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Account–Governance Platform Drift in Digital Financial Assets: A Reliability-Sensitive Socio-Technical Systems Analysis of Golden Apple's Russian Digital Debt Issuance

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Abstract

Regulated digital financial assets can become more than financing instruments when issued through platform account infrastructures, but public texts do not directly reveal customer behavior. This article examines Golden Apple's Russian digital financial asset issuance as a mechanism-informative socio-technical case and asks how public texts make account–governance platform drift visible before customer-behavior evidence is publicly closed. A 63-document public-source corpus was analyzed using source grading, document-level ordinal coding, three-coder reliability checks, PA_{v4} focused recoding, PA_{v5} construct-boundary recoding, sensitivity analysis, and A/B-only source-restriction robustness. The final model narrows the main mechanism to an Account–Governance Core (*AG-Core*) combining investor/customer-entry visibility, PA_{v4} account-infrastructure visibility, and investor-protection/risk-governance visibility. PA_{v5} indicates that *PA-Account* reached exploratory acceptable reliability, while *PA-Channel* and the PA_{v5} composite remain moderate and reliability-sensitive; PA_{v5} is therefore interpreted as a construct-boundary audit rather than a validated standalone scale. Financing-efficiency and consumption-right narratives are retained as supporting narrative conditions. *DR-Gap* diagnoses the public evidence boundary around the unclosed customer-behavior feedback loop. The article does not estimate conversion, retention, loyalty, repurchase, redemption, platform traffic, investor outcomes, or causal market effects.

Keywords: digital financial assets; platform drift; socio-technical systems; platform governance; text-as-data; investor protection; Russian CFA; evidence gap; reliability-sensitive coding

1. Introduction

Digital financial assets, tokenization, and distributed-ledger infrastructures are changing how financial rights are issued, registered, held, transferred, and explained to investors. Their system relevance is not limited to technical efficiency: they connect issuers, platform operators, investors, account infrastructures, disclosure rules, and governance constraints into a coupled socio-technical system [1–4]. Russian digital financial assets, commonly described in Russian sources as CFAs, are useful for this analysis because they operate through a legal and operator-registration framework rather than through a purely decentralized crypto-asset environment [5–7].

The case of Golden Apple issuing digital financial assets through Alfa-Bank's A-Token platform is mechanism-informative because it combines a retail brand, a bank-operated DFA platform, investor-entry narratives, account-path infrastructure, consumption-right language, and risk-governance boundaries [8–13]. The case is not selected as a statistically representative case. Its value lies in showing how account–governance coupling becomes publicly visible under evidence constraints, while public customer-behavior evidence remains incomplete.

The final construct structure is intentionally reliability-sensitive. *AG-Core* is the main mechanism layer and consists of *CA*, PA_{v4}, and *IR*. *FE* and *CE* are supporting narrative

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conditions. *DR-Gap* is kept outside the *AG-Core* index as a public evidence-boundary diagnostic. PA_{v5} is used as a construct-boundary audit: *PA-Account* is the more defensible account-path subdimension, *PA-Channel* is contextual infrastructure visibility, and the PA_{v5} composite is not treated as a validated standalone construct.

1.1. Contributions

First, the article proposes *AG-Core* as a mechanism-oriented explanation of account–governance platform drift in digital debt instruments. Second, it introduces *DR-Gap* as an evidence-boundary diagnostic for public texts that do not close the customer-behavior feedback loop; *DR-Gap* is not evidence that behavior is absent. Third, it demonstrates how source grading, three-coder reliability, PA_{v4} focused recoding, PA_{v5} construct-boundary auditing, and A/B-only source-restriction robustness can be combined in a public-source socio-technical systems case study without overstating behavioral or causal claims.

2. Literature Review and Theoretical Background

Tokenization research shows that digital representation can affect registration, settlement, asset accessibility, and operational design, but a digital token does not remove legal, governance, liquidity, and investor-protection constraints [1–4]. In the Russian context, the legal framework for digital financial assets and registered information-system operators makes the institutional boundary central to interpretation [5–7].

Platform research explains why the channel is not neutral. Platforms organize access, matching, accounts, rules, interfaces, and governance roles [14–17]. When a financial instrument is issued through a bank-operated platform, it may become an account-entry and investor-interface mechanism. Classic socio-technical systems research similarly warns against treating technical artifacts separately from organizational and human arrangements [18,19].

Text-as-data and content analysis provide a disciplined way to convert public documents into auditable variables when construct definitions, coding rules, reliability checks, and interpretation boundaries are explicit [20–22]. The present article therefore measures the visibility of mechanisms in public texts. It does not infer customer-level conversion, repurchase, redemption, loyalty, platform access, or traffic.

3. Theoretical Framework and Propositions

The account–governance core of platform drift refers to the socio-technical mechanism through which a digital debt instrument becomes embedded in investor outreach, account-path infrastructure, and risk-governance boundaries before customer behavioral feedback is publicly observable. The framework deliberately narrows the core mechanism to *CA*, PA_{v4}, and *IR*. *FE* and *CE* are treated only as supporting narratives, and *DR-Gap* is a boundary diagnostic.

Proposition 1. *Digital debt instruments are more likely to become publicly visible as platform-drift mechanisms when investor outreach, account-path infrastructure, and risk-governance boundaries are textually coupled.*

Proposition 2. *Financing-efficiency and consumption-right narratives may provide supporting context, but their lower reliability prevents them from carrying standalone mechanism claims.*

Proposition 3. *A high DR-Gap indicates that the customer-behavior loop remains publicly unclosed; it is not evidence that customer behavior is absent.*

Figure 1 presents the socio-technical boundary separating issuer, platform, regulatory, *AG-Core*, and *DR-Gap* layers.

