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INTEGRATING INTERNAL AUDIT RESULTS INTO MANAGEMENT DECISIONS AND IMPROVING THE EFFECTIVENESS ASSESSMENT SYSTEM

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Abstract. The article examines the integration of internal audit results into management decision-making in commercial banks and the improvement of the system for assessing the effectiveness of the audit function. It is established that the conventional pair of evidence criteria — sufficiency and appropriateness — is oriented towards justifying the auditor's own conclusion and says nothing about whether that conclusion is capable of supporting a management decision, with the result that the point at which audit value is either realised or lost remains unmeasured. The author proposes a method for evaluating internal audit evidence against three criteria — sufficiency, reliability and impact — and for systematising it in a unified evidence register. The method introduces an evidence quality index computed as EQI = 0.35 Su + 0.35 Re + 0.30 Im, five-point anchors for each criterion, and a decision conversion rate. Tested on conditional data, it revealed a pronounced relationship between the reliability of evidence and its influence on management: evidence with a reliability score of 4 or above produced an average impact score of 4.00, while evidence scoring 2 or below produced an average of 1.33.

Keywords: internal audit, commercial bank, audit evidence, sufficiency, reliability, impact, evidence quality index, unified evidence register, management decision, decision conversion rate, effectiveness assessment, audit committee.

INTRODUCTION

The value of internal audit is ultimately realised when its conclusions are transformed into concrete management decisions. Planning, testing, evidence collection and reporting create the informational basis for managerial action; however, if audit findings do not lead to appropriate decisions and corrective measures, the practical value of the audit function remains limited. Therefore, internal audit effectiveness should be assessed not only by the number of completed audits or recommendations issued, but also by the extent to which audit results influence management decisions and contribute to risk reduction and performance improvement.

This issue is particularly important in commercial banks, where management decisions are made under conditions of significant financial, operational, technological and regulatory risks. Internal audit findings may directly affect decisions concerning credit risk, liquidity, compliance, information security, operational efficiency and fraud prevention. In this environment, the quality of audit evidence determines whether an audit conclusion can provide a reliable basis for managerial action.

Traditional approaches to audit evidence mainly rely on the criteria of sufficiency and appropriateness. Although these criteria are essential for supporting the auditor's conclusion, they do not fully measure the practical usefulness of evidence for management decision-making. In particular, they provide limited information about the reliability of evidence and its actual influence on management decisions. This creates a methodological gap between evidential support for the auditor's conclusion and the decision-making value of audit results.

LITERATURE REVIEW

The Basel Committee on Banking Supervision, in *The internal audit function in banks* (2012), records an observation drawn from the 2008–2009 crisis that bears directly on this problem: in a number of institutions the internal audit function had identified the relevant weaknesses in good time, yet those findings did not translate into managerial action. The problem, in other words, was not detection but conversion. The Committee's supervisory expectations concerning the assessment of the internal audit function follow from this: a function that detects without converting is not an effective function.

The Global Internal Audit Standards issued by the Institute of Internal Auditors, effective from 9 January 2025, require the chief audit executive to establish objectives and performance measures for the function and to communicate results in a manner that supports decision-making. The classical anatomy of audit evidence, however, has remained unchanged for decades: evidence must be sufficient in quantity and appropriate in quality, appropriateness being decomposed into relevance and reliability. This pair of criteria is entirely oriented towards one purpose — justifying the auditor's own conclusion. It answers the question "may I state this?" It does not answer, and was never designed to answer, the question "will anyone act on this?"

In the Republic of Uzbekistan, the internal audit of banks is governed by the Regulation on the requirements for the internal audit of commercial banks, approved by Resolution No. 3/2 of the Board of the Central Bank of 16 April 2021 (registered by the Ministry of Justice on 7 May 2021 under No. 3302; as amended by Resolution No. 19/14 of 8 July 2026). Paragraph 26 obliges the function to assess the effectiveness of remedial measures, and paragraph 27 requires quarterly reporting to the supervisory board and the audit committee on the implementation of recommendations. The Regulation thus recognises that implementation matters, but it prescribes neither a format for recording evidence nor any means of establishing whether the evidence gathered was capable of moving a decision.

Two practical consequences follow. First, evidence remains dispersed: it is held in the working papers of individual engagements, organised by engagement rather than by process or control, and is therefore unavailable for any analysis spanning engagements or periods. Second, and more fundamentally, the effectiveness of the audit function continues to be measured by counts of findings and closure rates — indicators that describe activity rather than influence.

