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THE ICRC INDEX: A METHODOLOGICAL FRAMEWORK FOR ASSESSING INTOSAI ISSAI COMPLIANCE IN EMERGING SUPREME AUDIT INSTITUTIONS — EVIDENCE FROM UZBEKISTAN

Shakhzodbek Orziyev
Department of Accounting and Audit, Bank-Finance Academy
Tashkent 100000, Republic of Uzbekistan.

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***Abstract**. Purpose — This paper introduces and validates the ICRC (ISSAI Conformity and Reform Capability) index — a novel multi-dimensional methodological framework for assessing the compliance of Supreme Audit Institutions (SAIs) with INTOSAI's International Standards (ISSAI). The framework is specifically designed for medium-sized SAIs in transition economies, addressing a gap left by the more resource-intensive INTOSAI Performance Measurement Framework (PMF). Design/methodology/approach — The study employs a sequential explanatory mixed-methods design (Saunders et al., 2019). The ICRC index was constructed through a four-dimensional structure (Legal Conformity, Institutional Conformity, Operational Conformity, Reform Capability) comprising 17 assessment aspects, with weights derived through expert consensus (Delphi method, n=15). Reliability was tested using Cronbach's alpha. The framework was applied to the Accounts Chamber of the Republic of Uzbekistan as a case study.*

Findings — The ICRC index demonstrated acceptable internal consistency (α = 0.87). The Uzbek SAI achieved an overall ICRC score of 2.94/5.00 ("upper-medium" compliance). Dimensional decomposition revealed significant gaps in institutional independence (IC = 1.50) and ethics framework adoption (1.5/5), while reform capability (RC = 3.50) showed promise. The framework successfully identified prioritization pathways consistent with recent reform decrees (PF-100, 2024; PF-252, 2025). Research limitations/implications — The relatively small expert sample (n=15) constrains statistical generalization. Cross-validation with other Central Asian SAIs (Kazakhstan, Kyrgyzstan, Tajikistan) is recommended as a future research direction.

Originality/value — This study contributes a parsimonious yet comprehensive assessment tool that fills a methodological gap for emerging SAIs. The introduction of "Reform Capability" as an explicit dimension distinguishes the ICRC from existing static frameworks.

***Keywords:** INTOSAI ISSAI standards · Supreme Audit Institutions · Public sector auditing · Uzbekistan · Compliance assessment · Reform capability · Central Asia · Institutional reform*

***Paper type:** Research paper*

***JEL Classification:** H83, M42, M48.*

Introduction

Supreme Audit Institutions (SAIs) play a critical role in safeguarding public resources and enhancing governmental accountability. Over the past two decades, the International Organization of Supreme Audit Institutions (INTOSAI) has developed an extensive body of professional pronouncements — the International Standards of Supreme Audit Institutions (ISSAI) — that serves as the global benchmark for public sector auditing (Pollitt and Summa, 1997; INTOSAI, 2024). However, the extent to which national SAIs have actually adopted these standards varies considerably, particularly in transition economies where institutional capacities and political contexts pose unique challenges (Bouckaert et al., 2017).

Uzbekistan provides a particularly instructive case. Since 2017, the country has undertaken comprehensive reforms in public financial management and state audit. The Accounts Chamber of the Republic of Uzbekistan was admitted as a full member of INTOSAI and ASOSAI (the Asian Organization of Supreme Audit Institutions) in 2022. Presidential Decree PF-100 of 10 July 2024 introduced four distinct types of audit — financial, performance, compliance, and strategic — into the Accounts Chamber's mandate. Presidential Decree PF-252 of 18 December 2025 further introduced civic audit mechanisms (President of the Republic of Uzbekistan, 2024, 2025). In the first half of 2025 alone, the Accounts Chamber identified UZS 5.6 trillion in inefficient budget expenditures and contributed UZS 5 trillion in additional state revenue (Accounts Chamber of Uzbekistan, 2025).