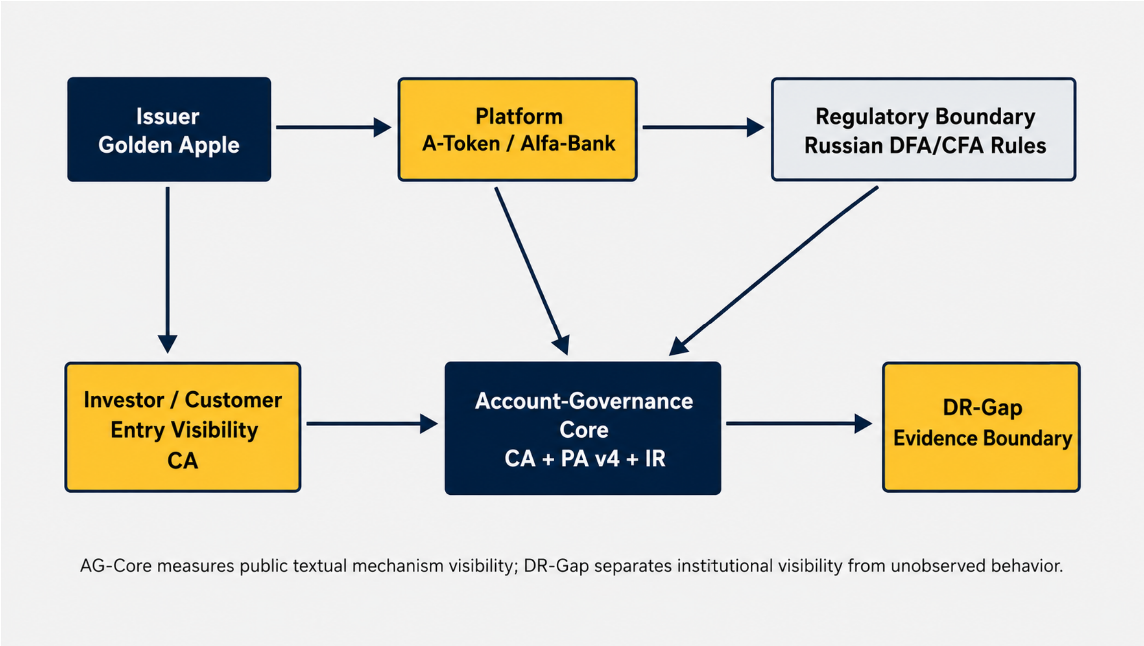

Figure 1. Socio-technical system boundary of platform drift.

AG-Core measures textual mechanism visibility. *DR-Gap* separates institutional visibility from unobserved customer behavior; it does not represent customer conversion, loyalty, repurchase, platform traffic, search popularity, or causal effects.

4. Materials and Methods

4.1. Corpus Construction, Evidence Hierarchy, and Case Selection

The study adopted a mechanism-oriented socio-technical case design. It constructed a corpus of 63 publicly verifiable documents, including platform and company releases, regulatory and legal sources, financial media reports, industry reports, international policy materials, and academic literature. The study included documents that directly referred to Golden Apple's digital financial asset issuance, Alfa-Bank/A-Token or another regulated Russian digital financial asset operator, official regulatory or legal materials relevant to digital financial assets, or scholarly debates on platform governance, tokenization, socio-technical systems, or content analysis. It excluded candidate sources from core claims when they lacked verifiable publication information, identifiable issuer or operator information, or direct relevance to the mechanism.

The study used A/B-grade sources to support core facts and case-specific mechanism evidence. The study retained C-grade sources for theoretical and contextual interpretation only. Still, it did not use them to establish core case facts or to make direct source-level claims about the Golden Apple issuance. During final source grading, the study classified C-grade sources as background and contextual materials, excluded them from the A/B-only factual corpus, and did not use them to establish direct Golden Apple case facts or case-specific account-path claims.

Table 1 reports the corpus structure and evidence hierarchy used to separate core case evidence from contextual interpretation.

Table 1. Corpus structure and evidence hierarchy.

Source type	N	A	B	C
Academic literature	23	0	0	23
Company	2	2	0	0

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Financial media	17	0	14	3
Industry report	3	0	0	3
International organization	7	7	0	0
Law/regulation	5	5	0	0
Platform/company	6	6	0	0

Note: A/B sources support core facts under the public textual-visibility boundary; C sources are used only for background interpretation; D sources are excluded from core claims. Final Table S1 grades are A = 20, B = 14, and C = 29. C-grade background/contextual sources are excluded from the A/B-only factual corpus.

4.2. Coding Protocol and Reliability-Sensitive Construct Design

The coding protocol defined the document as the unit of analysis rather than the sentence or claim. After training and calibration, three coders independently scored the 63-document corpus using a 0–2 ordinal scale. The training examples clarified the manual but did not serve as inferential evidence. The three coders generated formal scores through blind document-level coding, and the author calculated the reliability statistics after coding was complete. The author retained disagreement logs to identify construct-boundary sensitivity rather than to force artificial consensus.

Table 2 defines the coding manual and interpretation boundaries for the reliability-sensitive document-level coding.

Table 2. Coding manual and interpretation boundaries.

Measure	Layer	Score 0	Score 1	Score 2	Boundary note
CA	AG-Core	No customer/investor outreach or entry narrative	Indirect investor/customer reach, market access, or potential customer-entry language	Explicit new-customer, retail-investor, client-entry, investor-consumer interface, or acquisition narrative	Investor identity is not customer loyalty.
PA v4	AG-Core	Only company, financing, CFA, bank name, issuance size, rate, or tenor is mentioned	A-Token, online issuance, information-system operator, platform, or banking channel appears without explicit account path	Explicit account, mobile purchase, bank account, investor account, platform holding, account path, ecosystem entry, or operation chain	PA v4 is account-infrastructure visibility, not behavior.
IR	AG-Core	No investor-protection or risk-disclosure evidence	Indirect risk, regulation, liquidity, suitability, or disclosure narrative	Explicit risk disclosure, secondary-market limitation, suitability, redemption, regulation, or investor-protection mechanism	IR is a legitimacy and boundary condition.
FE	Supporting narrative	No financing-efficiency narrative	Indirect financing flexibility, speed, or cost narrative	Explicit financing-efficiency, alternative funding, issuance-speed, or cost-reduction narrative	Background condition only.

