

Embedding Regulatory Intent into Reporting Logic: A Structured Approach to Requirements, Controls, and Change Management in Large Banks

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Abstract:

Regulatory reporting challenges in large banking institutions increasingly arise from interpretive inconsistency and governance gaps rather than computational error. While reporting infrastructures and data platforms have matured, reporting logic—the point at which regulatory interpretation becomes executable—often evolves through incremental remediation, data-driven adjustments, and time-bound responses to supervisory feedback. This paper argues that regulatory intent must be embedded directly into reporting logic through disciplined requirements translation, logic-anchored controls that enforce data readiness and evidence production, and governed change management that preserves supervisory meaning over time. By treating reporting logic as an institutionally governed construct rather than a downstream technical artifact, large banking and financial institutions can improve audit defensibility, reduce supervisory friction, and strengthen the sustainability of regulatory reporting across reporting cycles.

Keywords: Regulatory Reporting Governance, Reporting Logic Architecture, Supervisory Intent Translation, RegTech Frameworks, Audit-Defensible Reporting, Control Framework Integration, Change Management in Regulatory Reporting.

1. INTRODUCTION

Regulatory reporting serves as a primary mechanism through which supervisory authorities assess the financial condition, risk posture, and resilience of large banking institutions. Since the global financial crisis, supervisory expectations have expanded significantly, with increased emphasis on governance, traceability, and consistency across reporting cycles [1,2]. In response, banks have invested heavily in data governance programs, reporting platforms, and control infrastructures. Despite these investments, supervisory examinations and internal audits continue to identify deficiencies related to inconsistent interpretation, weak control enforcement, and fragmented change practices.

A recurring theme in supervisory feedback is that reported figures may be technically accurate while the underlying logic lacks transparency or stability. In such cases, institutions struggle to demonstrate how regulatory expectations are consistently reflected in reporting execution as assumptions, data sources, or business activities evolve [3]. This challenge highlights reporting logic as a critical, yet often under-governed, layer of regulatory compliance.

This paper introduces a governance-driven operating model for preserving regulatory intent within executable reporting logic across reporting cycles. Rather than relying on narrative explanations or post-hoc documentation, the approach emphasizes requirements discipline, logic-level control integration, and regulated change management to preserve supervisory meaning across reporting cycles.

2. REGULATORY INTENT AND THE LIMITS OF INSTRUCTION-BASED COMPLIANCE

Regulatory intent reflects the underlying policy objectives regulators seek to achieve, such as prudential conservatism, risk sensitivity, and comparability across institutions [2,5]. While reporting forms and instructions provide necessary guidance, they rarely eliminate the need for interpretation. Large banks must still determine how requirements apply across complex product sets, legal entities, and business structures. Instruction-based compliance models often emphasize alignment of outputs with form-level definitions, supported by reconciliation and variance analysis. Although necessary, these approaches implicitly treat interpretation as static. In practice, regulatory guidance evolves incrementally through clarifications, examination findings, and supervisory dialogue, requiring continuous reassessment of interpretive positions [3,6].

Supervisory reviews increasingly probe how institutions operationalize regulatory intent, not merely whether reported values reconcile. When interpretive decisions are weakly governed, reporting logic may satisfy narrow technical specifications while diverging from supervisory objectives over time, increasing regulatory risk [3].

3. REPORTING LOGIC AS AN INSTITUTIONALLY GOVERNED CONSTRUCT

Reporting logic determines how regulatory expectations are operationalized through eligibility criteria, classification rules, aggregation methodologies, and deterministic decision paths. Despite this central role, logic is frequently managed as a technical configuration rather than as a regulated construct subject to governance.

Treating reporting logic as an institutionally governed construct requires elevating its status within the regulatory reporting framework. Key characteristics include:

- Explicit traceability from regulatory requirements to executable logic
- Defined interpretive ownership and approval
- Formal validation and control integration
- Controlled versioning and historical transparency

This perspective aligns reporting logic governance with supervisory expectations for risk data aggregation and reporting integrity, without conflating logic with predictive or statistical models [1,4]. Logic remains deterministic, but subject to regulatory discipline and oversight.

This governance framing of reporting logic extends beyond existing regulatory and industry guidance, which typically addresses data, models, or controls in isolation rather than the executable logic layer where regulatory interpretation is operationalized.

Figure 1 illustrates the interaction between regulatory interpretation, requirements translation, logic governance, and control enforcement within an institutionally governed reporting framework.

