

# Simplifying Inter-entity Reconciliation using Blockchain Technology

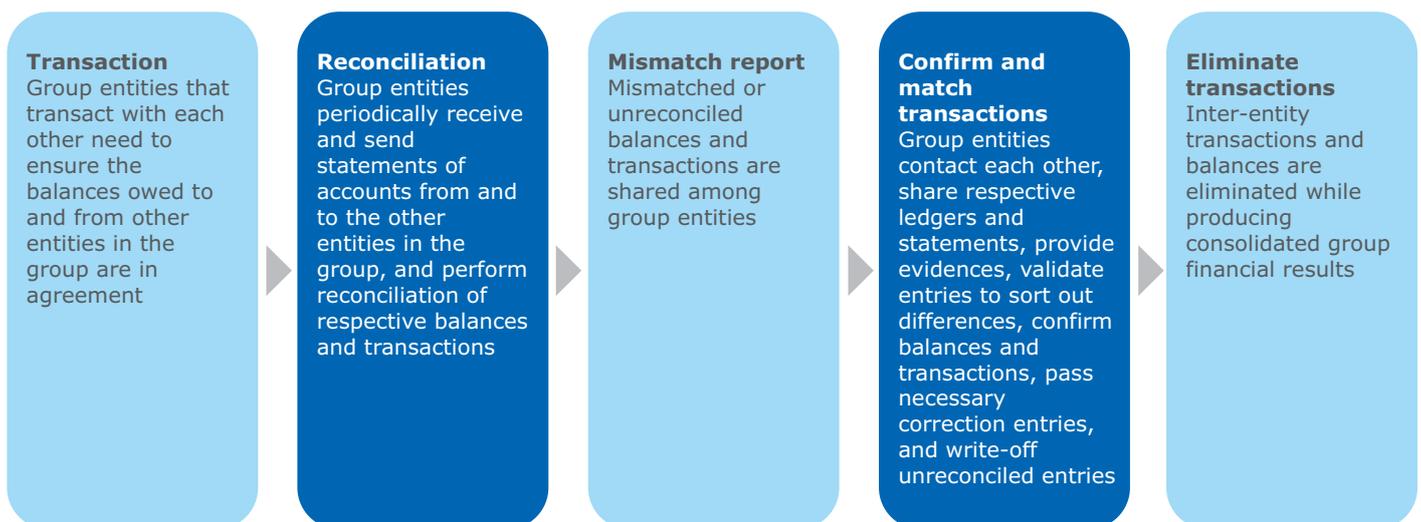
## Abstract

The blockchain technology is fast becoming the focus of strategic business initiatives at financial institutions the world over. Industry players are beginning to explore the various operations where blockchain technology can help improve efficiency. We believe that inter-entity reconciliation – a key activity of the financial reporting function – is one such area.

Having spread their operations across the globe, large banking groups are mandated to use different accounting methods to suit local requirements and regulations. Understandably, they find it extremely challenging to perform inter-entity reconciliation and consolidation at the organizational level. In this article, we discuss how blockchain-based solutions can be used to simplify inter-entity reconciliation, in turn making the financial reporting process more accurate.

## Introduction

Group entities of large banking enterprises transact with each other on a daily basis for funding requirements, lending activities, sale and transfer of assets, and so on. In addition, they need to share the cost of common facilities and services, management and service fees, tax allocations, and dividends, among others. The number of these inter-entity transactions is extremely high and can run into over thousands a month. The fact that these enterprises operate out of various geographies in different time zones with multiple currencies and diverse regulatory reporting norms, as well as tax regimes, complicates the scenario further. It requires reporting specialists to account for transfer pricing adjustments and different accounting methods. Figure 1 depicts a typical inter-entity reconciliation process.



**Figure 1: Steps involved in Inter-entity Reconciliations (Source: TCS Internal)**

Inter-entity reconciliations are necessary to ensure that balances owed to, and from entities, in the same group are in agreement. Confirming and matching inter-entity and inter-branch balances prior to the periodic closure of accounts is one of the most time and effort consuming activities that every banking group performs. Unmatched or unreconciled inter-entity accounts are high risk items from compliance perspective. These are also a major cause of worry to the management and auditors, given their capacity to conceal frauds and misappropriations. Unreconciled items may lead to adverse audit observations and even raise questions of qualification, if found to be large in volume or value. Eventually, banks are required to write-off such unreconciled balances, which may also impact margins.

## Why Inter-entity Reconciliation is a Challenging Exercise

### Why Inter-entity Reconciliation is a Challenging Exercise

Most challenges that banks face with respect to inter-entity reconciliations are broadly attributed to the absence of adequate information, tight schedules, and fragmented communication between counterparties. Financial results must be published at predetermined timelines, which may lead to certain open or unreconciled items being carried forward. Over a period of time, these brought-forward differences accumulate and result in a material mismatch. Further, the counterparties of various group entities may not be able to connect with each other on a real-time basis. Accounting errors, omissions and duplication of transactions, foreign exchange translations, transfer pricing adjustments, inter-group cost sharing allocations and adjustments, and complex revenue-sharing arrangements can further complicate the inter-entity reconciliation process.