CE	Supporting narrative	No consumption-right or benefit narrative	Indirect or generic benefit/consumer linkage	Explicit discount, voucher, benefit redemption, consumer right, or purchase-related privilege	Supporting narrative only.
DR-Gap	Boundary diagnosis	DR=2: explicit public customer-behavior feedback evidence is present	DR=1: indirect customer/benefit narrative without behavior data	DR=0: no public behavioral feedback evidence	DR-Gap is an evidence-boundary diagnostic.

Note: The manual uses a strict textual-visibility rule. Platform or bank naming alone does not establish strong account-path evidence, and no dimension is interpreted as observed customer behavior.

4.3. PA_{v4} and PA_{v5} Construct-Boundary Audits

PA_{v4} tightened the account-infrastructure boundary by requiring explicit evidence of account entry, investor account, mobile app purchase, bank account, platform holding, account path, ecosystem entry, or operation chain. PA_{v5} was then conducted as a follow-up construct-boundary audit rather than a replacement for the main model. *PA-Channel* measured broad platform, channel, operator, regulated information-system, online, or mobile-channel visibility. *PA-Account* measured explicit account-path visibility, including account access, mobile-app purchase, platform holding, registry holding, or operation-chain descriptions. The PA_{v5} composite was derived from these two subdimensions, but it is not considered a validated, standalone construct.

4.4. Textual Mechanism Measures

Equations (1)–(3) define the document-level textual visibility indices used in the main analysis.

$$AG\text{-}Core_i = \frac{CA_i + PA_{v4,i} + IR_i}{3} \tag{1}$$

$$SN_i = \frac{FE_i + CE_i}{2} \tag{2}$$

$$DR\text{-}Gap_i = 2 - DR_i \tag{3}$$

where CA, PA_{v4}, IR, FE, CE, and DR are document-level ordinal scores on a 0–2 scale; SN denotes the supporting-narrative index; *DR-Gap* reverses public customer-behavior feedback evidence so that higher values indicate a larger public evidence boundary.

Two stress variants were retained only for sensitivity analysis: an IR-penalty variant treating risk-governance visibility as a diffusion constraint, and a PA-enhanced variant giving more weight to account-infrastructure visibility. Neither variant replaces the main model.

4.5. Reliability Calculation and Reproducibility

The study interpreted reliability conservatively. It calculated Krippendorff's alpha, pairwise quadratic weighted kappa, Gwet's AC2, all-coder exact agreement, mean pairwise exact agreement, and bootstrap confidence intervals. The study used Krippendorff's alpha and weighted kappa as the primary measures of reliability. It reported Gwet's AC2 for transparency but did not rely on it alone as strong evidence of reliability, because agreement coefficients can be sensitive to category prevalence and marginal imbalance. The supplementary materials provide reproducible scripts, raw scores, disagreement logs, and PA_{v5} recoding files.

For Russian-language sources, the coding team relied on source-level text and bilingual interpretation. The coding team used working translations only to support comprehension. It did not treat working translations as original excerpts unless the dataset also retained the source text or otherwise documented it in a verifiable form.

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5. Results

5.1. Reliability and Construct Boundaries

Table 3 reports the three-coder reliability statistics and the interpretation boundaries for the main and supporting dimensions.

Table 3. Three-coder reliability and reliability-sensitive interpretation.

Dimension	Role	N	Krippendorff alpha	Bootstrap 95% CI	Mean weighted kappa	Mean Gwet AC2	All-coder exact agreement	Interpretation
CA	AG-Core core	63	0.677	0.540–0.792	0.673	0.345	0.540	acceptable exploratory
PA v3	AG-Core core, original rule	63	0.524	0.317–0.681	0.524	0.043	0.524	moderate but limited
PA v4	AG-Core core, focused recoding	63	0.539	0.393–0.672	0.536	0.058	0.444	moderate but limited; strict account-infrastructure boundary
IR	AG-Core core	63	0.695	0.549–0.806	0.696	0.390	0.540	acceptable exploratory
AG-Core with PA v4 pooled cells	Main mechanism update	189	0.651	0.567–0.716	0.651	0.300	0.508	acceptable exploratory; not scale-validation grade
FE	Supporting narrative condition	63	0.348	0.196–0.493	0.360	-0.302	0.413	weak; use as background only
CE	Supporting narrative condition	63	0.369	0.081–0.595	0.371	-0.275	0.540	weak; use as background only

Note: Krippendorff's alpha and weighted kappa are interpreted conservatively. FE and CE remain supporting narratives. Gwet's AC2 is reported but not treated as standalone validation.

Table 4 reports the follow-up PA_{v5} construct-boundary recoding results.

Table 4. Follow-up PA_{v5} construct-boundary recoding reliability.

Measure	N	Krippendorff alpha	Bootstrap 95% CI	Mean weighted kappa	Mean Gwet AC2	All-coder exact agreement
PA-Channel	63	0.540	0.324–0.718	0.543	0.706	0.730
PA-Account	63	0.670	0.386–0.830	0.695	0.969	0.857
PA v5 composite	63	0.537	0.352–0.683	0.539	0.893	0.651

Note: PA-Account reached exploratory acceptable reliability. PA-Channel and the PA_{v5} composite remained moderate and reliability-sensitive. PA_{v5} is a construct-boundary audit, not a validated standalone scale.

