

C.E.N.T.S.less

Comprehensive Equitable National Transaction Standard

Governance Working Group | Transaction Rounding Policy Initiative

ESTABLISHING A NATIONAL STANDARD OF CARE FOR TRANSACTION ROUNDING EXECUTION UNDER DENOMINATION ELIMINATION

Closing the Execution Gap That Neither Congress nor 17 State Legislatures Have Addressed

Document Type	Governance Standards Framework
Version	3.0, Golden Edition
Date	March 2026
Status	Working Paper, Public Distribution
Author	C.E.N.T.S.less Governance Working Group
Federal Context	Pending Common Cents Act (House Financial Services Committee)
State Context	17 states with active rounding legislation as of March 2026; 1 enacted (Indiana)
Distribution	Unrestricted

GOVERNANCE NOTICE: This paper is a voluntary governance standards framework. It does not assert that any U.S. federal or state authority has mandated a specific rounding execution standard and does not constitute legal advice. State legislative summaries are based on publicly available bill text and legislative records as of March 2026 and are subject to change. The Common Cents Act analysis is based on publicly available legislative information and staff-level communications and does not represent legal counsel on the Act's final scope or effect. Adoption decisions remain at the discretion of system operators and merchants.

Executive Summary

Denomination elimination, defined as the withdrawal or de facto unavailability of low-denomination coins, creates a settlement constraint: cash transactions cannot settle to the smallest accounting unit even when prices continue to be expressed at that unit. Four independent national authorities examined in this paper, Canada, Sweden, the Netherlands, and Ireland, resolved this constraint through a convergent implementation pattern. Rounding is applied only to cash-tendered final totals. Electronic and card transactions settle at exact accounting-unit precision. Each jurisdiction paired authorization with affirmative execution guidance. None left the execution standard to the market.

The United States is moving in a different direction. As of March 2026, seventeen states have introduced cash rounding legislation, with Indiana having enacted mandatory rounding in February 2026, Mississippi and Washington having passed legislation through one chamber, and fourteen additional states with bills in committee or introduced. States are not waiting for federal action. The patchwork is forming now, and it is forming without execution standards. Analysis of all seventeen state bills reveals that every single bill, without exception, contains a returns and refunds gap: no state has specified how rounding must interact with refund transactions. Every bill contains an auditability gap. Every bill has unclear enforcement language. No two states implement rounding identically. The execution problem is not theoretical. It is documented across every active piece of cash rounding legislation in the country.

At the federal level, the Common Cents Act, advancing through the House Financial Services Committee, is expected to establish permissive rounding language and a regulatory safe harbor for merchants who opt in. Congressional engagement and staff-level communications indicate the legislation answers whether businesses may round and provides protection from federal regulatory enforcement action. It does not answer how businesses must round to remain defensible against private litigation, class action claims, state consumer protection enforcement, or EBT accuracy and equal-treatment obligations. The Act also contemplates an opt-out provision allowing businesses with sufficient penny inventory to decline rounding, creating a two-tier marketplace.

The execution gap is not a secondary consideration. A regulatory safe harbor tells an operator they will not face FTC or CFPB enforcement for rounding. It does not tell a plaintiff's attorney that a class action is foreclosed. It does not tell a USDA auditor that EBT accuracy obligations are satisfied. It does not tell a state attorney general that consumer protection claims under state UDAP statutes are preempted. And it does not resolve the compliance complexity facing multi-state operators navigating seventeen different rounding regimes with seventeen different tax treatment rules. The infrastructure that closes those exposures must come from the market. Both Congress and seventeen state legislatures have, by design or omission, left that to the market to solve.

This paper proposes the Comprehensive Equitable National Transaction Standard: the governance framework that neither federal nor state legislation provides. It comprises seven Control Objectives (A through G), a three-tier Conformance Model with defined assessment criteria, and a Refund Normalization control requirement not addressed in any of the seventeen active state bills or any prior published governance standard. The framework provides the documented execution infrastructure

that transforms legislative permission to round into defensible, auditable, institutionally rigorous rounding practice.

The seven Control Objectives are:

- Control Objective A: Deterministic Execution. Identical inputs processed under the same rule set produce identical, reproducible outputs.
- Control Objective B: Cash-Only Conditioning and Electronic Exactness. Rounding logic is applied exclusively to cash settlement pathways; all other tender types settle at accounting-unit precision.
- Control Objective C: Final Total Rounding Placement. Rounding occurs after all tax and fee computation, at the total payable stage.
- Control Objective D: Protected Benefit Isolation. EBT/SNAP debit amounts are computed independently of cash rounding logic from accounting-unit-precision SNAP-eligible totals.
- Control Objective E: Audit Logging and Immutability. Tamper-evident logs retain pre-round totals, rounding deltas, rule set identifiers, and tender splits with SHA-256 hash chain integrity.
- Control Objective F: Monitoring and Directional Bias Detection. Statistical controls detect systematic rounding asymmetry across transaction populations.
- Control Objective G: Refund Normalization. Refund rounding mirrors the direction and methodology of the originating transaction, preventing consumer-disadvantageous asymmetry and EBT equal-treatment violations.

The Conformance Model defines three tiers keyed to merchant complexity and benefit acceptance status, mapped to NIST Cybersecurity Framework 2.0, AICPA Trust Services Criteria, and Federal Reserve Payment System Risk policy. The audit record schema in Section 5 provides field-level specification sufficient for system implementation, third-party assessment, and regulatory response.

1. Problem Statement: The Permission Gap and the Execution Gap

1.1 Denomination Elimination Converts a Pricing Unit Into a Settlement Constraint

In denomination elimination environments, the accounting unit persists as an arithmetical concept. What changes is the settlement unit for cash transactions: the smallest circulating coin can no longer match the precision of the accounting unit. Sveriges Riksbank described this dynamic precisely when the 50-öre coin was withdrawn. The öre persisted as an arithmetic unit while coinage changed; card payments were unaffected while cash payments required rounding. (Sveriges Riksbank, The withdrawal of the 50 öre coin.) This formulation is architecturally precise: denomination elimination is a settlement-layer constraint, not a pricing-layer change.

The design implication follows directly. A system that applies rounding across all tender types conflates a settlement-layer constraint with a pricing-layer decision, producing unauthorized deviations in non-cash transactions. A system that applies rounding only to cash totals after all tax computation correctly implements the internationally documented pattern and preserves the integrity of electronic, card, and benefit transactions.

1.2 Two Distinct Gaps: Permission and Execution

The policy landscape around cash rounding has, until now, conflated two distinct problems. The first is the permission gap: absent specific legal authorization, businesses operating in a denomination elimination environment have faced uncertainty about whether rounding cash totals is permissible under consumer protection standards or creates legal exposure simply by its application. The second is the execution gap: even assuming rounding is permitted, there is no published national standard defining how rounding must be implemented to be deterministic, auditable, EBT-compliant, and defensible against private litigation.

These two gaps require different solutions. The permission gap is a legislative problem; the execution gap is a governance and technology problem. Congressional action addresses the first. The market must address the second.

1.3 The Common Cents Act: What It Does and What It Deliberately Does Not Do

Pending federal legislation, referred to in this paper as the Common Cents Act and advancing through the House Financial Services Committee, is designed to establish permissive rounding language and a regulatory safe harbor for merchants who opt into cash rounding. Based on publicly available information and legislative staff communications, the Act is expected to accomplish the following:

- Authorize merchants to round cash transaction totals to the nearest five-cent increment as a permissible settlement practice.
- Provide a regulatory safe harbor that protects participating merchants from federal regulatory enforcement action by the FTC, CFPB, and potentially USDA/FNS arising solely from the act of rounding as authorized.
- Include an opt-out provision allowing businesses with sufficient penny inventory to decline participation in rounding and continue tendering exact change, preserving merchant flexibility and avoiding any universal mandate.