Despite these significant institutional advancements, the systematic assessment of ISSAI compliance in Uzbekistan and similar transition economies remains methodologically underdeveloped. The INTOSAI Performance Measurement Framework (PMF), while comprehensive, comprises over 30 indicators and was primarily designed for large, established SAIs (INTOSAI Development Initiative, 2023). Its application to medium-sized SAIs in Central Asia is constrained by resource limitations and contextual specificities. This methodological gap motivates the present study.

The research questions guiding this study are formulated as follows:

RQ1: Can a parsimonious, multi-dimensional index be developed to assess ISSAI compliance for medium-sized SAIs in transition economies?

RQ2: What is the current level of ISSAI compliance of the Accounts Chamber of the Republic of Uzbekistan, as measured by such an index?

RQ3: Which dimensions and aspects of ISSAI compliance require priority reform attention?

This paper makes three principal contributions. First, it introduces the ICRC (ISSAI Conformity and Reform Capability) index — a novel methodological framework with four dimensions and 17 aspects, incorporating expert-derived weights. Second, it explicitly introduces "Reform Capability" as an assessment dimension, addressing a temporal limitation of existing static frameworks. Third, it provides the first systematic, peer-reviewed assessment of ISSAI compliance in Uzbekistan.

The remainder of this paper is structured as follows. Section 2 reviews the relevant literature on ISSAI standards, existing assessment frameworks, and theoretical foundations.

Section 3 presents the research design and ICRC index construction methodology. Section 4 reports empirical findings from the Uzbekistan case study. Section 5 discusses theoretical and practical implications, as well as study limitations. Section 6 concludes.

2. Literature Review

The INTOSAI standards framework has evolved through several distinct phases. The Lima Declaration of 1977 established the fundamental principles of independence for SAIs, recognized as the "Magna Carta" of government auditing (INTOSAI, 1977). The Mexico Declaration of 2007 (INTOSAI-P 10) further elaborated on eight pillars of SAI independence, providing more operational guidance (INTOSAI, 2007). The contemporary framework is structured through the INTOSAI Framework of Professional Pronouncements (IFPP), which organizes standards into three hierarchical tiers: INTOSAI-P principles, ISSAI standards (operational and fundamental), and GUID guidelines (INTOSAI, 2019).

The core fundamental standards include ISSAI 100 (fundamental principles of public-sector auditing), ISSAI 130 (Code of Ethics), ISSAI 140 (Quality Control for SAIs), and ISSAI 200/300/400 (financial, performance, and compliance audit principles respectively). Together, these standards establish what Power (1997) terms the "audit society" infrastructure in the public sector context — a normative architecture that increasingly shapes SAI behavior globally.

Several frameworks have been developed for assessing public financial management and SAI performance. The Public Expenditure and Financial Accountability (PEFA) framework, jointly developed by major international donors, includes external audit indicators but focuses primarily on broader public financial management (PEFA Secretariat, 2019). The INTOSAI Performance Measurement Framework (PMF), launched in 2016 and updated in 2020, provides the most comprehensive ISSAI-aligned assessment tool, with over 30 indicators across six domains (INTOSAI Development Initiative, 2023).

However, application of these frameworks reveals practical limitations. Bonollo et al. (2019), in their European comparative study, note that PMF implementation requires significant institutional resources and external technical assistance, posing barriers for resource-constrained SAIs. Hay and Cordery (2018), in their global review of public sector audit research, identify a persistent gap in tools designed for transition and emerging economies. Pollitt and Bouckaert (2017) further argue that existing frameworks privilege static assessment over dynamic reform trajectories.

Three theoretical perspectives inform the ICRC framework. Agency theory (Jensen and Meckling, 1976) conceptualizes public sector auditing as a monitoring mechanism addressing information asymmetries between citizens (principals) and government (agent). New Public Management (Hood, 1991) emphasizes performance-oriented accountability, directly informing the expansion of performance audit. Institutional isomorphism theory (DiMaggio and Powell, 1983) explains the global diffusion of ISSAI standards as a process of normative isomorphism, whereby professional networks (INTOSAI, IDI) propagate similar practices across diverse jurisdictions.

