

REVIEWER'S REPORT

Manuscript No.: IJAR-59181

Title: Resilient Architecture for Saudi Banking Treasury Systems: Integrating RPO/RTO, High Availability, Failover Clustering, and Disaster Recovery under Vision 2030.

Recommendation:

Accept as it is
Accept after minor revision.....
 Accept after major revision
 Do not accept (*Reasons below*)

Rating	Excel.	Good	Fair	Poor
Originality		✓		
Techn. Quality		✓		
Clarity		✓		
Significance		✓		

Reviewer Id: JPR-285

Reviewer's Comment for Publication.

The manuscript addresses a relevant and technically important topic concerning resilience architecture for banking treasury systems, with particular emphasis on RPO/RTO, high availability, failover clustering, replication, disaster recovery, cyber recovery, and operational governance. The manuscript provides a coherent framework connecting business impact with technical recovery requirements and appropriately distinguishes high availability from geographically independent disaster recovery. The proposed service-tier approach and phased implementation roadmap provide practical value for banking technology, risk, and continuity-management professionals.

The manuscript is generally well structured, and the discussion effectively explains important issues such as replication lag, data integrity, split-brain prevention, dependency consistency, immutable backups, recovery sequencing, observability, and business validation. The distinction between technical system availability and actual business-service usability is particularly useful.

However, some minor revisions are recommended before publication:

1. **Review methodology should be described more precisely.** The manuscript identifies the review as a structured narrative review and gives the main search-term groups, but it does not provide sufficient detail regarding the databases/search platforms consulted, the number of records identified, screening procedures, or the final number of sources retained. Additional methodological detail would improve transparency and reproducibility.
2. **The evidence base should be differentiated more clearly.** The manuscript combines peer-reviewed literature, regulatory publications, supervisory guidance, and vendor technical documents. This is reasonable for an architecture-focused review, but the manuscript should more explicitly distinguish scholarly evidence from technical/vendor guidance when drawing conclusions.
3. **The proposed RPO/RTO tiers should be clearly identified as illustrative.** The manuscript does acknowledge that the values in Table 2 are design examples rather than universal limits. This qualification should be made especially prominent because RPO/RTO requirements may vary

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considerably according to individual banking services, architecture, regulatory requirements, and risk appetite.

4. **Tables and figures should be carefully checked for formatting and presentation.** In the supplied manuscript, portions of Table 1 and Table 2 appear fragmented across pages, and the manuscript refers to Figures 1 and 2. The final published version should ensure that all figures are present, legible, properly numbered, and directly correspond to the descriptions in the text.
5. **Language and formatting require minor editorial polishing.** A few typographical, spacing, line-break, and compound-word inconsistencies should be corrected throughout the manuscript. The reference list and citation style should also be checked carefully for consistency.
6. **The Saudi-specific contribution could be made more explicit.** Although the manuscript incorporates Saudi Central Bank materials and Vision 2030-related considerations, the authors could strengthen the discussion by more clearly identifying which recommendations are specifically applicable to the Saudi banking environment and which represent generally applicable resilience principles.
7. **The limitations section is appropriate but could be strengthened slightly** by emphasizing that the proposed architecture has not been empirically validated using actual Saudi bank treasury recovery exercises. The manuscript already identifies the need for future Saudi bank case studies and measurement of actual recovery performance, which is appropriate.

Overall, the manuscript presents a coherent and practically relevant review of resilient architecture for banking treasury systems. Its integration of business-service criticality, RPO/RTO, high availability, disaster recovery, data integrity, cyber recovery, governance, and testing is a useful contribution. The manuscript is suitable for publication **after minor revision**, primarily involving methodological clarification, improved presentation of tables/figures, clearer differentiation of evidence types, and editorial/formatting corrections.