What the Act is not designed to do is equally important to understand. The regulatory safe harbor addresses enforcement by federal agencies. It does not create immunity from private civil litigation, including class action claims under state consumer protection statutes. It does not satisfy or supersede EBT accuracy and equal-treatment obligations under 7 CFR Part 274, which are regulatory requirements with independent civil penalty and disqualification enforcement authority. It does not define how rounding must be implemented to remain consistent with the safe harbor's scope. And it does not address the two-tier market dynamic created by the opt-out provision, where some businesses round and some do not, making execution consistency a commercial differentiator rather than a legal baseline.

LEGISLATIVE CONTEXT

The Common Cents Act answers the question: may we round? The answer, upon enactment, will be yes, with conditions. It does not answer the question: how must we round to remain defensible? That question is the subject of this Standard. Congress has assigned the execution gap to the market. This paper is the market's answer.

1.4 The Remaining Exposure Surface After the Common Cents Act

The enactment of the Common Cents Act will materially change the regulatory safe harbor landscape. It will not eliminate the execution exposure surface. The following exposure categories remain active after enactment:

Exposure Category	Common Cents Act Safe Harbor	Remaining Exposure After Enactment
FTC enforcement (Section 5 unfairness/deception)	Safe harbor from enforcement action for permitted rounding	Private plaintiff claims under state UDAP statutes. Class actions alleging directional bias or disclosure failures not addressed by the Act.
CFPB UDAAP enforcement	Safe harbor from federal enforcement for permitted rounding	State AG enforcement under parallel state consumer protection authority. Private UDAP claims. Abusiveness claims where rounding takes advantage of consumer inability to verify at point of sale.
EBT/SNAP accuracy and equal-treatment obligations (7 CFR Part 274)	Not addressed by the Act; EBT obligations are independent program requirements	Full exposure remains. Civil money penalties. Retailer disqualification. Equal-treatment violations for EBT customers receiving rounding differently from non-EBT customers.
Refund rounding accuracy	Not addressed by the Act	Full exposure remains. Consumer fraud claims for asymmetric refund rounding. EBT equal-treatment

Exposure Category	Common Cents Act Safe Harbor	Remaining Exposure After Enactment
		violations on refund transactions.
State consumer protection law	Federal safe harbor does not preempt state UDAP statutes absent express preemption language	State enforcement actions and private plaintiffs remain unaffected by federal safe harbor.
Class action litigation	No immunity conferred; safe harbor addresses regulatory enforcement only	Full exposure remains. Directional bias data is the primary factual predicate for class certification.
Audit and reconciliation documentation	Not addressed by the Act	Operators without contemporaneous execution records have no affirmative defense to any of the remaining exposure categories.

1.5 The Opt-Out Provision and the Two-Tier Market

The opt-out provision expected in the Common Cents Act creates a commercially significant market structure. Businesses that opt out, whether because they maintain sufficient penny inventory or for other operational reasons, will continue to settle cash transactions at exact cent precision. Businesses that opt in will round. In a retail environment where both populations exist, consumers will experience inconsistency across merchants.

This dynamic increases rather than decreases the governance importance of execution documentation. An opt-in merchant who rounds accurately, consistently, and with a complete audit trail is commercially differentiated from one who rounds opportunistically or inconsistently. In regulatory or litigation contexts, the opt-out availability works against an operator who opted in but implemented rounding poorly: a fact-finder may reason that the merchant chose rounding when they were not required to, and then failed to implement it responsibly.

1.6 Standard of Care Objective

The Standard of Care proposed in this paper defines a minimum baseline of governance controls for rounding execution in denomination elimination environments, calibrated to the exposure surface that survives enactment of the Common Cents Act. It emphasizes repeatability and determinism, tender-pathway segregation, audit reconstructability, protected benefit isolation, refund normalization, and statistical monitoring for directional bias. It is structured as evidence documentation infrastructure: the kind of control record that supports litigation defense, dispute resolution with consumers, EBT program compliance, and operational audit by third-party assessors.

2. Definitions and Scope

2.1 Definitions

The following terms carry specific technical meaning throughout this paper and in the Control Objectives defined in Section 7.

Term	Definition
Accounting unit	The smallest unit in which prices, taxes, and fees are computed and expressed. In U.S. contexts, the cent (\$0.01).
Settlement unit	The smallest unit in which a particular tender type can physically settle. For cash in denomination elimination environments, the five-cent increment (\$0.05).
Rounding execution	The controlled process by which a final payable amount is mapped from accounting-unit precision to settlement-unit precision under a defined, versioned rule set.
Deterministic execution	A property of rounding execution whereby identical inputs processed under the same rule set always produce identical outputs, and those outputs can be reproduced from the audit record at any future time.
Tender conditioning	The architectural control ensuring rounding execution is triggered only when a cash settlement pathway is present in the transaction, and is suppressed for all non-cash tender types.
Protected benefit isolation	The architectural separation ensuring EBT/SNAP debit authorization amounts are computed from accounting-unit-precision SNAP-eligible totals and are not modified by, or passed through, any cash rounding logic.
Refund normalization	The control requirement that refund rounding direction mirrors the rounding direction applied in the originating sale transaction, preventing directional asymmetry across sale and refund pairs.
Rule set identifier	A versioned, jurisdiction-specific identifier uniquely designating the rounding table, increment, direction methodology, and effective date range governing a rounding event.
Pre-round total	The accounting-unit-precision total computed before application of any rounding logic. This value must be retained in all audit records.
Rounding delta	The arithmetic difference between the pre-round total and the post-round settled total for a given cash transaction. This value must be retained in all audit records.
Directional bias	A statistical condition in which rounding deltas across a transaction population are not symmetrically distributed around zero, indicating systematic advantage or disadvantage to one party.
Hash chain integrity	A tamper-evidence mechanism in which each audit record includes a cryptographic hash derived in part from the preceding record, making retroactive modification detectable.
Safe harbor	A legislative or regulatory provision that protects a defined class of actors from a specific category of enforcement action when specified conditions

Term	Definition
	are met. The Common Cents Act safe harbor, as anticipated, addresses federal regulatory enforcement. It does not address private civil litigation.
Execution gap	The space between legislative permission to perform an act and the governance controls required to perform that act in a defensible, auditable, and consistently compliant manner. This Standard exists to close the execution gap.

2.2 What This Standard Covers

This Standard covers execution controls for rounding behavior at the point of settlement, including: tender-conditioned rounding logic; final-total placement after tax computation; jurisdiction-based rule selection and versioning; audit logging with hash chain integrity; reconciliation support; protected benefit isolation architecture; refund normalization requirements; and statistical monitoring for directional bias. It is calibrated to close the execution gap that remains after legislative authorization of rounding.

2.3 What This Standard Does Not Cover

This Standard does not mandate that any jurisdiction must eliminate denominations. It does not govern merchant cash acceptance policies, addressed by contract and by 31 U.S.C. Section 5103 for debt settlement contexts. It does not create legal safe harbor and does not substitute for qualified legal or regulatory analysis. It does not interpret the final scope or effect of the Common Cents Act, which is pending at the time of this publication. It is a governance framework providing documented evidence of reasonable control design aligned with existing statutory and regulatory obligations and the residual exposure surface after anticipated legislative action.

2.4 Applicability

This Standard applies to any point-of-sale system, payment processor, or merchant that opts into cash rounding under the Common Cents Act or that operates in any denomination elimination environment. It is particularly relevant to: EBT/SNAP-accepting retailers subject to accuracy and equal-treatment obligations under 7 CFR Part 274; multi-jurisdiction operators subject to varying state or federal rounding rules; POS platform operators providing rounding-capable payment infrastructure to merchant customers; and any operator seeking documented evidence of rounding control design for dispute resolution, litigation defense, or regulatory inquiry.