The PA_{v5} recoding clarifies rather than removes *PA*'s construct-boundary problem. *PA-Account* reached exploratory acceptable reliability and is therefore the more defensible account-path subdimension. *PA-Channel* remained moderate and reliability-sensitive because broad platform/channel references are source-sensitive. The PA_{v5} composite also remained moderate and cannot be used as a validated standalone construct. Accordingly, the main interpretation is *PA-Account*-centered rather than *PA*-composite-centered, while PA_{v4} remains the main *AG-Core* component for comparability with the original model.

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5.2. Core Descriptive Results

Table 5 reports the descriptive statistics for *AG-Core*, supporting narrative, and *DR-Gap* measures.

Table 5. *AG-Core*, supporting narrative, and *DR-Gap* results.

Measure	Layer	N	Mean	SD	Median	IQR	Min	Max	95% CI
CA	AG-Core	63	0.587	0.754	0.000	0.000–1.000	0.000	2.000	0.397–0.777
PA v4	AG-Core	63	0.587	0.733	0.000	0.000–1.000	0.000	2.000	0.403–0.772
IR	AG-Core risk-governance boundary	63	0.873	0.871	1.000	0.000–2.000	0.000	2.000	0.654–1.092
FE	Supporting narrative	63	0.540	0.534	1.000	0.000–1.000	0.000	2.000	0.405–0.674
CE	Supporting narrative	63	0.238	0.530	0.000	0.000–0.000	0.000	2.000	0.105–0.372
DR Gap	Boundary diagnosis	63	1.659	0.474	2.000	1.500–2.000	0.000	2.000	1.539–1.778
AGCore visibility index	Main index	63	0.683	0.366	0.667	0.333–1.000	0.000	1.333	0.590–0.775
Supporting narrative index	Background index	63	0.389	0.406	0.500	0.000–0.500	0.000	1.500	0.287–0.491

Note: AG-Core is the main mechanism layer. FE and CE are supporting narratives. DR-Gap is a diagnostic of public evidence not closed. All index-level statistics are present and numeric. Interpretive labels are reported in the accompanying paragraph and supplementary tables.

The index-level statistics support the reliability-sensitive interpretation of the model. *CA* and *IR* have the strongest reliability support; PA_{v4} remains moderate and reliability-sensitive; *FE* and *CE* remain supporting narratives only; and *DR-Gap* marks the boundary of public evidence. The *AG-Core* visibility index has a mean of 0.683, an SD of 0.366, a median of 0.667, and a 95% CI of 0.590–0.775. The supporting-narrative index has a mean of 0.389, an SD of 0.406, a median of 0.500, and a 95% CI of 0.287–0.491. The high *DR-Gap* mean indicates that public documents disclose institutional and account-governance visibility before observable customer behavior closes.

Figure 2 summarizes the relationship between supporting narratives, *AG-Core*, and *DR-Gap*.

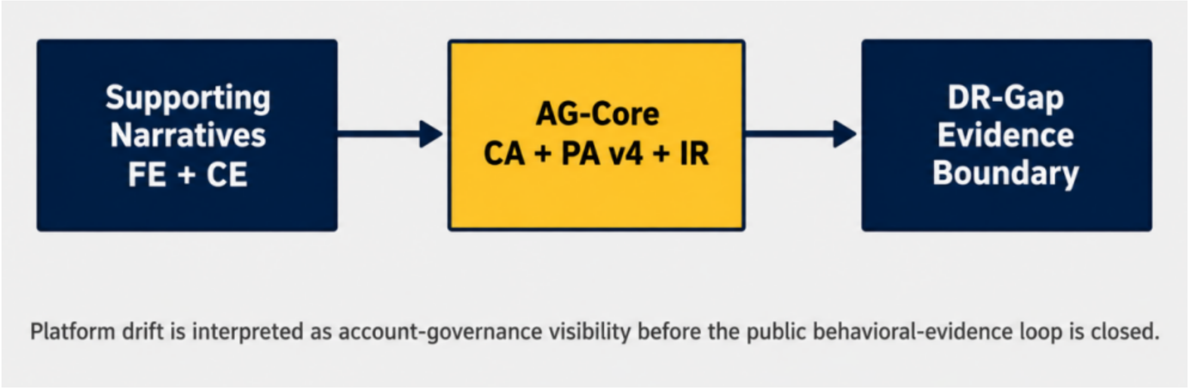

Figure 2. Account–Governance Core and *DR-Gap* model.

DR-Gap is a boundary diagnostic rather than a weak variable to be repaired. The figure does not represent customer behavior, traffic, loyalty, conversion, or causal effects.

Figure 3 reports the dimensional profile of the coded textual mechanism measures.

