Response to MAS Consultation P012-2026

Uncertain-outcome retry in technology risk management

Respondent details

Name/Organisation	King Yew Choo — personal capacity
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Confidentiality selection	No — I am fine with publishing my whole submission along with my identity.

Question 1

No comment.

Question 2

1. I agree with the proposed scope of IT risk assessment, the proposed IT risk register and the use of key risk indicators. The draft provisions are broad enough to cover the case below. I suggest that MAS use it as a non-exhaustive example in guidance or supervisory implementation material for relevant critical transaction systems: “Where the operation or disruption of a critical system can cause or conceal a material external transaction, the FI should assess whether an unknown outcome followed by a retry can produce a transaction inconsistent with the recorded expected outcome, including across material dependencies.”
2. The example is an uncertain-outcome retry. A transaction may have completed, its definitive acknowledgement may be lost, and an automatic retry may produce an unpermitted repeat. No component need be defective or malicious: each attempt can look locally valid while different identifiers obscure that both arose from one business instruction. For the assessment, the FI can record the outcome expected from that instruction, including any permitted split, partial, multi-leg, fee, reversal or batch effects. That is an illustrative technical control, not a proposed MAS term. It does not by itself prove customer intent, delegated or legal authority, settlement finality, redress or liability.
3. Where the risk is material, the register should show how one business instruction is identified or mapped across retries and material boundaries, including where the same request arrives under a fresh identifier or one intended transaction fans out into child effects. It should identify the period for which the binding can be recovered, the separate control at a component able to create a transfer, authorisation or capture, the reconciliation owner and any residual risk. A useful test loses the acknowledgement before or after commitment, retries concurrently or under a fresh identifier, and returns partial results late or out of order. Repeated submissions should select the same application result, while each transaction-creating component separately prevents an unintended repeat. Unresolved items enter reconciliation; they are not assumed to have failed.
4. MAS could give a short, non-exhaustive set of KRI examples without fixing universal thresholds: aged in-doubt count and value; outcomes inconsistent with the recorded expectation; unresolved instruction-to-transaction breaks; the separately reported coverage of direct correlation and tested compensating controls; availability of the identity record; and reconciliation time. Each FI can set thresholds according to materiality, the delay before reliable evidence arrives and customer impact.

Question 3

No comment.

Question 4

No comment.

Question 5

No comment.

Question 6

No comment.

Question 7

5. I agree with the proposed incident-management areas: assigned responsibility, preservation of investigation evidence, prompt senior-management notification and, where necessary, communication to customers and other affected stakeholders. For this case, the incident owner should be able to reconstruct one business instruction across its attempts, identifier mappings and child effects. The record should preserve or reference the expected outcome, any recorded authorisation or approval relevant to the instruction, reliable timestamps, attempts and acknowledgements, observable transaction references, the outcome and any correction. Access, integrity, time synchronisation, retention and any investigation hold should be governed expressly.
6. A timeout is not evidence that an instruction failed, and a successful retry is not evidence that the first attempt failed. Root-cause and impact analysis should establish what happened at each material boundary and whether similar instructions remain exposed. Senior-management and external communications should, where necessary, state the nature, impact and expected resolution using the best current evidence. The record supports consistency checks across institution-controlled and available third-party evidence; its weight depends on integrity, governance and corroboration. It does not determine redress or liability.

Question 8

No comment.

Question 9

No comment.

Other comments

7. I respond in a personal capacity. My work concerns systems architecture for automated payment initiation. I am the author of an individual Internet-Draft describing a server-side analytical model for human-sourced asynchronous HTTP tasks gated on payment or entitlement. It is a work in progress, not an IETF standard or a conformance target. I am also the founder of True Primary.
8. Declaration and scope. True Primary is a primary-research and expert-network business exploring agent-facing ways to purchase expert work. It has a commercial interest in safe controls for agent-initiated payments. I do not claim operating experience inside a Singapore financial institution. The recommendation does not allocate liability or replace authentication, AML/CFT, sanctions, consumer-protection, refund, chargeback or scheme requirements. The provider sources below illustrate request-key controls at particular interfaces; they do not establish Singapore-FI practice, settlement-wide uniqueness or the case for regulation. My substantive comments are confined to Questions 2 and 7.

References

- Monetary Authority of Singapore, Consultation Paper on Proposed Amendments to Notices on Technology Risk Management, P012-2026, 10 June 2026: https://www.mas.gov.sg/publications/consultations/2026/consultation-paper-on-proposed-amendments-to-notices-on-technology-risk-management
- King Yew Choo, A Server-Side Model for Gating Agent-Initiated Human-Sourced Asynchronous HTTP Tasks on Payment or Entitlement, individual Internet-Draft, work in progress, version 00, 23 July 2026 (not an IETF standard): https://datatracker.ietf.org/doc/draft-king-yew-choo-agentic-payments/00/
- Stripe, Idempotent requests: https://docs.stripe.com/api/idempotent_requests
- PayPal, Idempotency: https://developer.paypal.com/api/rest/reference/idempotency/
- Adyen, API idempotency: https://docs.adyen.com/development-resources/api-idempotency
- Square, Idempotency: https://developer.squareup.com/docs/build-basics/common-api-patterns/idempotency