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INSTITUTIONAL PRECONDITIONS FOR ORGANIZED REPO IN EASTERN EUROPEAN ECONOMIES

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Abstract. *The article investigates the institutional conditions under which organized repo develops in Eastern European economies, where the classic stand-alone tri-party repo model is largely absent. The object of the study is the institutional setting in which secured short-term funding moves from fragmented arrangements to an organized market segment. Legal recognition of repo alone does not ensure the emergence of a stable market segment; the outcome depends on how legal rules, post-trade infrastructure, and central-bank involvement are combined. The article compares six country cases — Ukraine, Poland, Czechia, Turkey, Hungary, and Romania — using legal acts, central bank materials, post-trade infrastructure sources, and descriptive World Bank indicators. The method is a structured comparative institutional analysis, with Ukraine, Poland, Czechia, and Turkey as the main sample. The paper also examines Hungary and Romania to see whether the same trends hold outside the main group. The comparison shows that organized repo in the sample usually develops through institutional substitutes rather than through a pure tri-party-agent model or legislation. These routes include integrated depository-counterparty arrangements, exchange-linked infrastructures, depository-centered structures, and systems organized around central-bank operations. Legal readiness becomes operational only when it is paired with a workable post-trade infrastructure. The article, therefore, compares functional routes to repo organization in smaller markets rather than measuring proximity to a single benchmark form. The practical implication is that repo-market development in emerging economies should be approached as a package of law, infrastructure, and operational design rather than as a legal reform issue alone.*
Keywords: *organized repo, tri-party repo, repo operations, central counterparty, central securities depository, post-trade infrastructure, secured funding, Eastern European economies, central bank operations*

ІНСТИТУЦІЙНІ ПЕРЕДУМОВИ ОРГАНІЗОВАНОГО РЕПО В СХІДНОЄВРОПЕЙСЬКИХ ЕКОНОМІКАХ

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Анотація. *У статті обґрунтовано, що в східноєвропейських економіках організоване репо формується через поєднання інституційних функцій, а не через пряме відтворення класичної моделі тристороннього агента. Об'єктом дослідження є інституційні умови, за яких ринок забезпеченого короткострокового фінансування переходить від фрагментарних або вузько функціональних механізмів до операційно оформленого сегмента. Актуальність теми зумовлена тим, що для менших ринків правове визнання репо саме по собі не гарантує появи стійкої ринкової інфраструктури; вирішальним є те, як поєднуються правові норми, післяторговельні механізми та роль центрального банку. Інформаційну базу становлять нормативно-правові акти, матеріали центральних банків, центральних депозитаріїв цінних паперів, центральних контрагентів, біржової інфраструктури та описові макрофінансові показники Світового банку. Методологічну основу становить структурований порівняльний інституційний аналіз шести країн: України, Польщі, Чехії, Туреччини, Угорщини та Румунії. Україна, Польща, Чехія і Туреччина формують основну вибірку, тоді як Угорщина і Румунія залучені як додаткові випадки для перевірки того, чи поширюється виявлена закономірність за межі чотирьох первинних спостережень. Встановлено, що організоване репо в досліджуваних країнах зазвичай розвивається не через окрему класичну модель тристороннього репо, а через інституційні замінники: інтегровані поєднання центрального депозитарію та центрального контрагента, біржово-орієнтовану інфраструктуру, депозитарно-орієнтовані моделі або системи, зосереджені навколо операцій центрального банку. Показано, що правова готовність набуває операційного значення лише тоді, коли поєднується з працездатною після торговельною інфраструктурою. Наукова новизна полягає у зміщенні аналітичного фокусу з наявності класичної моделі тристороннього репо на інституційні комбінації, що забезпечують виконання її ключових операційних функцій на менших ринках. Практичне значення полягає в тому, що отримані результати можуть бути застосовані для подальшого розвитку ринку репо в Україні та інших економіках, що формуються.*
Ключові слова: *організоване репо, триснонне репо, репо-операції, центральний контрагент, центральний депозитарій цінних паперів, післяторговельна інфраструктура, операції центрального банку*

JEL Classification: G100; G150; G180; E580

Formulation of the problem. Repo markets connect money-market funding, government securities, collateral management, and post-trade infrastructure. In advanced markets, the distinction between bilateral repo, tri-party repo, and centrally cleared repo is well developed [1–3]. In smaller

emerging economies, the same distinction is less straightforward because organized repo depends on whether legal rules, settlement arrangements, collateral management, and counterparty risk controls are combined in a workable institutional form.

This paper starts from a simple claim: organized repo in Eastern European economies is shaped by institutional function bundles rather than by the replication of the classic tri-party-agent template. A market may have a legal basis for title transfer and close-out netting, but still lack the operational architecture needed for routine secured funding. Conversely, a market may organize repo through exchange infrastructure or through a central-bank-centered framework without ever developing a stand-alone tri-party-agent service [2, 4, 5].

The comparison of Ukraine, Poland, Czechia, Turkey, Hungary, and Romania shows why this matters. Poland and Ukraine provide cases in which organized repo is linked to identifiable post-trade infrastructure [6, 7]. Czechia and Turkey show that repo can be institutionally centered on the central bank or on exchange-related infrastructure without reproducing the benchmark tri-party model [8–11]. Hungary and Romania show, in different ways, that legal preparedness and operational infrastructure should not be treated as the same thing [12–14].

Analysis of recent research and publications. The relevant literature falls into three linked areas of study.