The theoretical foundations of the subject are drawn from several bodies of work. The COSO *Internal Control — Integrated Framework* (2013) supplies the criteria against which control conditions are evaluated, and ISO 31000:2018 provides the general frame for risk assessment. The classical treatment of sufficiency and appropriateness is established in international auditing standards and is common ground for external and internal audit alike.

In the scholarly literature, the determinants of internal audit effectiveness have been examined by Mihret and Yismaw, who identified management support as one of the principal factors; by Arena and Azzone, who demonstrated that effectiveness depends on the characteristics of the audit team, the processes deployed and the links between internal audit and the audit committee; and by Cohen and Sayag, who found top management support to be dominant. Sarens and De Beelde established that the quality of communication between internal audit and the audit committee substantially determines the function's impact. Lenz and Hahn, synthesising the empirical literature, concluded that research has concentrated on the conditions of effectiveness while the measurement of outcomes remains underdeveloped.

The review discloses a consistent pattern: the literature identifies management support and communication quality as determinants of audit influence, but treats them as contextual conditions largely outside the auditor's control. What has not been examined is whether influence is also a function of a variable that lies squarely within the auditor's control — the quality of the evidence produced. This gap defines the scientific novelty of the present research.

RESEARCH METHODOLOGY

The research employs comparative legal analysis, systemic and structural analysis, taxonomic classification (in constructing the criterion anchors), multi-criteria weighted assessment (in constructing the index), and the illustrative case method.

ANALYSIS AND RESULTS

Audit evidence is conventionally evaluated against two criteria. Sufficiency concerns quantity: whether enough has been obtained to support the conclusion. Appropriateness concerns quality, and is decomposed into relevance — whether the evidence bears on the matter asserted — and reliability, which depends on the source and the manner of obtaining it. Evidence obtained directly and independently by the auditor is more reliable than evidence supplied by the audited unit; documentary evidence is more reliable than oral representation.

This framework is sound within its purpose. Its limitation lies in what that purpose is. Both criteria are directed at a single question: is the auditor entitled to state the conclusion? Neither is directed at the question of whether the conclusion, once stated, will be acted upon. The framework was constructed for external audit, where the auditor's obligation ends with an opinion and the decision-making audience is external. Internal audit has a different terminal point: its work is complete not when a conclusion is defensible but when a control has changed.

The consequence is that the most consequential attribute of internal audit evidence goes unmeasured. Two findings may rest on evidence that is equally sufficient and equally reliable, yet one may result in a redesigned control while the other results in an acknowledgement letter. Under the conventional framework these two outcomes are indistinguishable, because the framework stops measuring at the point where the difference arises.

To close this gap, a method is proposed for evaluating internal audit evidence against three criteria and systematising it in a single register (figure 1).

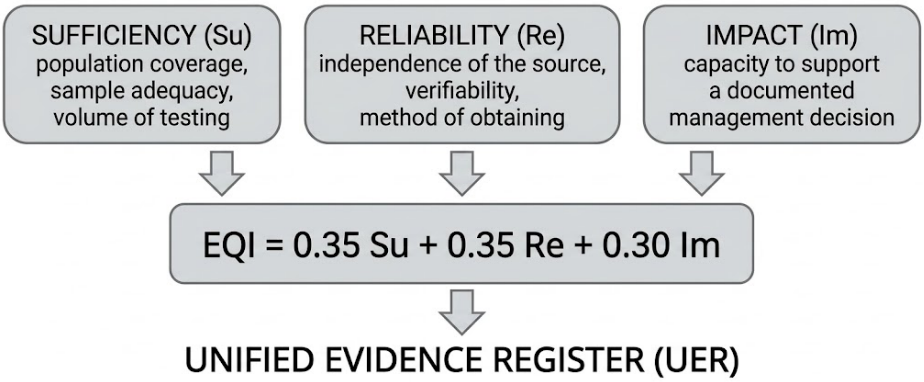

Figure 1. Three-criterion evaluation of audit evidence and the unified register

The third criterion, **impact (Im)**, measures the capacity of the evidence to support a documented management decision. It is important to be precise about what is being measured. Impact is not a measure of the auditor's persuasiveness, nor of management's cooperativeness; it is an attribute of the evidence itself, expressed through the highest level of managerial commitment the evidence proved able to sustain. Evidence that consists of an independently reproduced control test can sustain a decision to redesign that control; evidence that consists of a written representation from the process owner generally cannot, and the resulting discussion terminates in acknowledgement (table 1).