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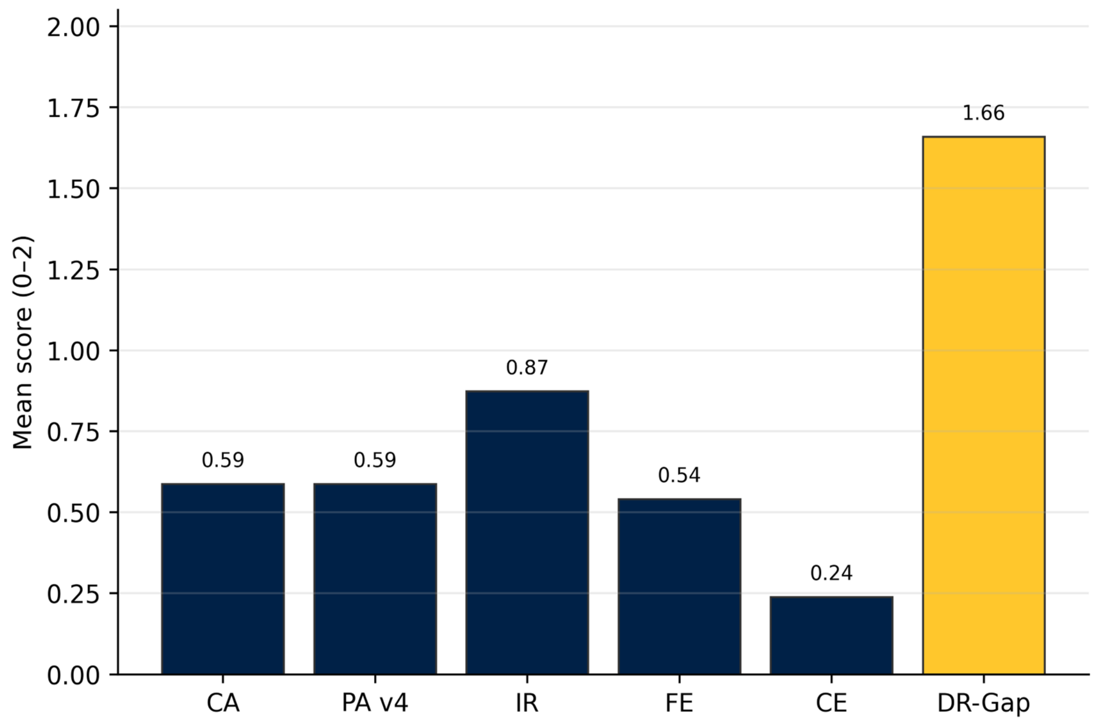

Figure 3. Dimensional profile by reliability-sensitive interpretation.

Scores are mean document-level textual-visibility values on the 0–2 scale. The higher *DR-Gap* indicates that public customer-behavior evidence remains incomplete rather than absent.

5.3. A/B-Only Source-Restriction Robustness

Table 6 reports the A/B-only source-restriction robustness check for *AG-Core* visibility.

Table 6. A/B-only source-restriction robustness of *AG-Core* visibility.

Corpus	N	CA	PA v4	IR	AGCore visibility index	FE	CE	Supporting narrative index	DR Gap
A/B final-grade factual corpus	34	0.824	0.676	1.088	0.863	0.706	0.382	0.544	1.662
Full 63-document corpus	63	0.587	0.587	0.873	0.683	0.540	0.238	0.389	1.659

Note: A/B-only robustness restricts the descriptive textual visibility calculation to final-grade A/B factual sources using Table S1 final grades. Values are means on the 0–2 scale. It does not estimate customer behavior, market impact, platform traffic, or causal effects. C-grade background/contextual sources are excluded from this restricted corpus.

The final-grade A/B restriction produced an *AG-Core* visibility mean of 0.863 in the high-grade factual corpus (N = 34), compared with 0.683 in the full 63-document corpus. This is interpreted only as stronger concentration of account–governance textual visibility within core factual sources. It is not causal validation and does not imply customer conversion, platform adoption, traffic, loyalty, repurchase, or market impact.

5.4. Sensitivity and Source-Date Context

Table 7 reports the sensitivity and source-restriction robustness specifications.

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Table 7. Sensitivity and source-restriction robustness.

Scheme	Formula	Mean	Interpretation
Main AG-Core visibility index	$\frac{CA + PA_{v4} + IR}{3}$	0.683	Main account–governance textual visibility index; IR is governance visibility.
IR-penalty stress variant	$\frac{CA + PA_{v4} + (2 - IR)}{3}$	0.767	Sensitivity analysis only; tests IR as diffusion constraint, not the main model.
PA-enhanced AG-Core variant	$\frac{CA + 1.5 \times PA_{v4} + IR}{3.5}$	0.669	Robustness stress test for stronger account-infrastructure emphasis.
Supporting-narrative index	$\frac{FE + CE}{2}$	0.389	Background narrative strength only; not part of AG-Core.
DR-Gap	$DR\text{-}Gap$	1.659	Evidence-boundary diagnostic; not part of AG-Core.

Note: Sensitivity analyses are descriptive and do not estimate causal effects. The main model uses IR as a proxy for governance visibility; the IR-penalty variant is retained only as a stress test.

Figure 4 reports the concentration of verifiable source dates around the two issuance windows. The event window describes source-date concentration only. It is not media effect, search popularity, platform traffic, or causal impact.

