revolutionize the way this essential process is conducted By automating time-consuming tasks, identifying potential problems, and providing real-time insights, machine learning can help businesses to improve accuracy, efficiency, and compliance.



Tools

With the introduction of Blackline reconciliation has been automated to a certain extent. Blackline is a software platform that helps automate the balance sheet reconciliation process, streamline the financial close, and reduce errors and risks.

The platform provides a centralized location for all balance sheet reconciliation-related data, including bank reconciliations, account reconciliations, and journal entries. This makes it easier for users to access and manage data and can help to reduce errors. The software automates many time-consuming tasks such as automatically matching transactions in accounting systems to bank statements. This can save users a significant amount of time and effort and can help to improve the accuracy of reconciliations. It can also identify discrepancies or errors in reconciliations, ensuring that accounts are accurately balanced.



Automation

A recent internal study found that the average automation rate for balance sheet reconciliation is low. However, machine learning can play a crucial role in supporting automation.

Sub Process	Metric	Unit	Average	Best-in-Class
Account Reconciliation	Percentage of Account Reconciliation- Semi-Automation	%	10.96%	54.43%
Account Reconciliation	Percentage of Account Reconciliation- Full Automation	%	17.70%	17.70%

Machine learning can automate tasks in three ways:

- **Process automation**: Machine learning algorithms can be used to analyze and understand existing processes and identify areas where automation can be applied. By learning from historical data and patterns, machine learning models can automate repetitive and rule-based tasks, improving efficiency and reducing human intervention
- **Intelligent decision-making:** Machine learning algorithms can be trained on large datasets to make intelligent decisions. For example, they can be used to propose correction journal entries to rectify balances or clear open items.
- **Anomaly detection:** Machine learning models can be trained to identify anomalies or deviations from normal patterns in data. For example, they can be used to analyze trial balances to identify anomalies.

Machine learning empowers automation by enabling systems to learn, adapt, and make intelligent decisions based on data, leading to increased efficiency, accuracy, and scalability in various domains. In the context of balance sheet reconciliation, machine learning has the potential to identify errors, exceptions, and missing or poor-quality data. It can also fix upstream processes and effectively reduce the total number of reconciliations for a business.

As a result, the process can become so seamless that intersystem reconciliation can be eliminated. Every business should try to achieve this.

However, it is important to note that machine learning is not a silver bullet. It still requires human intervention to ensure accuracy and compliance. For example, if a machine learning algorithm makes a recommendation, the end user should ideally accept or decline it to avoid surprises and create an audit trail. Additionally, the machine learning algorithm must be fed with new data regularly so that it can continue to learn and improve.

Overall, machine learning has the potential to revolutionize business finance services. However, it is important to use it in conjunction with manual processes to ensure accuracy and compliance.

The Future of Reconciliation: A Roadmap

Reconciliation has evolved from a manual process to a more automated one, with the use of tools and technologies.

Stage 1 - Manual

Reconciliations were performed manually in Excel

Stage 2 - Hybrid

Zero balance and non-critical accounts were reconciled automatically, while the rest were reconciled manually in Ecel. The process remailed fragmented.

Stage 3 - Automated

Reconciliations were consolidated and automated, with expections monitored and investigated by an internal team. This led to improved efficiency.

Stage 4 - Self Optimizing

Reconciliation is automated throughout its lifecycle, from data integration in ERP to resolution of exceptions. FTE involvement is minimal to none.

Businesses need to assess their current maturity level of the balance sheet reconciliation process and identify the measures that need to be implemented to move towards Stage 4.

The maturity level of an organization's balance sheet reconciliation process can be determined by assessing the extent to which it has achieved the criteria for each of these stages. An organization that has a mature balance sheet reconciliation process has a better chance of achieving accurate financial reporting, compliance with regulatory requirements, and reducing risks.

With the deployment of machine learning within modern systems, the optimum future of reconciliation is not far away. Machine learning algorithms will only continue to improve as they get access to more and more data. Businesses should be ready to reap the benefits of machine learning and a future where reconciliation activity can be minimized. This will not only improve service delivery to clients but will also reduce the tedious human effort involved to complete reconciliation within the defined TAT.

Authors

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Pratap is a seasoned finance and accounting professional with over 16 years of BPM & finance experience, with core expertise in RTR and PTP. He is an experienced leader with a proven track record of success in driving transformation projects, developing F&A domain artifacts, and building capabilities.

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Lalitha Narni is a chartered accountant with a Diploma in Information Systems Audit (DISA), along with a doctorate (Ph.D.) in commerce and management. She also holds three postgraduate degrees – a master's in commerce, M.B.A. with specialization in finance and international business, and a master's in financial management (management accounting). With over 20 years of experience in the BPO industry, she has played various roles including managing end-to-end transitions and transformations, leading re-engineering efforts, sharing best practices, and monitoring quality projects. She has also headed operations, managed staff by identifying their training needs and placing the right resources in the right place, maintained a floating team of experts, and managed client relationships. Additionally, she has led COE initiatives from RFP to the stabilization of tax processes.

In her current role with Infosys, Lalitha is the Global Head for the Finance Center of Excellence responsible for capability development and scaling up finance and accounting resources with domain training. In addition, she also supports operations (to identify and deliver transformations, contract renewals, etc.), solution development and orals with prospective clients, and consultation assignments as domain leads for technology projects.

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