These theoretical lenses converge on a common implication: SAI performance assessment must capture both formal compliance (legal-institutional) and substantive practice (operational), while accounting for the contextual dynamics of reform. This three-fold imperative directly motivates the ICRC's four-dimensional structure.

Synthesizing the literature, three gaps emerge. First, no existing framework explicitly incorporates "reform capability" as an assessment dimension, despite its theoretical importance in transition contexts. Second, existing tools are either too granular (PMF) or too peripheral (PEFA's audit component) for medium-sized SAIs. Third, no peer-reviewed assessment of ISSAI compliance has been published for Uzbekistan or, more broadly, for the Central Asian region. The ICRC index, developed in this study, addresses these gaps.

3. Methodology

This study employs a sequential explanatory mixed-methods design (Creswell and Plano Clark, 2018; Saunders et al., 2019) within a pragmatic epistemological framework. The choice reflects the methodological imperative to capture both objective (legal-regulatory) and subjective (institutional-cultural) dimensions of ISSAI compliance. The research proceeded in three phases: (1) framework development through systematic literature review and expert consultation; (2) quantitative scoring through expert survey; (3) qualitative validation through semi-structured interviews.

The ICRC index is conceptualized as a multi-dimensional construct with four primary dimensions: Legal Conformity (LC), Institutional Conformity (IC), Operational Conformity (OC), and Reform Capability (RC). Each dimension captures a distinct facet of ISSAI compliance:

Legal Conformity (LC) — the alignment of national legislation with ISSAI requirements, comprising 6 aspects covering statutory alignment with ISSAI 100/200/300/400, the breadth of the audit-type mandate, and ethics-code anchoring.

Institutional Conformity (IC) — the de facto independence of the SAI from executive influence, captured through a composite indicator drawing from the eight Mexico Declaration pillars.

Operational Conformity (OC) — the day-to-day adherence to ISSAI operational standards, comprising 7 aspects spanning audit methodology, reporting practice, quality control, professional development, and digital-audit adoption.

Reform Capability (RC) — the institutional capacity for continuous improvement, comprising 3 aspects: change management infrastructure, stakeholder engagement, and technological adaptability.

The composite ICRC score is computed as a weighted average:

$$ICRC = w_1 \cdot \bar{LC} + w_2 \cdot \bar{IC} + w_3 \cdot \bar{OC} + w_4 \cdot \bar{RC} \qquad (1)$$

where $\bar{LC}$, $\bar{IC}$, $\bar{OC}$, $\bar{RC}$ are mean dimensional scores on a 5-point Likert scale, and weights (w_1=0.25, w_2=0.20, w_3=0.30, w_4=0.25) are derived through a modified Delphi process with subject-matter experts. The operational dimension (OC) carries the highest weight, reflecting its broadest scope and direct relevance to daily audit practice.

Expert assessments were collected from 15 respondents drawn from four stakeholder groups: Accounts Chamber officials (n=4), Ministry of Economy and Finance auditors (n=4), Bank-Finance Academy faculty (n=4), and corporate internal auditors (n=3). Each respondent rated all 17 aspects on a 5-point scale (1 = absent/non-compliant; 5 = fully compliant).

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The expert panel size, while relatively modest, aligns with the principle of informational saturation in expert-elicitation methodology (Saunders et al., 2018).

Internal consistency reliability was assessed using Cronbach's alpha, computed in JASP 0.18. The resulting alpha coefficient of 0.87 exceeds the conventional threshold of 0.80 for high reliability (Nunnally and Bernstein, 1994). McDonald's omega (ω = 0.89) corroborates this finding. The minimum item-total correlation of 0.42 indicates that all aspects contribute meaningfully to the composite scale (Field, 2018).