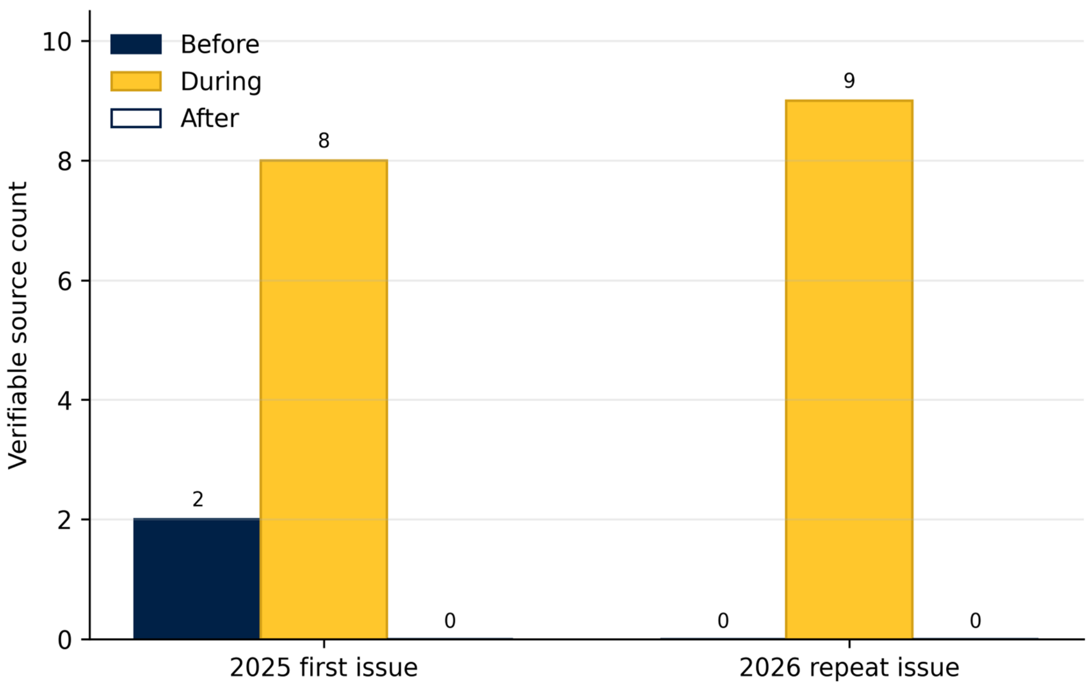

Figure 4. Event-window concentration of verifiable source dates. Counts indicate source-date concentration before, during, and after each issue window. The figure does not estimate attention, platform traffic, customer behavior, or causal market response.

6. Russian Digital Financial Asset Market and Platform-Operator Context

Table 8 summarizes the Russian digital financial asset market and platform-operator anchors used for contextual interpretation.

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Table 8. Russian digital financial asset market and platform-operator anchors.

Anchor	Evidence grade	Relevance to AG-Core	DR-Gap implication
Bank of Russia operator registry [23]	A	Anchors platform-account infrastructure as a regulated operator layer.	Registry status does not provide customer transaction, retention, or platform-access evidence.
Bank of Russia DFA exchange-operator registry [24]	A	Links IR to regulated exchange rules and market infrastructure.	Exchange infrastructure supports transaction capability, not loyalty or repurchase evidence.
Alfa-Bank / A-Token platform disclosure [8,25,26]	A	Situates Golden Apple within a bank-operated CFA platform.	Platform-scale evidence does not reveal customer-level behavior.
Sber digital assets platform disclosure [27]	A	Shows that account/platform infrastructure is broader than A-Token.	Aggregate market scale does not close the behavioral feedback loop.
MOEX digital assets infrastructure [28]	A	Provides infrastructure context beyond bank-only platforms.	Aggregate infrastructure data do not disclose issuer-customer outcomes.
Atomyze / Nornickel DFA precedent [29]	A	Shows a non-bank industrial-asset precedent for regulated DFA issuance.	Industrial tokenization evidence does not provide retail customer conversion data.
Sber bitumen-index DFA precedent [30]	A	Adds a commodity-index DFA precedent within the same regulate infrastructure context.	Commodity-linked infrastructure evidence does not provide issuer-customer behavioral evidence.
Sber fixed-income gold DFA precedent [31]	A	Shows fixed-income DFA framing beyond the focal retail issuer.	Comparable product framing does not disclose loyalty, redemption, or repurchase evidence.
Alfa-Bank yuan-denominated DFA precedent [32]	A	Shows A-Token use for alternative currency-denominated DFA issuance.	Currency-denominated issuance evidence does not close the customer-behavior loop.
Alfa-Bank X5 Group comparative CFA case [33]	A	Adds a retail-sector comparative CFA anchor for platform-mediated issuance.	Retail-sector comparability supports contextual interpretation only, not customer conversion evidence.

Note: Market and platform-operator anchors are used solely as institutional and contextual evidence. They do not provide customer-level transaction, repurchase, retention, platform-traffic, or causal-effect evidence.

Market and operator-level evidence situates the Golden Apple case within a regulated Russian digital financial asset infrastructure. The included comparative cases support theoretical transferability and contextual robustness, but only for mechanism comparison. They do not validate a causal model or disclose customer-level behavior.

7. Discussion

The central system's finding is that the digital debt instrument becomes publicly visible first through investor/customer entry narratives, account path infrastructure, and risk governance boundaries. At the same time, customer behavioral feedback remains publicly unclosed. This interpretation is more defensible than any claim about loyalty, redemption, conversion, or platform adoption, because the present evidence does not estimate those outcomes.

AG-Core is stronger than a broader platform-drift index because it focuses on *CA*, PA_{v4}, and *IR*. PA_{v4} remains theoretically central but reliability-sensitive. PA_{v5} strengthens the boundary argument by showing that explicit account-path evidence is more consistently codable than broad platform-channel language. *FE* and *CE* remain useful only as supporting narratives. The key systems claim is therefore modest but defensible: public texts make account–governance coupling visible before customer-behavior evidence is publicly closed.

Investor-protection and risk-disclosure narratives should not be treated only as negative information. They are simultaneously legitimacy devices and diffusion constraints: they help define the institutional conditions under which regulated platform finance is publicly framed while marking the boundaries of retail investor protection, secondary-market liquidity, suitability, and disclosure. This dual role explains why the main model treats *IR* as governance visibility and why the *IR*-penalty variant is retained only as a sensitivity analysis.

8. Limitations and Future Research

This study is deliberately bounded. It is a single-case, mechanism-oriented analysis, so its contribution is theoretical transferability rather than statistical generalization. The corpus consists of public sources, which allows auditability but excludes non-public customer-level transaction data, investor-account records, platform-access logs, benefit-redemption records, and issuer- or operator-side internal data. PA_{v4} remains moderate and unreliable. PA_{v5} improves construct-boundary clarity because *PA-Account* reached exploratory acceptable reliability, but *PA-Channel* and the PA_{v5} composite remained moderate and reliability-sensitive. Future research should pre-register *PA-Channel* and *PA-Account* separately and may model *PA-Account* as the primary account-path component while treating *PA-Channel* as contextual infrastructure visibility.

