

Trust Costs and Public Credibility in a Cashless Society

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Abstract. Cashless payments are commonly evaluated in terms of speed, convenience and technical risk, but these criteria do not explain why the public regards some financial institutions as credible and others as untrustworthy. This paper argues that cashlessness does not eliminate trust; it transfers trust from a tangible instrument and bilateral exchange to banks, payment platforms, clearing systems and regulators. To analyse that transfer, the paper defines trust costs as the verification, monitoring, privacy, redress and switching or exclusion burdens that users bear when relying on institutions they cannot fully observe. It then proposes a Public Financial Credibility Framework with six dimensions: operational reliability, integrity and accountability, transparency and data stewardship, fairness and inclusion, redress and contestability, and resilience and public backstops. The framework is applied to loyalty points, algorithmic credit and buy now pay later, financial exclusion, central bank digital currency and payment failures. Existing theory, official data and regulatory evidence provide preliminary theoretical and content validity. However, the framework is presented as a testable research programme rather than an empirically validated index. Future validation should combine survey measures, behavioural outcomes and event studies of outages, data breaches and redress decisions.

Keywords: cashless society, institutional trust, public credibility, digital payments, financial inclusion

1. Introduction

The rise of digital payments is often described as a technological transition from notes and coins to electronic records. That description is incomplete. Cash permits two parties to settle a transaction directly once the note is accepted as genuine. A digital payment instead depends on a chain of institutions: the bank or wallet provider that records the balance, the network that transmits the instruction, the infrastructure that clears and settles it, and the regulator that defines liability when something goes wrong. Cashlessness therefore does not remove trust. It reallocates trust from a visible object and a bilateral exchange to organisations, rules and technical systems that most users cannot inspect.

This shift is not, by itself, a reason to reject cashless payments. Digital systems can lower transaction costs, widen access and leave records that make fraud or error easier to investigate. Recent global data show that 79% of adults held an account in 2024, up from 51% in 2011, with mobile technology contributing to the expansion of formal finance [1]. Yet access is not equivalent

to security, understanding or confidence. A system may be efficient for the average user while imposing severe costs on people who lack connectivity, digital skills, documentation or a meaningful way to challenge an automated decision.

The central claim of this paper is conditional: society should not fear cashlessness as such, but it should be concerned when unavoidable dependence on financial institutions is not matched by reliability, transparency, inclusion and effective redress. To make that claim analytically useful, the paper develops the concept of trust costs and a Public Financial Credibility Framework. The framework explains how institutional design affects perceived vulnerability, public credibility and behaviour. It is then applied to loyalty systems, data-driven credit, financial exclusion, central bank digital currency and payment failures. The final section assesses whether the framework can support future research on the public credibility of banks, payment platforms and public monetary institutions.

2. Trust and institutional dependence

The imagined cashless society has a longer history than the smartphone. Earlier payment innovations were repeatedly presented as steps towards a future in which information would substitute for physical money [2]. What is new is not simply digitisation but the density of intermediation. A wallet may appear to transfer value instantly, while the legal and operational reality involves authentication, data processing, risk controls and later settlement. The user experiences convenience precisely because this complexity is hidden.

Trust becomes important where dependence and vulnerability coexist. Cross-disciplinary trust theory describes trust as a willingness to accept vulnerability under conditions of risk and interdependence [3]. A related model distinguishes the decision to trust from the perceived trustworthiness of the other party, organised around ability, integrity and benevolence [4]. Applied to finance, ability concerns whether an institution can execute and safeguard transactions; integrity concerns whether it follows acceptable rules; and benevolence, translated to an institutional setting, concerns whether it gives adequate weight to customers' interests rather than treating them merely as sources of data or revenue.

Public credibility is related to, but distinct from, trust. In this paper, credibility means the public judgement that a financial institution will perform its commitments competently, predictably and legitimately. Trust is the behavioural willingness to rely on that institution despite residual uncertainty. Credibility can therefore be investigated through the properties of an institution and the public's assessment of them, while trust becomes visible in conduct such as keeping funds with a provider, continuing to use a service after an outage, accepting an institution's explanation, or choosing not to switch. This distinction prevents high usage from being misread as high trust: people may continue using a dominant platform because alternatives are costly or unavailable.

3. Theoretical framework of trust costs

Institution-based trust research shows that people rely not only on a provider's character but also on structural assurances: contracts, guarantees, regulation and normal procedures that make successful exchange more likely [5]. Financial trust is likewise shaped by experience, knowledge and perceptions of institutions, and it influences participation in financial markets [6, 7]. These insights allow the original idea of a burden of trust to be stated more precisely.

Trust costs are the burdens a person must bear in order to rely on a financial system whose operation cannot be fully observed. They are not limited to fees. They include verification costs,

such as checking whether balances and conditions are accurate; monitoring costs, such as watching for fraud or unexpected expiry; privacy costs created by the collection and reuse of transaction data; redress costs involved in identifying the responsible party and obtaining correction; and switching or exclusion costs when leaving the system, using cash, or accessing an alternative is difficult. These burdens can be represented as an index rather than a literal price: trust costs equal verification, monitoring, privacy, redress and switching or exclusion burdens.