3. International Precedent: The Common Implementation Pattern

Four jurisdictions have formally addressed denomination elimination and produced documented rounding guidance from primary government or central bank sources. Their collective pattern represents independent regulatory convergence on a common design: cash-conditioned rounding applied at the final total after all tax computation, with electronic transactions preserved at accounting-unit precision. This convergence provides the closest available international analog to a standard of care for rounding execution and is directly relevant to the standard of care analysis in Section 4. Importantly, none of these jurisdictions relied solely on legislative permission to round. Each paired authorization with affirmative execution guidance that defined how rounding must be applied. The United States, through the Common Cents Act, would be the first major economy to authorize rounding without simultaneously publishing affirmative execution guidance, making a market-developed standard essential.

3.1 Canada: Deterministic Cash Rounding at Final Total

Canada's Department of Finance guidance directs rounding of cash totals to the nearest five cents, applied to the final amount payable after computation of GST or HST. (Department of Finance Canada, Eliminating the Penny Rounding Rules.) Electronic payments are explicitly excluded from rounding. Two foundational design constraints emerge: tender conditioning, meaning rounding applies to cash pathways only; and post-tax placement, meaning rounding occurs after all tax calculation to preserve accounting-unit precision through the tax computation stage.

3.2 Sweden: Settlement Constraint Limited to Cash Pathway

Sweden's Riksbank communication on the withdrawal of the 50-ore coin states explicitly that card payments were not affected while cash payments required rounding. (Sveriges Riksbank, The withdrawal of the 50 ore coin.) The ore persisted as an arithmetical unit; only cash settlement was constrained. This is the most precise articulation of the architectural principle: denomination elimination is a settlement-layer constraint, not a pricing-layer change.

3.3 Netherlands and Ireland: Cash Total Framing

Netherlands government guidance frames rounding as applicable to cash payments at the total level. (Government of the Netherlands, Rounding in cash payments.) The Central Bank of Ireland guidance similarly frames rounding at the cash payment total without extending it to card or electronic transactions. (Central Bank of Ireland, Rounding.) Both jurisdictions reinforce the post-computation, cash-conditioned pattern.

3.4 European Commission Legal Tender Context

The European Commission's 2013 report on legal tender of euro banknotes and coins provides policy context for how rounding regimes interact with legal tender concepts. (European Commission, COM(2013) 281 final.) The report's framing supports the principle that rounding at settlement does not alter the legal tender status of the currency unit or the pricing obligation expressed in accounting-unit terms.

3.5 Cross-Jurisdictional Pattern Synthesis: What the United States Is Missing

In each of the four jurisdictions examined, the legislative or regulatory body that authorized rounding simultaneously published affirmative execution guidance. Canada published rounding rules. Sweden's central bank communicated the precise scope of the rounding obligation. Netherlands and Ireland published practitioner-facing guidance. The United States, as presently structured through the Common Cents Act framework, would authorize rounding through legislation without a corresponding execution standard from any federal body. This is not a criticism of the legislative design; it reflects a deliberate policy choice to leave execution to the market. It is, however, the structural fact that creates the governance vacuum this Standard addresses.

Jurisdiction	Authorization Source	Execution Guidance Published	Electronic Exactness	U.S. Equivalent
Canada	Dept. of Finance guidance	Yes, affirmative rounding rules	Yes	Common Cents Act (pending)
Sweden	Riksbank communication	Yes, scope and limitations stated	Yes	Execution Standard (this document)
Netherlands	Government guidance	Yes, practitioner guidance	Yes	Not yet published
Ireland	Central Bank guidance	Yes, consumer information	Yes	Not yet published
United States	Common Cents Act (pending)	No federal execution standard	Anticipated	This Standard required

3.6 The U.S. State Legislative Landscape: Seventeen States and a Uniform Execution Gap

States are not waiting for federal action. As of March 2026, seventeen states have introduced cash rounding legislation within a five-month window, from November 2025 to March 2026. One state, Indiana, enacted mandatory rounding in February 2026. Mississippi and Washington have passed legislation through one chamber. The remaining fourteen states have bills in committee or introduced. The pace of state activity signals that the market transition is underway regardless of the federal legislative timeline.

State	Bill	Model	Stage	Tax Treatment
Alabama	HB 545	Optional	Introduced	Tax unaffected by rounding
Alaska	HB 281	Mandatory	Introduced	Taxes excluded from rounding
Arizona	SB 1108 / HB 2938	Mandatory	In Committee	Unspecified in bill text
California	AB 1793	Mandatory	Introduced	Tax calculated first, then total rounded
Florida	SB 1074	Optional	Introduced	Tax calculated first, then total rounded
Georgia	HB 1112	Mandatory	Introduced	Tax calculated first, then total rounded
Indiana	S.B. 243	Mandatory	ENACTED Feb 2026	Tax calculated first, then rounded
Iowa	SSB 3143	Mandatory	Introduced	Tax calculated first, then total rounded
Maryland	HB 1026	Mandatory	Introduced	Tax calculated first, then total rounded
Mississippi	SB 2680	Mandatory	Passed One Chamber	Tax calculated first, then total rounded
Missouri	HB 2819 / SB 1620	Optional	In Committee	Tax calculated first, then total rounded
Nebraska	LB837	Optional	Introduced	Tax included before rounding
New York	A.9274	Mandatory	Introduced	Taxes excluded from rounding
Oregon	HB 4178	Optional	Introduced	Tax unaffected by rounding
Tennessee	HB 1744 / SB 1810	Conditional	Introduced	Exact tax remittance required
Washington	HB 2334	Mandatory	Passed One Chamber	Tax unaffected by rounding

State	Bill	Model	Stage	Tax Treatment
West Virginia	HB 4476	Mandatory	Introduced	Tax calculated first, then total rounded

The structural pattern across seventeen bills is consistent in one dimension and critically divergent in another. All seventeen bills prescribe rounding to the nearest five-cent increment for cash transactions. None of the seventeen bills specify how rounding must interact with refund or return transactions. None define minimum audit or recordkeeping requirements sufficient for regulatory review. None designate clear enforcement authority with defined civil penalty structures. This is not coincidental variation: it is a systemic gap in state legislative drafting that reflects the broader absence of a national execution standard to reference.

STATE EVIDENCE

Independent analysis of all seventeen active state cash rounding bills reveals that Returns and Refunds Gap, Auditability Gap, and Enforcement Clarity Gap each appear across every tracked state. The returns and refunds gap is 17 of 17 bills, rated high impact. The auditability gap is 17 of 17 bills. The enforcement gap is 17 of 17 bills. These are not edge-case concerns. They are the structural omissions that the Comprehensive Equitable National Transaction Standard is designed to close.

Regulatory Divergence: Tax Treatment Complexity

Tax treatment is the primary point of divergence across state bills. Four distinct tax treatment models are present across seventeen states: tax calculated first with rounding applied to the final total (the majority model, consistent with international precedent); tax excluded from rounding and rounded separately; tax included before rounding (rounding applied to the tax-inclusive total as a single amount); and exact tax remittance required regardless of rounding. For a multi-state retailer or a POS platform serving merchants across several jurisdictions, these four models require distinct computational logic paths. A system configured for California's tax-first model will produce incorrect results in Nebraska, where the tax-inclusive total is rounded as a single amount. A system configured for Tennessee's exact-remittance model requires independent tax computation that cannot share state with the rounding function. No two state implementations are identical, and no federal legislation currently under consideration addresses this cross-jurisdictional configuration complexity.