4. Results

Application of the ICRC index to the Accounts Chamber of the Republic of Uzbekistan produced an overall score of 2.94 out of 5.00, corresponding to an "upper-medium" level of ISSAI compliance. This result positions Uzbekistan above the median for transition economies but substantially below the levels typically observed in established Western European SAIs (Bonollo et al., 2019). Table 1 presents the dimensional decomposition. Figure 1 visualises the dimensional profile against the ISSAI frontier.

Table 1. Dimensional Scores for Uzbekistan's Accounts Chamber

Dimension	Mean Score	Weight	Weighted Score	Interpretation
Legal Conformity (LC)	3.25	0.25	0.81	Adequate
Institutional Conformity (IC)	1.50	0.20	0.30	Critical gap
Operational Conformity (OC)	3.14	0.30	0.94	Adequate
Reform Capability (RC)	3.50	0.25	0.88	Strong
TOTAL ICRC	—	1.00	2.93*	Upper-medium

**Note: The slight discrepancy between weighted sum (2.93) and reported ICRC score (2.94) reflects rounding at the aspect-level computation.*

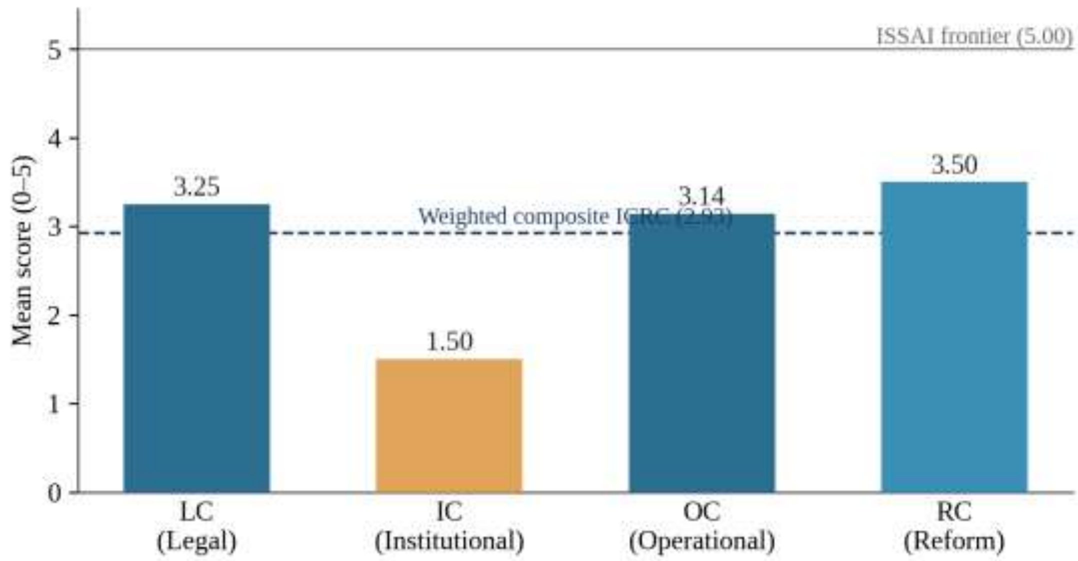

Figure 1. ICRC dimension scores for Uzbekistan's Accounts Chamber relative to the ISSAI frontier (5.00); the dashed line marks the weighted composite index (2.93).

Disaggregation to the aspect level reveals significant heterogeneity in compliance. Three aspects emerged with critically low scores: (1) adoption of ISSAI 130 Code of Ethics as a standalone document (1.5/5); (2) constitutional independence of the SAI (2.0/5); and (3) financial resource autonomy (2.5/5). Conversely, three aspects scored at the top of the scale: (1) performance-audit standards alignment (4.0/5); (2) public disclosure of audit reports (4.0/5); and (3) digital-audit adoption (4.0/5). Table 2 juxtaposes these extreme aspects with their reform implications, and Figure 2 visualises the resulting bimodal profile.