Figure 1: Embedding Regulatory Intent into Reporting Logic through Requirements Translation, Logic Anchored Controls, and Governed Change

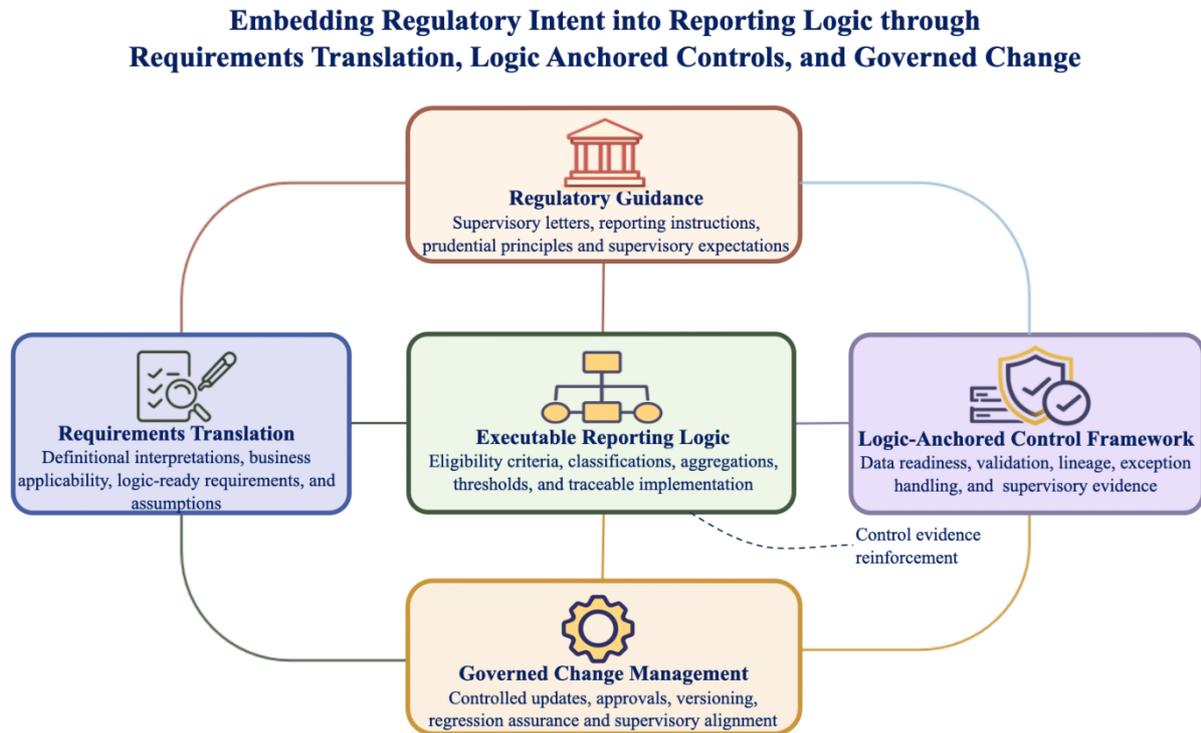


Figure 1 presents a conceptual operating model rather than a system-specific implementation, illustrating how regulatory intent is preserved as requirements are translated into executable logic, enforced through controls, and sustained through governed change.

4. STRUCTURED TRANSLATION OF REGULATORY REQUIREMENTS

Embedding regulatory intent begins with disciplined requirements translation. Regulatory texts often blend objectives, principles, and implementation considerations, requiring decomposition into logic-ready statements that preserve meaning while enabling deterministic execution.

Effective requirements translation involves:

- Identifying the supervisory objective underlying each requirement
- Defining explicit inclusion and exclusion criteria
- Documenting interpretive assumptions used to resolve ambiguity
- Separating regulatory meaning from system or data constraints

Without this discipline, logic implementations may drift as remediation activities introduce localized adjustments that are not reassessed against original intent. Structured requirements serve as a stable anchor, enabling consistent logic evolution and defensible supervisory explanations [3,5].

In large institutions, requirements translation also functions as a risk control. Poorly defined requirements increase reliance on downstream reconciliation and manual adjustment, obscuring root-cause issues. By contrast, logic-ready requirements reduce interpretive ambiguity at implementation time, shifting regulatory compliance from reactive correction to proactive execution.

4.1 Institutional Roles in Requirements Translation

Structured requirements translation depends on clear institutional accountability. Interpretation often spans regulatory policy, reporting, risk governance, and technology functions. Without defined roles, interpretive decisions may occur implicitly during implementation or remediation, increasing inconsistency risk.