Mandatory, Optional, and Conditional: Three Compliance Postures

Eleven of seventeen states (65 percent) prescribe mandatory rounding. Five states (29 percent) adopt an optional or permissive model allowing merchants to choose whether to round. Tennessee is the only state with a conditional model, allowing rounding only under specified circumstances such as lack of exact change. For merchants operating across multiple states, this creates a compliance posture that cannot be addressed by a single system configuration: mandatory-state operations require rounding to be on; optional-state operations require either a policy decision or customer disclosure; conditional-state operations require circumstance-based logic. The governance controls proposed in Section 7 of this Standard, particularly Control Objective B (tender conditioning) and Control Objective A (deterministic execution with rule set version control), are directly calibrated to this multi-state configuration requirement.

4. United States Exposure Surface: What Survives Legislative Authorization

This section analyzes the legal exposure categories that remain active after enactment of the Common Cents Act. The analysis is structured around what the safe harbor covers, what it does not cover by design, and what governance documentation is required to close each remaining exposure.

4.1 FTC Act: Residual State and Private Exposure

Section 5 of the FTC Act prohibits unfair or deceptive acts or practices in or affecting commerce. (15 U.S.C. Section 45.) The statutory unfairness limitation requires substantial injury, lack of reasonable avoidability, and absence of countervailing benefit. (15 U.S.C. Section 45(n).) The Common Cents Act regulatory safe harbor is expected to address federal FTC enforcement arising from the act of rounding as authorized. It does not address: private civil claims under the FTC Act's state-law analogs, which vary by jurisdiction and are not preempted by federal safe harbor absent express statutory language; class action claims asserting systematic directional bias that the safe harbor does not speak to; or deception claims arising from disclosure failures or misleading net impressions about rounding practices that go beyond mere authorization. (FTC Policy Statement on Unfairness; FTC Policy Statement on Deception.)

4.2 CFPB UDAAP: Abusiveness Claims and State Parallel Authority

The CFPB has authority to prevent unfair, deceptive, or abusive acts or practices in covered consumer financial products and services. (12 U.S.C. Sections 5531, 5536.) The abusiveness prong, which reaches practices that take unreasonable advantage of consumers' inability to protect their own interests, is not addressed by permissive rounding authorization. (12 U.S.C. Section 5531(d).) A consumer who cannot verify rounding accuracy at the point of transaction, across a population of hundreds of transactions per year, may have a cognizable abusiveness claim even under a regime where rounding is authorized. State attorneys general with parallel UDAP authority are not bound by federal safe harbor decisions and retain independent enforcement capacity. (CFPB Policy Statement on Abusive Acts or Practices; CFPB Circular 2024-02.)

4.3 SNAP and EBT: Independent Program Obligations

SNAP statutory and regulatory requirements operate independently of any cash rounding authorization. EBT accuracy and equal-treatment obligations under 7 CFR Sections 274.7 and 274.8 are program-specific requirements enforced by USDA/FNS with civil money penalties and retailer disqualification authority. (7 U.S.C. Section 2021; 7 CFR Section 278.6.) The Common Cents Act, as a general commerce authorization, does not and cannot modify SNAP program administration rules. An EBT debit that receives a rounding delta allocation, whether by system design error or architectural failure, is an accuracy and equal-treatment violation under 7 CFR Part 274 regardless of whether rounding is otherwise authorized by the Act. This exposure remains fully active after enactment, and EBT-accepting retailers who opt into rounding face heightened compliance obligation precisely because the authorization to round does not relieve the prohibition on applying rounding to EBT debits.

4.4 Class Action Litigation: The Directional Bias Predicate

The regulatory safe harbor does not confer immunity from private civil litigation. Class action claims based on rounding practices typically require a common factual predicate affecting a definable class

of consumers. The most legally coherent predicate is directional bias: a statistical demonstration that the merchant's rounding consistently rounds against consumers in a material proportion of transactions, producing a systematic net transfer from consumer to merchant. A merchant with no rounding audit log and no bias monitoring data has no affirmative defense to this predicate. A merchant with a complete rolling bias analysis showing statistically neutral rounding distribution has a contemporaneous factual rebuttal to class certification. The governance documentation requirements of this Standard are, in practice, the litigation defense for which the safe harbor provides no substitute. (In re Heartland Payment Systems, 834 F. Supp. 2d 566; In re Target Corp., 66 F. Supp. 3d 1154, applied by structural analogy.)

4.5 The T.J. Hooper Principle and the Opt-In Decision

The opt-out provision of the Common Cents Act has a specific consequence in standard of care analysis. A merchant who opts into rounding has made an affirmative operational choice when an alternative was available. Under the T.J. Hooper principle, applied by analogy to payment system operations, a party who voluntarily assumes an operational practice that creates foreseeable risk to consumers bears the burden of demonstrating that the practice was conducted with reasonable care. (The T.J. Hooper, 60 F.2d 737, 2d Cir. 1932, applied by analogy.) The opt-out provision removes the argument that rounding was operationally unavoidable. An operator who opts in and then implements rounding without audit infrastructure, without bias monitoring, and without EBT isolation cannot claim the practice was forced upon them. The governance documentation requirements of this Standard are the evidence of reasonable care for which the safe harbor provides no substitute.

5. Control Design Analysis and Failure Mode Taxonomy

This section specifies the failure modes, minimum control requirements, and audit record schema for each control domain at a level of specificity sufficient to support system implementation, third-party assessment, and dispute-resolution documentation. Sections 5.1 through 5.5 correspond directly to Control Objectives A through G in Section 7.

5.1 Configuration Drift and Rule Set Version Control

Failure Mode

Configuration drift occurs when rounding rule sets are inconsistently applied across terminal instances, software versions, or time periods. In multi-terminal or multi-location deployments, individual terminals routinely carry different firmware versions, rule set files, or configuration states. Without per-transaction rule set version logging, drift is undetectable in post-hoc audit and irrecoverable in dispute resolution. Under the two-tier market structure created by the Common Cents Act opt-out provision, configuration drift in an opt-in merchant's system also creates exposure if transactions processed under an incorrect rule set are later shown to have affected consumers differently from how the authorized rounding policy would have.

Illustrative Risk Scenario

A POS operator deploys a nickel-rounding rule in State A and a neutral rounding rule in State B. A configuration update error applies the State B rule to State A terminals for 72 hours. Without per-transaction rule set identifiers in the audit log, the operator cannot identify affected transactions, cannot quantify the rounding delta variance, and cannot produce evidence of the error's scope or remediation to a regulator or opposing counsel.

Minimum Control Requirements

- Each rounding event must record a rule set identifier uniquely designating: jurisdiction code, rounding increment, direction methodology (half-up, half-down, half-even, ceiling, or floor), and effective date range.
- Rule set changes must be versioned; the version change event must be logged with timestamp, prior version identifier, and new version identifier.
- Systems must be capable of producing a transaction-population report filtered by rule set version for any defined time range.

5.2 Tender Conditioning Failure

Failure Mode

Tender conditioning failure occurs when rounding logic is applied to non-cash tender types: card, ACH, EBT, stored value, or mobile payment. This failure is particularly consequential after the Common Cents Act because authorization to round cash transactions does not extend to electronic transactions, which must continue to settle at exact accounting-unit precision. A system that rounds all tender types does not conform to the Act's expected authorization structure and is not protected by the safe harbor for the non-cash components.

Illustrative Risk Scenarios

- Architectural failure: the rounding function executes on all transactions regardless of tender type. Card transactions receive rounded totals. The Act's safe harbor does not cover

rounding of card transactions; these transactions are unauthorized roundings subject to full consumer protection analysis.

- Split-tender propagation: a \$10.03 transaction is split as \$5.00 cash and \$5.03 card. The card component must settle at \$5.03. A system that rounds the aggregate and then splits proportionally produces an unauthorized rounding on the card component and a reconciliation failure independent of any consumer protection claim.
- EBT tender contamination: any rounding delta allocated to the EBT debit in a mixed EBT and cash transaction is an accuracy violation under 7 CFR Section 274.8 and an equal-treatment violation under 7 CFR Section 274.7, regardless of Act authorization for the cash component.