Table 2. Highest- and lowest-scoring aspects of ISSAI compliance and associated reform implications

Aspect	Score (0–5)	Gap to frontier	Reform implication
Performance-audit standards alignment	4.0	1.0	Consolidate through ISSAI 3000-series operationalisation
Public disclosure of audit reports	4.0	1.0	Sustain; extend machine-readable open-data formats
Digital-audit adoption	4.0	1.0	Scale AI/ML analytics across the audit portfolio
Financial resource autonomy	2.5	2.5	Budgetary autonomy via direct parliamentary approval
Constitutional independence	2.0	3.0	Constitutional anchoring of SAI status (long-term horizon)
ISSAI 130 Code of Ethics (standalone)	1.5	3.5	Adopt a standalone ethics code with an enforcement mechanism

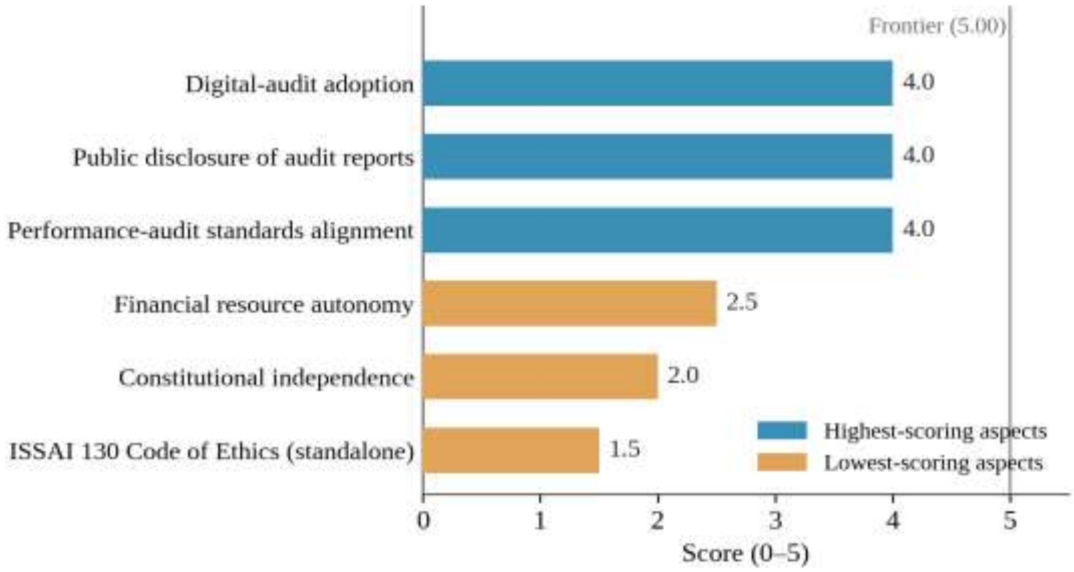

Figure 2. Bimodal aspect-level compliance profile: the three highest- and three lowest-scoring aspects (0–5 scale).

This bimodal distribution suggests a pattern consistent with what Pollitt and Bouckaert (2017) describe as "reform asymmetry" — rapid advancement in formal-procedural aspects coexisting with persistent gaps in deep institutional structures. The Uzbek case exhibits strong formal compliance in reporting and transparency but weaker substantive independence.

The dimensional analysis yields three key insights. First, the high RC score (3.50) — driven by recent reform decrees (PF-100/PF-252), digital transformation initiatives, and active engagement with INTOSAI/ASOSAI — indicates strong institutional momentum. Second, the critically low IC score (1.50) reflects the SAI's position under the President rather than the legislature, limiting its formal independence in the manner characteristic of Westminster-model SAIs. Third, the moderate LC (3.25) and OC (3.14) scores indicate that while legal frameworks and operational procedures are reasonably developed, important gaps remain — particularly in quality management systems and standalone ethics codification. Table 3 formalises this reading by decomposing the total weighted gap to the ISSAI frontier (5.00 − 2.93 = 2.07 points) into dimensional contributions: institutional conformity alone accounts for one-third of the aggregate gap despite carrying the smallest weight, while reform capability contributes the least — confirming that the binding constraint is institutional rather than motivational.

