

04 – Payment Integrity Quality Report

Enterprise Payment Controls Evaluation

Document Type: Quality Portfolio – Control Validation Report

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Release Position: APPROVED WITH LIMITATIONS

1. Objective

This report evaluates the effectiveness of Payment Integrity Controls across the full Program Increment (6 sprints). It validates revenue protection mechanisms including atomicity, idempotency, reconciliation, RBAC enforcement for refunds, and order-payment consistency.

2. Critical Risk Areas Reviewed

- Payment marked as 'Paid' while order persistence failed (state mismatch)
- Duplicate charges due to retry/timeouts
- Redirect failures from order to payment gateway
- Refund authorization without proper RBAC permissions
- Reconciliation mismatches between gateway and database records
- Incorrect tax/discount calculations affecting payment totals

3. Payment-Related Defect Summary

Metric	Value
Total Payment/Checkout Defects Identified	6
Critical	2
Medium	3
Low	1
Resolved Before Release	All Critical + Major resolved

4. Control Validation Results

- Idempotency validation executed – duplicate charge prevention confirmed.
- Atomic transaction integrity validated – order/payment state alignment verified.
- Reconciliation log review completed – no orphan payments in staging.
- RBAC negative refund tests passed (Cashier blocked, Manager/Admin allowed).
- End-to-end critical flow (Login → POS → Pay → Order → Report) passed ≥95% in staging.

5. Residual Risk & Known Limitations

Minor UI-related inconsistencies and non-blocking edge-case calculation issues remain open and are scheduled for post-release stabilization sprint. Continuous monitoring required during initial production window.

6. Final Recommendation

Payment controls are considered stable for production deployment. Release APPROVED WITH LIMITATIONS. Enhanced monitoring recommended for first 48 hours post-deployment.