Table 1.
Five-point anchors for the three evidence criteria

Score	Sufficiency (Su)	Reliability (Re)	Impact (Im)
5	Full population tested; no extrapolation required	Obtained by the auditor through re-performance or direct system extraction	Control change implemented and independently verified
4	Statistically justified sample; confidence level documented	Written confirmation from an independent third party	Control change approved and under implementation
3	Judgemental sample of defensible size; basis documented	System-generated records supplied by the audited unit	Action plan agreed with owner and deadline set
2	Limited sample; extrapolation not defensible	Internal administrative documents (orders, procedures)	Finding acknowledged; no action plan
1	Isolated instances only	Oral or written representation of the audited unit	Finding disputed or unanswered

The anchors are constructed so that the three columns are read together. A record scoring 5 on sufficiency and 1 on reliability is internally incoherent in a way that the anchors make visible: a full population cannot meaningfully be "tested" through the representation of the party being examined. The register therefore performs a diagnostic function beyond scoring.

The **evidence quality index** aggregates the three criteria:

EQI = 0,35 Su + 0,35 Re + 0,30 Im

Sufficiency and reliability carry equal weight because neither compensates for the other: a large volume of weak evidence and a small volume of strong evidence are both deficient. Impact carries a slightly lower weight, for a deliberate reason — it is partly determined by factors outside the auditor's control, and weighting it equally would penalise auditors for managerial resistance they did not cause. Interpretation bands are proposed as follows: 4,00 and above — strong evidence; 3,00 to 3,99 — adequate; 2,00 to 2,99 — weak; below 2,00 — insufficient to support a conclusion.

The **unified evidence register** records, for each item of evidence: a unique identifier; the process and control to which it relates; the engagement in which it was obtained; the type of evidence; the three scores and the index; the finding it supports; the recommendation issued; the type of management decision produced; and the date on which the decision was documented. Maintaining evidence in this form, rather than within engagement files, makes it possible for the first time to analyse evidence across engagements, processes and periods (figure 1).

Figure 2. The chain from evidence to control change and its measurement points

The register supports three indicators of integration into management decision-making. The **decision conversion rate** is the share of findings that produced a documented management decision, that is, those scoring 3 or above on impact. The **average evidence quality index** measures the technical quality of the function's output independently of managerial response. The **reliability–impact relationship** compares the average impact score of evidence in high and low reliability bands, and is the indicator of principal analytical interest, since it establishes whether the quality of evidence is in fact what determines managerial response in the given bank.

Testing the method on conditional data

The operation of the method is demonstrated on ten records from the evidence register of a hypothetical bank. **The data are conditional and are constructed solely to illustrate the computational logic (table2).**

Table 2.
Extract from the unified evidence register (conditional example)

ID	Process	Su	Re	Im	EQI	Type of management decision
E-2026-001	Corporate lending	5	5	5	**5,00**	Control redesigned and verified
E-2026-002	IT access management	5	5	4	**4,70**	Control change under implementation
E-2026-010	Financial reporting	4	5	4	**4,35**	Control change under implementation
E-2026-003	AML screening	4	4	4	**4,00**	Control change approved
E-2026-004	Remote banking	3	4	3	**3,35**	Action plan agreed
E-2026-005	Collateral valuation	4	3	3	**3,35**	Action plan agreed
E-2026-006	Treasury operations	3	3	2	**2,70**	Acknowledged, no action plan
E-2026-007	Branch cash operations	2	2	2	**2,00**	Acknowledged, no action plan
E-2026-008	Procurement	2	2	1	**1,70**	Disputed
E-2026-009	Payroll	3	1	1	**1,70**	Disputed
	Average / rate				3,29	**Conversion rate 60 %**

The register yields three findings.

First, the relationship between reliability and impact. Records scoring 4 or above on reliability produced an average impact score of 4,00; records scoring exactly 3 averaged 2,50; records scoring 2 or below averaged 1,33. The relationship is monotonic and pronounced. Its practical implication is direct: in this bank, whether a finding produces a control change is predicted less by how the finding was argued than by how the underlying evidence was obtained. This shifts the locus of improvement from report drafting — where internal audit functions typically concentrate their effort — to evidence gathering.

Second, the diagnostic value of internally incoherent records. Record E-2026-009 scores 3 on sufficiency but 1 on reliability: a sample of defensible size was assembled, but entirely from representations of the audited unit. Its index of 1,70 falls in the "insufficient" band and its outcome was a disputed finding. Under the conventional framework this record would have been assessed as having a sufficiency problem, and the corrective action would have been to enlarge the sample — which would not have helped. The three-criterion structure locates the defect correctly.