This formulation corrects two possible errors. First, cash is not costless. It can be stolen, counterfeited or inconvenient, and it provides limited recourse after loss. Second, a technically transparent ledger does not automatically create trustworthiness. A ledger may record a transaction perfectly while the rule that authorised it remains unfair, the use of data remains opaque, or the appeal process remains ineffective. Technology can reduce some verification costs, but governance determines who can set the rules, correct an error and bear a loss.

4. Public financial credibility framework

The proposed framework connects institutional safeguards to public judgement through a simple causal sequence. Six dimensions of institutional trustworthiness shape perceived vulnerability and trust costs; these perceptions shape public credibility; credibility then influences reliance, adoption, complaint behaviour, switching and withdrawal. Personal experience, digital literacy, market concentration, crisis exposure and the availability of cash or another provider moderate each link. The framework is therefore designed to analyse both ordinary use and moments of stress.

Table 1. Public financial credibility framework

Dimension	Public credibility question	Illustrative indicators
Operational reliability	Can the institution execute, settle and safeguard transactions when needed?	Uptime; error and fraud rates; settlement failures; recovery time
Integrity and accountability	Does it follow stable rules and accept responsibility for failures?	Compliance findings; fund segregation; audit results; clarity of liability
Transparency and data stewardship	Can users understand pricing, data use and automated decisions?	Disclosure quality; consent controls; explanations; breach incidence
Fairness and inclusion	Can different groups access and use the service on reasonable terms?	Access gaps; affordability; disability and offline access; disparate outcomes
Redress and contestability	Can an error or decision be challenged quickly and effectively?	Complaint resolution time; reversal rate; compensation; appeal availability
Resilience and public backstop	Can essential payments continue when one provider or channel fails?	Interoperability; portability; cash fallback; insurance; resolution planning

The dimensions are complementary rather than interchangeable. Reliability without integrity may produce an efficient but exploitative system. Transparency without redress may merely explain why the user cannot obtain a remedy. Inclusion without resilience may give people access to an account that fails when connectivity is lost. High public credibility should therefore require both competent performance and institutional arrangements that limit vulnerability. In compact form, public credibility rises as reliability, integrity, transparency, fairness, redress and resilience improve, and falls as perceived trust costs rise.

5. Applications to cashless finance

Loyalty points show how trust costs can emerge in transactions that appear minor. Consumers exchange spending, attention and personal data for balances whose value, transferability and expiry are controlled by the issuer. The consumer may experience the balance as property, but legally and practically it is often a revocable contractual claim. The relevant credibility questions are therefore not whether the database is accurate, but whether the rules are clear, changes are prospective, data use is proportionate and redemption remains possible if the programme closes. A platform lowers trust costs when it discloses expiry and valuation rules, permits data controls and provides portable records. It raises them when it can devalue points unilaterally or make departure costly through lock-in.

This example also reveals why market competition is not a complete answer. Switching is not frictionless when benefits, transaction histories and social connections are non-portable. A dominant provider can retain usage even as credibility falls. The framework therefore treats switching costs and market concentration as moderators between public judgement and observed behaviour.

5.1. Algorithmic credit and buy now pay later

Payment platforms increasingly combine transaction processing with credit scoring, personalised limits and buy now pay later products. Integration can reduce search costs and widen access, but it also merges payment data, behavioural profiling and borrowing at the point of sale. A regulatory study identified benefits such as simple repayment structures, alongside risks involving weak disclosures, data harvesting, dispute difficulties and borrower overextension [8]. In a later matched-data study, approximately 21% of consumers with a credit record used at least one pay-in-four loan in 2022, and about 63% of those borrowers originated overlapping loans at some point during the year [9]. These figures do not prove that the product causes financial distress, but they demonstrate why cross-platform visibility and transparent affordability assessment matter.

The credibility framework directs analysis away from the simplistic question of whether an algorithm predicts default accurately. Operational ability matters, but so do transparency, fairness and contestability. A score may be statistically effective while relying on opaque proxies, producing unequal outcomes or offering no practical appeal. Trust costs rise when users must infer how limits were set, monitor multiple repayments, accept broad secondary uses of their data, and pursue several entities after an error. They fall when providers give intelligible reasons, test for disparate outcomes, display aggregate obligations, and maintain a human route for correction.

5.2. Inclusion, cash fallback and central bank digital currency

Digital finance can expand inclusion, but a cashless mandate can also transform lack of connectivity or confidence into exclusion. Research on unbanked households and local access to cash shows that distance, cost, documentation, skills and distrust can remain barriers even where digital services exist [10, 11]. The relevant policy objective is therefore not maximum digitisation but credible choice. Maintaining cash acceptance, assisted channels or offline functionality can reduce the vulnerability of elderly, rural, disabled and low-income users while digital capability improves.