Source-level archive materials are handled conservatively. Rows without uploaded screenshots, PDFs, or archived webpages are flagged in Tables S1, S8, and S12. They are not used for direct quotations or unique core facts unless the original excerpt and verification status are closed. Future versions should attach archived screenshots or PDFs for all A/B sources where journal policy and copyright constraints permit.

Future causal testing would require comparable-firm panel data, operator- or issuer-side data access, verified investor account records, platform access logs, benefit redemption records, and customer-level transaction histories. Such data would be required to examine conversion, repurchase, redemption, loyalty, traffic, investor outcomes, risk reduction, or causal market effects. The present article does not estimate those outcomes; it defines the public evidence boundary that future studies would need to cross.

9. Conclusions

This article proposes account–governance platform drift as a socio-technical mechanism through which platform-issued digital debt instruments may become publicly visible as account-path and governance infrastructures. The final structure narrows the main mechanism to *AG-Core*, treats *FE* and *CE* as supporting narrative conditions, and uses *DR-Gap* to diagnose the unclosed public customer-behavior evidence loop. PA_{v4} improves account-infrastructure boundary discipline but remains reliability-sensitive. PA_{v5} confirms that *PA-Account* is the more defensible account-path subdimension, while *PA-Channel* and the PA_{v5} composite remain moderate and reliability-sensitive.

The article does not estimate customer conversion, retention, loyalty, repurchase, redemption behavior, platform traffic, search popularity, investor outcomes, actual risk reduction, or causal market effects. Market-level and platform-operator evidence strengthens the case's institutional context, but it does not transform the study into a customer-behavior or causal-effect analysis. Comparative digital financial asset cases strengthen only contextual robustness. The main contribution is a reliability-sensitive, evidence-bounded text-as-data framework for identifying publicly visible account–governance coupling in platform-based digital finance.

Supplementary Materials: The following supporting information can be downloaded at the website of this paper posted on Preprints.org, Table S1. Final public-source corpus, source-level evidence status, and evidence grading; Table S2. Full *AG-Core*/*DR-Gap* coding manual; Table S3. Three-coder raw scores; Table S4. Reliability calculations; Table S5. Pairwise weighted kappa, Gwet's AC2, exact agreement, and bootstrap confidence intervals; Table S6. Disagreement log; Table S7. Comparative Russian digital financial asset cases; Table S8. Final URL/DOI/reference audit; Table S9. PA_{v5} three-coder recoding raw scores; Table S10. PA_{v5} reliability calculations; Table S11. PA_{v5} disagreement log; Table S12. Source evidence archive index; Data S1.

Final public-source corpus; Data S2. PA_{v5} recoding dataset; Code S1. Reproducible reliability calculation script; Code S2. PA_{v5} reliability calculation script; README files; source-closure audit table; A/B-only recalculation log; reference-renumbering log; reliability-statistics consistency check; and Figure S1–S4 source figure files. Rows lacking exact source-level quotations, screenshots, PDFs, or archive records are marked as unresolved, downgraded, or excluded from direct core evidence rather than inferred or reconstructed.

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References

1. Aldasoro, I.; Doerr, S.; Gambacorta, L.; Garratt, R.; Wilkens, P. The Tokenisation Continuum. BIS Bulletin No. 72, 2023. Available online: https://www.bis.org/publ/bisbull72.htm (accessed on 10 June 2026).
2. Financial Stability Board. The Financial Stability Implications of Tokenisation. 2024. Available online: https://www.fsb.org/2024/10/the-financial-stability-implications-of-tokenisation/ (accessed on 10 June 2026).
3. International Organization of Securities Commissions. Tokenization of Financial Assets. 2025. Available online: https://www.iosco.org/library/pubdocs/pdf/IOSCOPD809.pdf (accessed on 10 June 2026).
4. OECD. Tokenisation of Assets and Distributed Ledger Technologies in Financial Markets. OECD Publishing: Paris, France, 2025. Available online: https://www.oecd.org/en/publications/tokenisation-of-assets-and-distributed-ledger-technologies-in-financial-markets_40e7f217-en.html (accessed on 10 June 2026).
5. Federal Law No. 259-FZ. On Digital Financial Assets, Digital Currency and Amendments to Selected Legislative Acts. 2020. Available online: https://cis-legislation.com/document.fwx?rgn=126432 (accessed on 10 June 2026).
6. Bank of Russia. Digital Financial Assets and Their Operators. Available online: https://www.cbr.ru/eng/finm_infrastructure/digital_oper/ (accessed on 10 June 2026).
7. Bank of Russia. Digital Financial Assets: First Company Put on Register. 2022. Available online: https://www.cbr.ru/eng/press/event/?id=12660 (accessed on 10 June 2026).