Third, the interpretation of the conversion rate. Six of ten findings produced a documented decision, giving a conversion rate of 60 per cent. Read alone, this figure invites the conclusion that management is insufficiently responsive. Read against the register, it supports a different conclusion: all four findings that failed to convert rested on evidence in the weak or insufficient bands. The constraint lies on the audit side rather than the management side — an inference that no count-based reporting could have produced.

The theoretical contribution lies in extending the evaluation of audit evidence beyond the point at which the conventional framework stops. Sufficiency and appropriateness were developed for an assurance model in which the auditor's obligation terminates with an opinion. Internal audit operates under a different obligation, terminating with a change in control, and its evidence framework should reflect that difference. The impact criterion supplies the missing dimension, and does so without displacing the existing criteria, which retain the larger part of the weight.

A second contribution concerns the unit of record. Audit evidence is conventionally organised by engagement, which is natural from the perspective of documenting a single piece of work but which makes evidence invisible in the aggregate. Reorganising evidence into a register indexed by process and control converts a documentation archive into an analysable dataset, and makes possible questions — such as which forms of evidence have historically produced control changes in this bank — that cannot otherwise be asked.

The practical contribution is a redirection of improvement effort. Internal audit functions that find their recommendations poorly received commonly respond by improving their reporting: clearer writing, better structured presentations, more effective committee communication. The conditional data suggest that this response addresses the wrong variable. If the reliability of evidence predicts managerial response as strongly as the illustration indicates, then securing independent system access, expanding re-performance testing and reducing reliance on the representations of audited units will do more for the function's influence than any improvement in drafting.

The method operationalises existing requirements rather than adding to them. The Global Internal Audit Standards require the establishment of performance measures for the function; the evidence quality index and the conversion rate are such measures, and they are derived from evidence rather than from self-assessment or perception surveys. The Standards further require that results be communicated in a manner supporting decision-making; the impact criterion measures whether that requirement was in fact met. Paragraph 26 of Regulation No. 3302 requires assessment of the effectiveness of remedial measures — the impact anchors distinguish an agreed action plan from an implemented and verified control change, which is precisely the distinction that assessment requires. Paragraph 27 prescribes quarterly reporting to the supervisory board and the audit committee; the register determines what the analytical content of such reporting should be.

Three conditions govern implementation. The first is **independent access to systems**: the highest reliability band is attainable only where the auditor can extract data directly, so that a bank unwilling to grant such access places a ceiling on the quality of its own audit evidence. The second is **scoring discipline**: the anchors must be applied consistently, which requires calibration among auditors and periodic review of scoring decisions. The third is **the timing of impact scoring**: impact cannot be assessed at the conclusion of an engagement, since decisions follow it, and must therefore be recorded at a defined interval — ninety days after the report is proposed — with the register updated accordingly.

The limitations should equally be acknowledged. The impact criterion is partly exogenous: a well-evidenced finding may fail to convert because of resource constraints or competing priorities unrelated to evidence quality, and a low score does not by itself establish an audit deficiency. Scoring impact within the register creates an incentive for auditors to prefer findings likely to be accepted, which would undermine the function's willingness to raise uncomfortable matters; the safeguard is that impact carries the lowest weight and that the index is reported alongside, not instead of, the count of findings raised. The relationship observed in the illustration is constructed and not empirical; establishing whether it holds in practice requires validation on actual bank data. Finally, the method measures conversion into decisions but not the quality of those decisions, which lies beyond the scope of the instrument.

CONCLUSION AND SUGGESTIONS

First, the conventional criteria applied to audit evidence — sufficiency and appropriateness — are directed at justifying the auditor's own conclusion and are silent on whether that conclusion is capable of supporting a management decision. Since internal audit's obligation terminates with a change in control rather than with an opinion, this framework leaves unmeasured precisely the point at which the function's value is realised or lost.

Second, the proposed method evaluates evidence against three criteria — sufficiency, reliability and impact — with five-point anchors for each, aggregates them into an evidence quality index computed as $EQI = 0{,}35\ Su + 0{,}35\ Re + 0{,}30\ Im$, and systematises the results in a unified register indexed by process and control rather than by engagement.

Third, testing on conditional data disclosed a monotonic relationship between the reliability of evidence and its impact: average impact scores of 4,00, 2,50 and 1,33 for reliability bands of 4 and above, 3, and 2 and below respectively. The practical implication is that the influence of internal audit is determined more by how evidence is obtained than by how findings are argued.

Fourth, the register performs a diagnostic function beyond scoring. A conversion rate of 60 per cent, read alone, indicates insufficient managerial responsiveness; read against the register, it shows that every finding which failed to convert rested on evidence in the weak or insufficient bands, locating the constraint on the audit side.

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