A retail central bank digital currency may serve as a public option and preserve access to central bank money in a digital economy. It can potentially support settlement finality and inclusion, but its credibility depends on design rather than its public label alone [12, 13]. Privacy rules, offline availability, limits on surveillance, interoperability, legal tender status and clear allocation of

liability determine whether it lowers trust costs. A central bank digital currency that is difficult to use, easily monitored or dependent on the same private intermediaries may reproduce the vulnerabilities it is intended to address.

5.3. Failure, liability and redress

The credibility of a cashless system is most visible when it fails. An outage can prevent access to necessities; fraud can pass through several firms; a platform collapse can leave prepaid balances uncertain. International principles for payment infrastructures emphasise clear governance, settlement finality, operational resilience and effective risk management because payment confidence depends on continuity as well as speed [14]. Consumer-facing rules must then translate system resilience into intelligible rights.

Liability cannot be left to lengthy standard-form agreements that distribute risk towards the least informed party. European payment law, for example, limits a payer's liability for certain unauthorised transactions, illustrating how law can convert a vague expectation of protection into a structural assurance [15]. The broader principle is not that users should never bear responsibility. It is that the system should identify the responsible institution, preserve evidence, provide a rapid appeal and allocate losses according to control over the risk. Redress is not an afterthought to trust; it is one of the mechanisms that makes reliance rational.

6. Discussion and future validation

The framework yields a more balanced conclusion than either technological optimism or blanket resistance. Cashless systems can reduce trust costs through auditable records, faster correction, lower transfer costs and broader access. They can also concentrate operational dependency, normalise surveillance and make exit difficult. The same technology can therefore increase credibility in one institutional setting and reduce it in another. The decisive variables are the rules surrounding the technology and the public's practical ability to understand, challenge and leave the system.

As a framework for discussing the public credibility of financial institutions, it has three forms of preliminary validity. First, it has theoretical coherence: operational ability and integrity draw on established trustworthiness theory; structural assurance comes from institution-based trust; and fairness and redress explain why competent performance alone may not generate legitimate reliance. Second, it has content validity: the six dimensions cover the principal vulnerabilities exposed by the cases in this paper, from outages and opaque scoring to exclusion and unclear liability. Third, it has analytical usefulness: each dimension can be connected to observable institutional indicators and to public responses. This makes the framework more than a list of desirable values.

It is not, however, an empirically validated index. Future research should test it in four stages. A survey could first measure the six dimensions, perceived vulnerability, trust costs and willingness to rely on a named bank, platform or central bank. Confirmatory factor analysis could test whether respondents distinguish the proposed dimensions, while comparisons with satisfaction and general technology trust could establish discriminant validity. Structural equation modelling could then test whether trust costs mediate the relationship between institutional safeguards and public credibility. Measurement-invariance tests across age, income, region and digital proficiency would show whether comparisons between social groups are defensible.

Second, survey responses should be linked, where possible, to behaviour: retained balances, use frequency, complaint escalation, willingness to share data, switching and withdrawals after adverse

news. Third, longitudinal or event-study designs could observe changes before and after an outage, data breach, compensation decision or regulatory reform. A credible framework should predict a sharper decline after a failure where redress is slow and a stronger recovery where responsibility is acknowledged and losses are corrected. Finally, the model should be tested across institutions. Reliability may dominate perceptions of a payment network, integrity may dominate perceptions of a bank, and privacy may dominate perceptions of a central bank digital currency. Stable core dimensions combined with context-specific weights would support generalisability without assuming that every institution earns trust in the same way.

The framework also has limits. Public perceptions may reflect misinformation, political identity or experiences outside the institution's control. Objective performance indicators can likewise conceal unequal experiences. Credibility should therefore be assessed through both public judgement and institutional evidence, not reduced to a popularity score. Nor should the framework be used to justify trust. Its purpose is diagnostic: to identify why reliance is or is not reasonable and which safeguards can reduce avoidable vulnerability.

7. Conclusion

A cashless society does not eliminate trust; it reorganises it. The public exchanges the immediate assurance of physical possession for dependence on institutions that record value, process data, allocate credit and resolve failure. That exchange can be beneficial when institutional safeguards reduce the costs of verification, privacy loss, redress and exclusion. It becomes dangerous when technical convenience conceals concentrated power and users cannot understand, challenge or exit the system.

The Public Financial Credibility Framework turns this argument into a testable research programme. By evaluating reliability, integrity, transparency, fairness, redress and resilience, it can explain how institutional design influences perceived vulnerability and public reliance. The framework is conceptually grounded and applicable to concrete cases, but its predictive validity must still be tested across populations, institutions and shocks. The proper conclusion is therefore neither fear cashlessness nor trust innovation. It is to require that institutions earn credibility by making digital dependence reliable, accountable and reversible.

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