8. Alfa-Bank. Платформа цифровых финансовых активов А-Токен. Available online: https://alfabank.ru/corporate/a-token/ (accessed on 10 June 2026).
9. Alfa-Bank. А-Токен расширяет рынок: дебютный выпуск ЦФА Золотого яблока. Available online: https://alfabank.ru/news/t/release/a-token-rasshiryaet-rinok-debyutnii-vipusk-tsfa-zolotogo-yabloka-na-1-mlrd-rublei/ (accessed on 10 June 2026).
10. Alfa-Bank. Золотое Яблоко объявляет о повторном размещении ЦФА на платформе А-Токен. Available online: https://alfabank.ru/news/t/release/zolotoe-yabloko-obyavlyaet-o-povtornom-razmeshchenii-tsfa-na-platforme-a-token--v-15-raza-bolshe-pervogo/ (accessed on 10 June 2026).
11. Gold Apple. Что такое ЦФА Золотого яблока. Available online: https://goldapple.ru/flacon/article/ne-ingredient-kosmetiki-no-imeet-k-nam-otnoshenie-chto-takoe-tsfa-zolotogo-yabloka (accessed on 10 June 2026).
12. Vedomosti. Золотое яблоко выпустит первые ЦФА. Available online: https://www.vedomosti.ru/investments/articles/2025/10/06/1144430-zolotoe-yabloko-vipuskaet-pervie-tsfa (accessed on 10 June 2026).
13. Interfax. Золотое яблоко размещает ЦФА на 1 млрд руб. под 17,5%. Available online: https://www.interfax.ru/russia/1050973 (accessed on 10 June 2026).
14. Rochet, J.-C.; Tirole, J. Platform Competition in Two-Sided Markets. J. Eur. Econ. Assoc. 2003, 1, 990–1029. https://doi.org/10.1162/154247603322493212
15. Parker, G.G.; Van Alstyne, M.W. Two-Sided Network Effects: A Theory of Information Product Design. Manag. Sci. 2005, 51, 1494–1504. https://doi.org/10.1287/mnsc.1050.0400
16. Gawer, A. Bridging Differing Perspectives on Technological Platforms: Toward an Integrative Framework. Res. Policy 2014, 43, 1239–1249. https://doi.org/10.1016/j.respol.2014.03.006
17. Jacobides, M.G.; Cennamo, C.; Gawer, A. Towards a Theory of Ecosystems. Strateg. Manag. J. 2018, 39, 2255–2276. https://doi.org/10.1002/smj.2904
18. Trist, E.L.; Bamforth, K.W. Some Social and Psychological Consequences of the Longwall Method of Coal-Getting. Hum. Relat. 1951, 4, 3–38. https://doi.org/10.1177/001872675100400101
19. Bostrom, R.P.; Heinen, J.S. MIS Problems and Failures: A Socio-Technical Perspective. MIS Q. 1977, 1, 17–32. https://doi.org/10.2307/248710
20. Gentzkow, M.; Kelly, B.; Taddy, M. Text as Data. J. Econ. Lit. 2019, 57, 535–574. https://doi.org/10.1257/jel.20181020
21. Krippendorff, K. Content Analysis: An Introduction to Its Methodology, 4th ed.; SAGE: Thousand Oaks, *CA*, USA, 2018.
22. Cohen, J. A Coefficient of Agreement for Nominal Scales. Educ. Psychol. Meas. 1960, 20, 37–46. https://doi.org/10.1177/001316446002000104
23. Bank of Russia. Operators of Information Systems. Available online: https://www.cbr.ru/admissionfinmarket/navigator/ois/ (accessed on 10 June 2026).
24. Bank of Russia. Operators of Digital Financial Asset Exchange. Available online: https://www.cbr.ru/admissionfinmarket/navigator/ootsfa/ (accessed on 10 June 2026).
25. Alfa-Bank. Платформа цифровых финансовых активов А-Токен. Available online: https://alfabank.ru/corporate/cfa/ (accessed on 10 June 2026).
26. Alfa-Bank. А-Токен—лучшая платформа цифровых финансовых активов в стране по итогам 2 лет. Available online: https://alfabank.ru/news/t/release/a-token--luchshaya-platforma-tsifrovikh-finansovikh-aktivov-v-strane-po-itogam-2-let/ (accessed on 10 June 2026).
27. Sber. В 2025 году на платформе цифровых активов Сбера выпущено ЦФА объёмом свыше 400 млрд рублей. Available online: https://www.sberbank.ru/ru/sberpress/all/article?blockID=1303&lang=ru&newsID=4edbe31c-cd29-4d2f-9d28-27e88ad834d9&regionID=77&type=NEWS (accessed on 10 June 2026).
28. Moscow Exchange. Цифровые финансовые активы. Available online: https://www.moex.com/ru/digital-assets (accessed on 10 June 2026).

 doi:10.20944/preprints202606.1031.v1

29. Nornickel. Nornickel Places Debut Issue of Digital Financial Assets on Atomyze Blockchain Platform. Available online: https://nornickel.com/news-and-media/press-releases-and-news/nornickel-places-debut-issue-of-digital-financial-assets-on-atomyze-blockchain-platform/ (accessed on 10 June 2026).
30. Sber. Сбер первым вывел на рынок цифровой финансовый актив на индекс битума. Available online: https://www.sberbank.ru/ru/sberpress/all/article?blockID=1303&lang=ru&newsID=804d2884-ebfd-4635-95e7-248d09eb400c&regionID=77&type=NEWS (accessed on 10 June 2026).
31. Sber. Сбер запускает ЦФА на золото с фиксированным доходом. Available online: https://www.sberbank.ru/ru/sberpress/all/article?blockID=1303&lang=ru&newsID=33453f3f-6117-4181-9b03-ec08cb1dc0d5&regionID=31&type=NEWS (accessed on 10 June 2026).
32. Alfa-Bank. Альфа-Банк впервые выпустил ЦФА в юанях. Available online: https://alfabank.ru/news/t/release/alfa-bank-vpervie-vipustil-tsfa-v-yuanyakh/ (accessed on 10 June 2026).
33. Alfa-Bank. ЦФА от X5 Group. Доходность 17,1% годовых. Available online: https://alfabank.ru/alfa-investor/t/tsfa-ot-x5-group-dokhodnost-171-godovikh/ (accessed on 10 June 2026).
34. Meng, W. Account–Governance Platform Drift in Digital Financial Assets: A Reliability-Sensitive Socio-Technical Systems Analysis of Golden Apple's Russian Digital Debt Issuance Dataset; Harvard Dataverse, V1, 2026. https://doi.org/10.7910/DVN/OVAM3M.