Effective role separation includes:

- Interpretive ownership (adoption of regulatory positions)

- Implementation ownership (logic specification)
- Control ownership (validation and evidence)
- Change authority (approval of logic modifications)

Clear accountability strengthens audit defensibility and supports supervisory review by demonstrating how interpretive decisions are formally governed rather than individually inferred [3,6].

5. LOGIC-ANCHORED CONTROL FRAMEWORKS

Controls are essential for preserving regulatory intent within reporting logic. Traditional output-focused controls operate downstream and may fail to detect interpretive drift until after regulatory exposure has occurred.

Logic-anchored controls operate at execution time and include:

- Validation of eligibility and classification behavior
- Enforcement of regulatory thresholds and caps
- Monitoring of anomalous outcomes
- Controlled handling of overrides and exceptions

Supervisory guidance emphasizes controls that operate consistently and generate auditable evidence as part of normal execution rather than through manual reconstruction [1,4,7].

5.1 Data Readiness as a Control Prerequisite

Regulatory intent cannot be preserved without reliable data. Supervisory frameworks increasingly emphasize data completeness, lineage, and definitional consistency as prerequisites for credible reporting [1].

Data readiness controls validate:

- Completeness and timeliness of required data elements
- Alignment with regulatory definitions
- Traceability from source systems to report outputs

Integrating data readiness into logic-level controls reduces late-stage remediation and strengthens supervisory confidence in reporting outcomes.

6. CHANGE MANAGEMENT AS A REGULATORY DISCIPLINE

Regulatory reporting environments are inherently dynamic. New guidance, remediation actions, and business changes continuously drive logic updates. Unstructured change remains a leading cause of supervisory findings [6].

Disciplined change management treats each logic modification as a regulatory event, incorporating:

- Regulatory driver traceability
- Impact assessment on assumptions and controls
- Formal approval by governance bodies
- Regression assurance to preserve prior intent

This approach enables adaptation without eroding regulatory meaning over time.

7. PRESERVING INTENT FIDELITY ACROSS REPORTING CYCLES

Intent fidelity refers to the sustained alignment between regulatory objectives and reporting logic execution across cycles. Even well-designed logic can degrade as assumptions accumulate and exceptions proliferate.

Periodic logic reviews should assess:

- Continued validity of interpretive assumptions
- Accumulation of overrides or manual adjustments
- Alignment with evolving supervisory expectations

This proactive assessment reduces remediation churn and supports sustainable compliance [8].

7.1 Supervisory Review and Audit Implications

From a supervisory perspective, intent-embedded logic improves transparency. Examiners increasingly expect institutions to demonstrate traceability from regulatory expectations to executable logic and control evidence [3].

Institutions adopting this approach can support supervisory walkthroughs with structured artifacts rather than narrative explanations, reducing examination friction and strengthening audit outcomes [6].

8. INSTITUTIONAL BENEFITS FOR LARGE BANKING ORGANIZATIONS

Embedding regulatory intent into reporting logic delivers measurable benefits:

- Reduced interpretive inconsistency
- Improved audit defensibility
- Lower remediation and rework costs
- Scalable governance across jurisdictions

These benefits are particularly important for large banks operating across multiple regulatory regimes [9].

9. DISCUSSION: FROM OUTPUT ACCURACY TO INTENT PRESERVATION

Regulatory reporting maturity is shifting from output accuracy toward intent preservation. While accurate figures remain essential, supervisors increasingly assess whether reporting processes reliably reflect regulatory objectives under changing conditions [10]. This shift mirrors broader governance expectations that emphasize sustained alignment between institutional processes, control structures, and supervisory intent rather than point-in-time compliance [11].

Embedding intent into logic enables a transition from reactive compliance to proactive regulatory stewardship. This shift reduces dependence on manual controls and strengthens institutional credibility. Unlike traditional regulatory reporting maturity models that emphasize data, controls, or governance in isolation, this approach centers regulatory intent preservation at the logic execution layer where supervisory interpretation is operationalized.

10. CONCLUSION

Reporting logic is the point at which regulatory intent becomes operational reality. This paper has argued that regulatory intent can be embedded into execution logic through disciplined requirements translation, logic-anchored control frameworks emphasizing data readiness, and governed change management. Treating reporting logic as an institutionally governed construct improves audit defensibility, reduces supervisory risk, and supports sustainable regulatory reporting in large banking institutions.

This governance framing has direct applicability to CCAR, capital reporting, liquidity reporting, and other supervisory reporting regimes in large banking institutions, where consistent interpretation, traceability, and sustained supervisory alignment are critical to effective regulatory oversight.

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