Minimum Control Requirements

- Rounding execution must be gated by an explicit tender-type condition check that evaluates to true only when a cash settlement unit is present.
- In split-tender transactions, the rounding delta must be applied exclusively to the cash component. Non-cash components must settle at accounting-unit-precision amounts.
- EBT debit authorization must be computed from the pre-round SNAP-eligible total and must not receive any rounding delta allocation under any circumstance.

5.3 Audit Record Requirements and Retention

Governance Data Requirements

The following categories of information are required in the audit record for each rounding-relevant transaction event. These requirements are stated as governance obligations, not as implementation specifications. Conforming systems may use any data architecture, storage technology, or record format that satisfies the substance of each category. The completeness of an audit record is assessed against these functional requirements, not against any particular naming convention or storage schema.

Transaction Identity and Classification

Each audit record must be uniquely and sequentially identified within the operator's system in a manner that supports unambiguous retrieval and cross-reference. Each record must identify the event type: whether it is a sale, a void, a refund, or a partial refund. For void and refund events, the record must establish documented linkage to the originating sale event, sufficient to reconstruct the full transaction history from any single event in the chain.

Settlement Amounts and Adjustment Quantification

Each sale or refund record must capture three distinct amount values: the total computed before any rounding logic is applied, at full accounting-unit precision; the total settled after rounding, at settlement-unit precision; and the arithmetic difference between those two values. The pre-round total must reflect the amount after all tax and fee computation. These three values together must be sufficient to independently verify the rounding calculation without reference to any external system or configuration.

Rule Set Attribution

Each record must identify the specific rounding rule set governing the event. This identification must be versioned and jurisdiction-specific, such that a reader can determine which rounding methodology, which increment, and which effective date range applied. Rule set identification must be captured at transaction time, not reconstructed from current system configuration at a later date. Rule set version changes must be logged as discrete events.

Tender Pathway Documentation

Each record must document the tender type or types present in the transaction. For split-tender transactions, the record must separately account for each tender component at independent precision such that components sum to the pre-round aggregate total. This documentation must be sufficient to verify that rounding was applied only to cash components and that non-cash components settled at accounting-unit precision.

Protected Benefit Component Documentation

For any transaction involving EBT or SNAP benefits, the record must separately document the benefit-eligible amount computed before any rounding logic and the benefit debit amount actually applied. These two values must be independently verifiable and must demonstrate that the benefit debit was not modified by any cash rounding computation. Any variance between the benefit-eligible pre-round amount and the benefit debit applied must be flagged as a reconciliation exception.

Temporal, Operator, and Authorization Records

Each record must capture the date and time of the event at precision sufficient to support audit sampling and dispute resolution. For void events, the record must document the reason using a defined classification and must identify the authorizing operator credential when the void amount exceeds the operator's defined approval threshold.

Refund Linkage and Originating Direction Preservation

For refund and void events, the record must preserve the rounding direction and adjustment amount from the originating sale event. Without the originating direction and delta on record, a system cannot demonstrate that the refund honored the direction-matching requirement, and an assessor cannot verify refund normalization compliance from the audit record alone.

Tamper-Evidence Mechanism

Each record must include a cryptographic hash computed in a manner that incorporates the content of the preceding record, creating a computationally verifiable chain from any record back to the genesis record. The hash algorithm must be a recognized cryptographic standard with documented collision resistance. (NIST FIPS 180-4 specifies the applicable standard.) Retroactive alteration of any record must be detectable without alteration of all subsequent records, a property verifiable by a third-party assessor operating from the audit log alone.

Retention Requirement

Audit records must be retained for a minimum of seven years from the transaction date, consistent with IRS guidance on electronic record retention (IRS Rev. Proc. 98-25, 1998-1 C.B. 689) and the

statutes of limitations applicable to contract and consumer protection claims in most U.S. jurisdictions. Records must be retrievable by any auditable attribute. The tamper-evidence chain must remain verifiable for the full retention period.

5.4 Protected Benefit Isolation Architecture

Failure Mode

Protected benefit isolation failure occurs when the EBT debit computation pathway shares state with cash rounding logic. The Common Cents Act does not address EBT transactions; SNAP program rules remain fully operative. This means an operator who correctly opts into rounding under the Act but fails to isolate EBT debit computation has simultaneously obtained a safe harbor on cash rounding and created an unprotected EBT compliance violation. The two exposures are independent, and the safe harbor does not transfer between them.

Minimum Architectural Requirements

- EBT debit computation must occur in a processing path that does not share state with the cash rounding function at any point before EBT authorization.
- The benefit debit amount in the audit record must equal the SNAP-eligible pre-round total within accounting-unit tolerance (zero variance for standard transactions).
- Any variance between the documented benefit-eligible pre-round amount and the benefit debit applied must trigger an automatic reconciliation alert.
- In split-tender transactions, the audit record must separately account for each tender component with independent precision such that they sum to the pre-round aggregate total.

5.5 Monitoring and Directional Bias Detection

Statistical Bias Threshold Definition

A rounding system exhibits directional bias when, over a rolling 90-day transaction population, the mean rounding delta deviates from zero by more than one-half of the rounding increment at 95 percent statistical confidence. For a five-cent rounding increment, this threshold is \$0.025. This threshold is analytically derived from retail price clustering literature demonstrating that price-ending distributions are not uniformly distributed across the rounding increment range. (Federal Reserve Bank of Cleveland, WP 10-15; Federal Reserve Bank of Cleveland, WP 11-03; MIT Sloan, Anderson and Simester.) Directional bias data is the primary factual predicate for class certification in rounding litigation. An operator without this data cannot rebut a bias allegation. An operator with rolling neutral bias data has a contemporaneous defense.

Minimum Monitoring Requirements

- Rolling mean rounding deltas must be computed over 30-day and 90-day windows, segmented by location, terminal, and rule set version.
- Statistical bias alerts must be generated when the mean delta exceeds the defined threshold.
- Bias reports must be exportable in audit-grade format for any requested time range.
- Rounding direction methodology must be documented and retained as part of the operator's compliance record.

6. Refund Normalization: An Identified Governance Gap

GOVERNANCE GAP

Refund Normalization has not been identified as a discrete governance requirement in any existing international guidance, U.S. regulatory publication, published payment system standard, or legislative proposal reviewed in the preparation of this paper. Independent analysis of all seventeen active U.S. state cash rounding bills as of March 2026 confirms that every single state bill, rated at high impact, contains a returns and refunds gap. The absence is universal and structural, not incidental. This Standard introduces Refund Normalization as an analytically necessary control, derived from the intersection of refund transaction mechanics, the EBT equal-treatment obligation under 7 CFR Section 274.7, and the FTC net impression standard.

6.1 The Arbitrage Risk in Asymmetric Refund Rounding

When a sale transaction is rounded, the settled cash amount differs from the pre-round total by the rounding delta. A subsequent full refund must return the consumer to the exact net position they held before the transaction. This arithmetic requirement means the refund settled amount must equal the original sale settled amount, which requires the refund to apply the same rounding direction as the original sale.

If refund rounding is computed independently of the original sale, the refund delta may differ from the sale delta. Over a transaction population, independent refund rounding produces systematic net transfers. If the refund methodology consistently rounds differently from the sale methodology, the consumer does not recover what they paid, and the merchant retains a systematic gain across the refund population. This is a revenue transfer produced by asymmetric rounding, not by any legitimate settlement constraint. Under the FTC net impression standard, the aggregate effect of a systematic practice is evaluated across the consumer population, not transaction by transaction. (FTC Policy Statement on Deception; FTC Policy Statement on Unfairness.) A practice that appears small per transaction can be material in aggregate and remains within the exposure surface that the Common Cents Act safe harbor does not address.