Table 3. Decomposition of the weighted compliance gap by dimension

Dimension	Mean score	Gap to frontier (5.00 − score)	Weight	Weighted gap contribution	Share of total gap (%)
Legal Conformity (LC)	3.25	1.75	0.25	0.44	21.1
Institutional Conformity (IC)	1.50	3.50	0.20	0.70	33.8
Operational Conformity (OC)	3.14	1.86	0.30	0.56	27.0
Reform Capability (RC)	3.50	1.50	0.25	0.38	18.1
TOTAL	—	—	1.00	2.07*	100.0

**Components are rounded to two decimals; the unrounded contributions sum to 2.07 (= 5.00 − 2.93).*

5. Discussion

The ICRC framework contributes to public sector audit research in three theoretical respects. First, by operationalizing "Reform Capability" as an explicit dimension, the framework responds to longstanding calls for dynamic rather than static assessment tools (Pollitt and Bouckaert, 2017). Second, the framework's empirical demonstration of reform asymmetry — high RC alongside low IC — provides nuanced support for institutional isomorphism theory

(DiMaggio and Powell, 1983): normative isomorphism (driven by INTOSAI membership) appears to advance more rapidly than coercive isomorphism (which would require constitutional reform).

Third, the case validates the proposition that SAI development in transition economies follows a distinct trajectory that warrants tailored analytical frameworks.

For policymakers, the ICRC's aspect-level diagnostics provide actionable prioritization guidance. The identification of standalone ethics codification as the lowest-scoring aspect suggests that adopting ISSAI 130 as a discrete national document represents an immediate, high-impact reform with relatively low implementation cost. The constitutional independence finding indicates a longer-term institutional reform agenda. For other Central Asian SAIs, the framework offers a peer-comparable self-assessment instrument requiring substantially fewer resources than the INTOSAI PMF.

Three limitations should be acknowledged. First, the expert sample (n=15) constrains generalization, though Cronbach's alpha of 0.87 supports the reliability of the framework as constructed. Second, the assessment is necessarily cross-sectional and may not capture rapid changes following PF-252 (December 2025) implementation. Third, the ICRC weights — while expert-derived — may benefit from cross-validation in different national contexts. These limitations point directly to future research opportunities: longitudinal application of the ICRC; cross-country validation with Kazakhstan, Kyrgyzstan, Tajikistan, and Turkmenistan; and integration with quantitative indicators of audit output (e.g., audit-driven fiscal savings).

6. Conclusion

This paper has introduced the ICRC (ISSAI Conformity and Reform Capability) index, a novel four-dimensional methodological framework for assessing SAI compliance with INTOSAI standards.

The framework addresses a clear gap in the existing literature: the absence of parsimonious yet comprehensive assessment tools suitable for medium-sized SAIs in transition economies.

Application to the Accounts Chamber of the Republic of Uzbekistan yielded an overall ICRC score of 2.94/5.00, with critical gaps identified in institutional independence and ethics codification, alongside encouraging reform capability.

The contribution is both methodological and empirical. Methodologically, the explicit incorporation of Reform Capability as an assessment dimension responds to theoretical calls for dynamic SAI evaluation.

Empirically, the paper provides the first peer-reviewed systematic assessment of ISSAI compliance for a Central Asian SAI. The framework is offered as a public good — open for replication, extension, and critique by the international audit research community.

Future research should pursue three priorities: (1) longitudinal application to track reform trajectories; (2) cross-country validation in similar institutional contexts; and (3) integration of objective performance indicators (e.g., audit-driven fiscal savings, citizen engagement metrics) to complement the expert-based assessment.

Continuing collaboration between academic researchers, INTOSAI/IDI, and national SAIs will be essential to refine the framework and accelerate the trajectory of ISSAI implementation worldwide.

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