Here are some aspects that make inter-entity reconciliation a complex activity:

**Limited counterparty visibility:** Geographically dispersed group entities use varied and isolated accounting systems, which impairs enterprise-level visibility into each entity's ledger accounts and transaction details.

**Non-standard accounting:** More often than not, group entities use different accounting and general ledger systems. Moreover, since most banking groups are the result of takeovers, mergers, and acquisitions, such system-level differences have become even more pronounced. In addition, various legacy accounting systems and multiple charts of accounts are likely to be in operation. It is a challenge to make these varied systems talk to each other for a common accounting and reporting exercise.

**Technology:** Not all organizations currently use technology systems for inter-entity reconciliations. They may have processes that are either manual or semi-manual, which are error-prone and time-consuming. As a result, ensuring accuracy and timeliness of inter-entity reconciliation becomes a challenge.

**High volume of transactions:** The larger the group, the more the propensity of internal transactions. It is a challenge to capture these complex, multidimensional, voluminous transactions, and reconcile them within stipulated timeframes.

## How Blockchain Technology Can Help

To counter the ill-effects of manual processes for inter-entity reconciliation, banking enterprises have created centralized reconciliation teams or have outsourced the activity to third-party service providers. While this has substantially reduced the cost of operations, and improved the accuracy and timeliness of the exercise, it is not a viable solution in the longer run. This is because challenges like non-standard accounting practices and inadequate counterparty visibility cannot be resolved using this approach. Some banks have deployed ERP solutions to overcome reconciliation challenges, but again, the ever-changing business landscape and aggressive M&A activity might prove this solution ineffective, eventually.

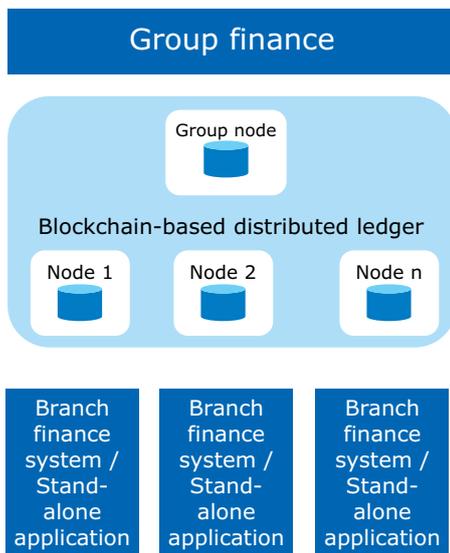
We believe that it is imperative for banks to establish a robust mechanism for inter-entity matching and reconciliation. This will minimize the involvement of bank personnel, whose expertise can be channelized to core business activities, thereby bringing more value to not only the finance function, but also the overall business. Banks must leverage latest technologies to achieve this; for instance, a blockchain-based solution can considerably improve the inter-entity reconciliation process.

Owing to its inherent feature of a distributed ledger, the blockchain technology can help maintain and reconcile inter-entity accounting entries easily. A blockchain-based solution can provide the necessary APIs for integration with existing accounting systems. Inter-entity accounting entries posted to respective ledgers can also be agreed upon and reconciled in near real-time, using the distributed ledger feature. Additionally, the use of digital signatures will drive additional security and auditability in the process. Figure 2 captures the key advantages of a blockchain-based intra-entity accounting process.

While a blockchain-based solution can immensely improve the efficiency of the inter-entity reconciliation process, organizations need to factor in two aspects:

- The blockchain technology is still in its infancy and is at a stage of experimentation at most banks.
- There are no, or very few, commercially available solutions.

This means it is important to conduct elaborate proofs-of-concept and demos to ensure the readiness of a solution before planning a large-scale implementation.



#### Advantages of Blockchain-based distributed ledger :

- Common, real-time, intra-company distributed ledgers within a group can eliminate mismatches, and reduce the non-value adding tasks in intra-company reconciliation and reporting
- Distributed ledger software offers APIs for integration with branch-level finance systems
- Can be integrated with the branch finance systems or maintained as standalone applications, depending on the volume of intra-company transactions

#### The reconciliation process will include:

- Branch-level APIs
  - Record the intra-company accounting entry
  - Approve the posted entry
  - Query the intra-company accounting entry
- Group-level APIs
  - Query the unapproved intra-company accounting entries

Figure 2: Inter-Company Accounting with Blockchain-based Distributed Ledger (Source: TCS Internal)

## Conclusion

Banks are exploring the applicability of blockchain technology in various operations and business scenarios. Inter-entity reconciliation is a potential area where the technology can deliver significant benefits. Since the various constituent entities of global banking groups differ in accounting practices, it becomes rather challenging to streamline the inter-entity reconciliation process. The manual nature of this process further augments the complexity.

We believe that blockchain-based solutions can be of immense use here. However, given the fact that this technology is still at a nascent stage of adoption, comprehensive use case testing is

the need of the hour. Banking enterprises must conduct elaborate tests to prove the business case and the readiness of this technology, especially with regard to its scalability and security, and only then plan for enterprise-level implementations. If blockchain-based solutions are as promising in practice as they are in theory, then we are looking at an inter-entity reconciliation process that is a lot faster, simpler, and accurate.

## About The Author

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