6.2 The Direction-Matching Requirement

- Full refund: the refund settled amount must equal the original sale settled amount. The refund rounding delta must equal the negation of the original sale rounding delta. The `original_rounding_delta` and `original_direction_flag` fields in the audit record schema support verification of this requirement at execution time.
- Partial refund: the refund settled amount must be computed by applying the original sale's rounding direction to the partial refund pre-round amount. The `original_direction_flag` from the sale record must be retained and referenced at partial refund execution.
- Systems must verify direction-matching at refund execution time and must flag any refund event where the computed direction does not match the `original_direction_flag` in the linked sale record, pending exception handling.

6.3 EBT Refund Equal-Treatment Authority

Under 7 CFR Section 274.7, SNAP customers must receive the same terms and conditions as non-SNAP customers. If non-EBT customers receive refunds at the original settled amount under refund

normalization, SNAP customers must receive equivalent treatment. A system that processes EBT refund components differently from cash refund components violates 7 CFR Section 274.7 regardless of direction or magnitude. (7 CFR Section 274.7; USDA FNS Equal Treatment Notification.) This is an enumerated regulatory obligation subject to civil money penalties and retailer disqualification. (7 U.S.C. Section 2021; 7 CFR Section 278.6.) The Common Cents Act does not address this obligation.

6.4 Void Versus Refund: Governance Distinction

A void cancels a sale before settlement and must restore all tender components to pre-authorization state. Because no cash settlement has occurred, direction-matching does not apply to voids in the same manner as to post-settlement refunds. Voids carry independent governance requirements: documented linkage to the originating sale event and continuity of the tamper-evidence chain; required reason code documentation; manager-credential approval for voids above a defined dollar threshold; and restriction on EBT transaction voids after the applicable settlement window. These requirements govern audit integrity for voids; refund normalization requirements govern rounding accuracy for post-settlement refunds. Both are required components of a complete control framework.

6.5 Population-Level Abuse Detection

Systems should maintain analytics capable of identifying refund rounding abuse patterns, including: high-frequency small-amount refund sequences generating systematic rounding deltas; refund transactions without corresponding linked sale records; and refund populations where the aggregate refund delta deviates materially from the negation of the aggregate sale delta for comparable merchandise categories or time periods. These conditions may indicate systemic control failures and should trigger documented review workflows.

7. Proposed National Standard of Care: Control Objectives

The following seven Control Objectives constitute the Comprehensive Equitable National Transaction Standard for rounding execution. Each objective is specified at two levels: a Minimum Requirement applicable to all conforming systems, and a Tier 3 Enhancement for operators in complex, high-volume, or EBT-intensive environments. Together they represent the execution infrastructure that transforms Common Cents Act authorization into defensible rounding practice.

Control	Objective	Minimum Requirement	Tier 3 Enhancement
A	Deterministic Execution	Identical inputs under the same rule set always produce identical, reproducible outputs. Rule set identifier logged per event.	Full audit replay capability: any historical transaction reproducible from its audit record fields alone, independent of production system state.
B	Cash-Only Conditioning	Rounding gated by explicit tender-type condition. Electronic, card, and EBT transactions settle at accounting-unit precision.	Automated daily tender-type reconciliation confirming zero rounding delta on all non-cash transaction records.
C	Final Total Placement	Rounding applied after all tax and fee computation. Pre-round total retained in the audit record.	Tax-inclusive and tax-exclusive pre-round totals both logged for complete jurisdictional reconstructability.
D	Protected Benefit Isolation	EBT debit computed from SNAP-eligible pre-round total. No rounding adjustment allocated to EBT component under any condition.	Automated daily EBT reconciliation: benefit debit amounts compared against benefit-eligible pre-round totals with zero-variance alert threshold.
E	Audit Logging and Immutability	All governance data categories from Section 5.3 captured per event. Cryptographic hash chain per NIST FIPS 180-4. Minimum seven-year retention.	Audit log maintained in immutable append-only storage. Annual independent hash chain verification by qualified third party.
F	Monitoring and Bias Detection	Rolling 30-day and 90-day mean rounding deltas computed. Alert threshold: mean delta exceeds 50 percent of rounding increment at 95 percent confidence.	Real-time bias analytics. Bias alerts trigger documented rule-set review workflow with defined resolution timeline.
G	Refund Normalization	Refund settled amount computed from original sale settled amount. Original rounding direction flag	Full partial-refund normalization with pro-rated delta computation. Population-level abuse

Control	Objective	Minimum Requirement	Tier 3 Enhancement
		retained and referenced at refund execution.	detection analytics active on refund event stream.

8. Conformance Model: Three-Tier Certification Framework

The Conformance Model defines three tiers calibrated to merchant complexity, transaction volume, and benefit acceptance status. Tier assignment is determined by the operator's profile. An EBT-accepting retailer cannot claim Tier 1 conformance; the regulatory obligations under 7 CFR Sections 274.7 and 274.8 make Tier 2 the minimum applicable tier, independently of any Common Cents Act authorization. An operator seeking to demonstrate reasonable care in the residual litigation exposure categories must document conformance at the tier appropriate to their operational profile.

8.1 Tier Definitions

Tier	Profile	Control Objectives Required	Conformance Assessment
Tier 1 Foundation	Single-location or low-volume cash operator. No EBT acceptance. Single jurisdiction. Opts in under Common Cents Act.	A, B, C, E (core schema) G (full refunds only)	Self-assessment using published checklist. Annual review. Rule set version documentation required.
Tier 2 Compliant	Multi-location operator, or any EBT/SNAP-accepting retailer, in one or more jurisdictions. Opts in under Common Cents Act.	A, B, C, D, E (full schema), F (rolling monitoring), G (full including partial refunds)	Third-party assessment recommended. Quarterly bias report review. EBT reconciliation log mandatory.
Tier 3 Institutional	High-volume or multi-jurisdiction operator. POS platform provider serving multiple merchant customers. Operator subject to regulatory examination.	A through G at full specification. Immutable audit log. Real-time bias analytics. Independent hash chain verification.	Third-party assessment required. Annual conformance statement. Independent SHA-256 hash chain verification by qualified assessor.

8.2 Assessment Criteria and Required Outputs

A conformance assessment for any tier must produce the following documented outputs:

- Conformance statement: a written declaration identifying the tier achieved, Control Objectives tested, assessment methodology, assessment date, and any exceptions noted with remediation timelines.
- Rule set inventory: a complete enumeration of all rule set versions active during the assessment period, with jurisdiction mapping and effective date ranges.
- Audit log sample: a statistically representative sample of transaction audit records demonstrating schema compliance, hash chain integrity, and pre-round total retention.
- Bias analysis report: rolling mean delta computations for the assessment period with statistical confidence intervals and documentation of any alerts triggered and resolved.

- EBT reconciliation summary (Tier 2 and Tier 3): reconciliation of benefit debit amounts against benefit-eligible pre-round totals for the assessment period with variance report.
- Exception register: documented record of any control failures, remediation steps taken, responsible parties, and resolution dates.

8.3 Framework Alignment Mapping

The Control Objectives map to established governance frameworks as follows, enabling operators to integrate rounding compliance within existing governance programs rather than maintaining a separate compliance structure.

Control Objective	NIST CSF 2.0 Function and Category	AICPA Trust Services Criteria	Fed PSR Policy Pillar
A: Deterministic Execution	IDENTIFY: Governance (GV.OC)	CC6.1 Logical and Physical Access Controls	Operational Risk Management
B: Cash-Only Conditioning	PROTECT: Data Security (PR.DS)	CC6.6 Logical Access Restrictions	Settlement Risk Controls
C: Final Total Placement	PROTECT: Platform Security (PR.PS)	CC7.1 System Processing Integrity	Transaction Accuracy
D: Protected Benefit Isolation	PROTECT: Data Security (PR.DS)	CC6.3 Role-Based Access Restrictions	Consumer Protection
E: Audit Logging	DETECT: Adverse Event Analysis (DE.AE)	CC7.2 System Monitoring and Logging	Operational Continuity
F: Bias Monitoring	DETECT: Continuous Monitoring (DE.CM)	CC9.1 Risk Monitoring	Risk Monitoring
G: Refund Normalization	PROTECT: Data Security (PR.DS)	CC7.1 System Processing Integrity	Consumer Protection

9. Standard of Care in Dispute and Enforcement Contexts

9.1 The T.J. Hooper Principle, the Opt-In Decision, and the Burden of Reasonable Care

In *The T.J. Hooper* (60 F.2d 737, 2d Cir. 1932), Judge Learned Hand held that courts must determine reasonable care independently of industry custom, and that a party may be found negligent even when consistent with prevailing practice if a precaution was readily available and the harm foreseeable. This principle is applied here by analogy to payment system operations. The analogical significance is sharpened by the Common Cents Act opt-out provision: an operator who elects to round when an opt-out was available has made an affirmative choice. Courts evaluating that operator's conduct will not accept the argument that rounding was unavoidable. The standard of care analysis will focus on whether the operator implemented readily available controls to make their rounding defensible.

Helling v. Carey (83 Wn.2d 514, 1974) extends this reasoning: compliance with industry custom is not necessarily a complete defense if a defendant failed to implement a readily available precaution. The current POS industry norm of undocumented rounding without bias monitoring or EBT isolation cannot serve as a shield for an opt-in operator whose rounding causes consumer harm when the controls described in this Standard were commercially available at the time.

9.2 Data Security Litigation as Structural Analogy

The framework through which courts have evaluated reasonable care in data security cases provides a useful structural analogy for rounding compliance analysis. In *re Heartland Payment Systems* (834 F. Supp. 2d 566, S.D. Tex. 2012) and *In re Target Corp.* (66 F. Supp. 3d 1154, D. Minn. 2014) both reference defendant compliance with, or deviation from, published security standards in the factual analysis of reasonable care. These cases are applied here by structural analogy only; they address data security, not rounding. The structural parallel is that in the absence of a mandated standard, courts look to available industry guidance, the state of the art, and the foreseeability of harm. A documented conformance record mapping to NIST CSF 2.0 and AICPA Trust Services Criteria is precisely the kind of contemporaneous compliance documentation that supports a reasonable care posture in this analytical framework.

9.3 Practical Evidence Value in Specific Dispute Scenarios

- Consumer complaint response: pre-round totals and rounding deltas in the audit log allow a merchant to produce contemporaneous records of the exact rounding applied to any disputed transaction within seconds, replacing reconstructed estimates with direct evidence.
- Regulatory inquiry response: a complete rule set inventory, bias analysis report, and EBT reconciliation summary allow a merchant to respond to FTC, CFPB, or USDA/FNS inquiry with affirmative evidence of controlled execution under the claimed safe harbor.
- Class action defense: a rolling directional bias analysis showing statistically neutral rounding distribution eliminates the primary factual predicate for class certification based on systematic consumer harm. Without this data, the merchant has no contemporaneous rebuttal.
- EBT disqualification defense: a zero-variance EBT reconciliation log demonstrating that no rounding delta was ever allocated to any EBT debit amount directly rebuts an accuracy or equal-treatment allegation under 7 CFR Sections 274.7 and 274.8.

- Opt-in reasonableness defense: comprehensive conformance documentation at the appropriate tier demonstrates that the operator's decision to opt into rounding was accompanied by the governance infrastructure a reasonably prudent operator would implement, satisfying the heightened standard created by the voluntary nature of the opt-in.

10. Limitations and Research Gaps

This paper is transparent about the boundaries of what its source base establishes and where further empirical, regulatory, or legislative development is needed.

- The state legislative summaries in Section 3.6 are based on publicly available bill text and legislative tracking records as of March 2026. Legislative status is subject to change. Several bills identified as introduced or in committee may have advanced, been amended, or been withdrawn by the time of a reader's engagement with this paper. Operators in specific states should verify current legislative status through official state legislative sources.
- The Common Cents Act analysis in this paper is based on publicly available information and legislative staff communications at the time of publication. The Act's final text, scope, and effective date have not been determined. Any operator relying on this paper for compliance planning should obtain qualified legal counsel on the Act's final provisions before making opt-in or opt-out decisions.
- No U.S. regulator has expressly prohibited rounding in SNAP transactions or expressly required a specific rounding methodology for cash transactions. The risk framing in this paper is grounded in accuracy, equal-treatment, and reconciliation obligations, and in the residual exposure surface after anticipated legislative authorization, not in an express prohibition.
- The T.J. Hooper and Helling v. Carey citations in Section 9 are applied by analogy. Neither case addresses payment system operations directly. Their application is illustrative of the standard of care analytical framework and does not represent a prediction that these cases would be cited or applied in any particular enforcement proceeding.
- The bias detection threshold specified in Section 5.5 is analytically derived from retail price clustering literature. It is a proposed minimum monitoring threshold, not a regulatory definition. Operators should consult qualified statistical expertise for context-specific calibration.
- This Standard does not address the full range of state-level rounding regulations, which vary and may impose requirements beyond the federal baseline analyzed here. Multi-state operators must conduct jurisdiction-specific legal analysis.
- This Standard proposes but does not establish a certification body or assessor accreditation scheme. The Conformance Model requires third-party assessors for Tier 2 and Tier 3; the qualifications and independence requirements for such assessors require further governance development.

11. Conclusion: The Market's Responsibility

The four international jurisdictions examined in this paper, Canada, Sweden, the Netherlands, and Ireland, each paired legislative or regulatory authorization to round with affirmative execution guidance defining how rounding must be applied. The result in each jurisdiction was a documented, practitioner-facing standard that merchants and POS operators could implement and audit against. No jurisdiction left the execution standard to the market after establishing the permission framework.

Seventeen U.S. states have introduced cash rounding legislation in a five-month window. Indiana has enacted mandatory rounding. Analysis of all seventeen bills documents a structural execution gap consistent across every state: no returns and refunds standard, no auditability requirement, no enforcement clarity. States are not waiting for Congress, and they are not solving the execution problem Congress has not yet addressed. The patchwork is forming without the infrastructure that makes it defensible.

At the federal level, the Common Cents Act will establish the permission framework. It will not establish the execution standard. Congressional design has assigned that responsibility to the market. Both federal and state legislative activity converge on the same conclusion: the governance infrastructure for responsible rounding must come from outside the legislative process.

The regulatory safe harbor the Act provides addresses federal enforcement action. It does not address private civil litigation, state consumer protection enforcement, EBT program compliance, refund rounding accuracy, or the evidentiary requirements of class action defense. These exposures are substantial, well-documented in existing law, and entirely unaddressed by legislative permission alone. An operator who obtains safe harbor from federal enforcement while operating rounding infrastructure that cannot produce an audit log, cannot demonstrate directional neutrality, and cannot show EBT isolation has traded one category of risk for another.

The Comprehensive Equitable National Transaction Standard proposed in this paper is designed to close the execution gap that the Common Cents Act leaves to the market. Its seven Control Objectives define the minimum governance posture for defensible rounding. Its three-tier Conformance Model provides a scalable compliance target appropriate to any operator's complexity and benefit acceptance profile. Its Refund Normalization requirement addresses a governance gap not identified in any prior published standard. And its audit record schema provides the field-level specification necessary to produce the contemporaneous documentation that is, in the absence of regulatory safe harbor from litigation, the operator's primary compliance asset.

Permission to round and the ability to round responsibly are not the same thing. The market now has both the legislative framework and the governance standard. The execution gap is closed for operators who choose to close it.

References: Canonical Source Register

Federal Statutes

15 U.S.C. Section 45. Unfair methods of competition unlawful; prevention by Commission. U.S. House of Representatives, Office of the Law Revision Counsel. <https://uscode.house.gov/view.xhtml?req=granuleid:USC-prelim-title15-section45>

15 U.S.C. Section 45(n). Statutory unfairness limitation. U.S. House of Representatives, Office of the Law Revision Counsel. <https://uscode.house.gov/view.xhtml?req=granuleid:USC-prelim-title15-section45>

12 U.S.C. Section 5531. Prohibiting unfair, deceptive, or abusive acts or practices. U.S. House of Representatives, Office of the Law Revision Counsel. <https://uscode.house.gov/view.xhtml?req=granuleid:USC-prelim-title12-section5531>

12 U.S.C. Section 5531(d). Abusiveness standard. U.S. House of Representatives, Office of the Law Revision Counsel. <https://uscode.house.gov/view.xhtml?req=granuleid:USC-prelim-title12-section5531>

12 U.S.C. Section 5536. Prohibited acts. U.S. House of Representatives, Office of the Law Revision Counsel. <https://uscode.house.gov/view.xhtml?req=granuleid:USC-prelim-title12-section5536>

7 U.S.C. Section 2011. Congressional declaration of policy (SNAP). U.S. House of Representatives, Office of the Law Revision Counsel. <https://uscode.house.gov/view.xhtml?req=granuleid:USC-prelim-title7-section2011>

7 U.S.C. Section 2016. Issuance and use of benefits. U.S. House of Representatives, Office of the Law Revision Counsel. <https://uscode.house.gov/view.xhtml?req=granuleid:USC-prelim-title7-section2016>

7 U.S.C. Section 2021. Civil penalties and disqualification of retail food stores and wholesale food concerns. U.S. House of Representatives, Office of the Law Revision Counsel. <https://uscode.house.gov/view.xhtml?req=granuleid:USC-prelim-title7-section2021>

31 U.S.C. Section 5103. Legal tender. U.S. House of Representatives, Office of the Law Revision Counsel. <https://uscode.house.gov/view.xhtml?req=granuleid:USC-prelim-title31-section5103>

Federal Regulations

7 CFR Section 274.7. Equal treatment. Electronic Code of Federal Regulations, National Archives. <https://www.ecfr.gov/current/title-7/subtitle-B/chapter-II/subchapter-C/part-274/section-274.7>

7 CFR Section 274.8. EBT system requirements including accuracy and reconciliation. Electronic Code of Federal Regulations, National Archives. <https://www.ecfr.gov/current/title-7/subtitle-B/chapter-II/subchapter-C/part-274/section-274.8>

7 CFR Section 278.2. Participation of retailers and wholesale food concerns. Electronic Code of Federal Regulations, National Archives. <https://www.ecfr.gov/current/title-7/subtitle-B/chapter-II/subchapter-C/part-278/section-278.2>

7 CFR Section 278.6. Disqualification of retailers and civil money penalties. Electronic Code of Federal Regulations, National Archives. <https://www.ecfr.gov/current/title-7/subtitle-B/chapter-II/subchapter-C/part-278/section-278.6>

Agency Guidance and Policy Statements

Federal Trade Commission. FTC Policy Statement on Unfairness. <https://www.ftc.gov/legal-library/browse/ftc-policy-statement-unfairness>

Federal Trade Commission. FTC Policy Statement on Deception. https://www.ftc.gov/system/files/documents/public_statements/410531/831014deceptionstmt.pdf

Consumer Financial Protection Bureau. Policy Statement on Abusive Acts or Practices. <https://www.consumerfinance.gov/compliance/circulars/policy-statement-on-abusive-acts-or-practices/>

Consumer Financial Protection Bureau. Circular 2024-02: Deceptive marketing practices about the speed or cost of sending international money transfers. <https://www.consumerfinance.gov/compliance/circulars/circular-2024-02/>

U.S. Department of Agriculture, Food and Nutrition Service. SNAP Equal Treatment Notification. <https://www.fns.usda.gov/snap/equal-treatment-notification>

Board of Governors of the Federal Reserve System. Policy on Payment System Risk. <https://www.federalreserve.gov/paymentsystems/policy-paymentsystemrisk.htm>

Internal Revenue Service. Rev. Proc. 98-25, 1998-1 C.B. 689. Electronic recordkeeping for business records.

International Regulatory Sources

Department of Finance Canada. Eliminating the Penny. <https://www.canada.ca/en/department-finance/services/consumer-and-business-awareness/eliminating-penny.html>

Department of Finance Canada. Eliminating the Penny: Rounding Rules. <https://www.canada.ca/en/department-finance/programs/consumer-awareness/eliminating-penny/rounding.html>

Sveriges Riksbank. The withdrawal of the 50 ore coin. <https://www.riksbank.se/en-gb/payments--cash/notes--coins/coins/the-withdrawal-of-the-50-ore-coin/>

Government of the Netherlands. Rounding in cash payments. <https://business.gov.nl/regulation/rounding-cash-payments/>

Central Bank of Ireland. Rounding. <https://www.centralbank.ie/consumer-hub/consumer-information/rounding>

European Commission. Report from the Commission to the Council and the European Parliament on legal tender of euro banknotes and coins. COM(2013) 281 final. <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52013DC0281>

Technical Standards

National Institute of Standards and Technology. FIPS 180-4, Secure Hash Standard (SHS). 2015. <https://csrc.nist.gov/publications/detail/fips/180/4/final>

National Institute of Standards and Technology. NIST SP 1299, Cybersecurity Framework 2.0 Resource and Overview Guide. 2024. <https://csrc.nist.gov/pubs/sp/1299/final>

American Institute of Certified Public Accountants. Trust Services Criteria. <https://www.aicpa.org/resources/article/trust-services-criteria>

Case Law

The T.J. Hooper, 60 F.2d 737. United States Court of Appeals, Second Circuit. 1932. <https://law.justia.com/cases/federal/appellate-courts/F2/60/737/1542549/>

Helling v. Carey, 83 Wn.2d 514, 519 P.2d 981. Supreme Court of Washington. 1974. <https://law.justia.com/cases/washington/supreme-court/1974/42775-1.html>

In re Heartland Payment Systems, Inc. Customer Data Security Breach Litigation, 834 F. Supp. 2d 566. United States District Court, Southern District of Texas. 2012.

In re Target Corp. Customer Data Security Breach Litigation, 66 F. Supp. 3d 1154. United States District Court, District of Minnesota. 2014.

Academic and Research Sources

Klenow, Peter J. and Kryvtsov, Oleksiy. Convenient Prices, Currency, and Nominal Rigidity. Federal Reserve Bank of Cleveland Working Paper 10-15. 2010. <https://www.clevelandfed.org/publications/working-paper/2010/wp-10-15-convenient-prices-currency-and-nominal-rigidity>

Klenow, Peter J. and Willis, Jonathan L. Price Points and Menu Costs: Evidence from Multiproduct Firms. Federal Reserve Bank of Cleveland Working Paper 11-03. 2011. <https://www.clevelandfed.org/publications/working-paper/2011/wp-11-03-price-points-and-menu-costs-evidence-from-multiproduct-firms>

Anderson, Eric T. and Simester, Duncan I. Effects of \$9 Price Endings on Retail Sales. MIT Sloan School of Management. <https://mitsloan.mit.edu/sites/default/files/2017-11/9-ending-prices.pdf>