The first area defines the benchmark market forms. Recent work on repo intermediation and central clearing explains how collateral allocation, settlement timing, and counterparty structure shape secured funding [1–3]. This literature clarifies the classic tri-party-agent model before the analysis turns to countries where that model is weak, partial, or absent.

The second area concerns institutional prerequisites for secured funding. Work on market organization, collateralized funding, and clearing design shows that repo depth depends not only on collateral quality, but also on legal certainty, haircut formation, access to clearing, and the operational design of post-trade services [2, 5, 15]. In the paper, that point matters because smaller markets often rely on combinations of depository, clearing, exchange, and central bank functions rather than on a stand-alone tri-party provider.

The third area concerns stress episodes and the role of the central bank. Recent discussion of market dysfunction suggests that central banks may shift from routine rate signaling to direct support for the functioning of collateralized markets when market intermediation becomes impaired [4]. Market plumbing and CCP statistics add a complementary institutional perspective by showing how central clearing capacity and post-trade organization shape the environment where secured funding operates [16]. It matters because central-bank-centered repo use may either support market formation or stand in for broader private-market depth.

Ukrainian scholarly work on collateral management and market modernization provides a useful local context, especially for interpreting Ukraine's reform path [17]. It, however, does not answer the cross-country question addressed here.

Existing research explains organized repo and central clearing in large markets. However, it gives less attention to how organized repo emerges in smaller Eastern European markets where no stand-alone tri-party agent exists. This paper addresses that gap through a structured comparison of six institutional paths.

Separation of previously unresolved parts of the overall problem. The unresolved issue is how organized repo emerges in smaller Eastern European markets where the tri-party-agent model is not the dominant institutional path.

The paper advances four propositions.

1. Legal recognition is a necessary but insufficient condition for the development of organized repo.
2. Post-trade institutions determine whether legal readiness becomes an operational market segment.
3. In smaller Eastern European markets, institutional substitutes often perform the functions associated with classic tri-party repo.
4. Central-bank-centered repo use may coexist with weak or absent stand-alone tri-party services.

These propositions are evaluated through structured comparison rather than through causal estimation. The paper uses country-level evidence to show how legal, post-trade, and central bank-related institutions combine in practice.

Purpose of the study. The paper examines which combinations of legal, post-trade, and central-bank-related institutions are associated with the emergence of organized repo segments in selected Eastern European economies.

To answer that question, the article addresses four tasks:

1. To compare the legal anchors for repo, collateral, and netting across the selected countries;
2. To classify the dominant post-trade path visible in each country as central-counterparty-mediated, central-bank-centered, depository-centered, exchange-linked, or hybrid;
3. To compare the timing of legal and operational milestones where the evidence supports a dated chronology;
4. To interpret these country paths against a benchmark-only tri-party case, Luxembourg / Clearstream.

Basic material. The paper uses structured comparative institutional analysis of six country cases: Ukraine, Poland, Czechia, Turkey, Hungary, and Romania. Ukraine, Poland, Czechia, and Turkey form the main analytical sample because each provides a distinct combination of law, infrastructure, and repo practice. Hungary and Romania are secondary cases included to test whether the main pattern extends beyond the four primary cases. Clearstream is kept outside the sample as a benchmark because its purpose is conceptual: it clearly identifies the classic tri-party-agent model, but it is not part of the Eastern European comparison.

The evidence base has three components. First, the paper uses current official materials to identify legal anchors and post-trade arrangements within the sample [9, 13, 18–21]. Second, it uses operational materials for organized repo or closely related clearing services [6–8, 10, 11, 14]. Third, it uses descriptive context statistics by the World Bank to situate the cases by market size, income level, banking depth, and capital-market scale [22].

The study's coding records one legal anchor and, where available, one dated operational milestone for each country. This keeps the comparison at the minimum institutional level needed to point out how organized repo became workable. The four paths discussed later are treated as dominant routes rather than as exhaustive or mutually exclusive categories. Central-bank-centered cases are included only where official sources show that repo instruments play a central role in organizing collateralized funding.

The coding follows two restrictive rules. A legal anchor is recorded only where the source identifies a rule set that makes collateralized transactions, netting, or market intermediation legally operational. An operational milestone is considered only when an official source dates a specific repo or clearing service without inference. This keeps the comparison conservative and limits milestones to directly evidenced launches, such as KDPW_CCP repo clearing and the Ukrainian risk-controlled repo service [6, 7].

Table 1

Post-trade model across the six-country sample

Country	Post-trade model	Operational milestone	Source basis
Ukraine	Settlement Center repo-with-risk-control path within the National Bank of Ukraine market infrastructure	2021 — repo with risk control launch	[7]
Poland	KDPW_CCP-cleared organized repo path	2022 — Treasury BondSpot Poland repo clearing launch	[6]
Czechia	Central-bank repo case; no domestic repo central-counterparty milestone identified in the source base	No dated operational milestone identified	[8]
Turkey	Exchange-linked repo ecosystem centered on Borsa Istanbul and MKK	2014 — broader MKK-linked operating milestone documented in the source base	[9–11, 23]
Hungary	KELER and KELER CCP infrastructure path without a repo-specific launch year in the source base	No repo-specific launch year identified	[12, 20]
Romania	Legal-depository setting with an incomplete CCP leg in the comparison	No verified operating CCP milestone identified	[13, 14]

Source: created by the author

Table 1 shows that the six-country sample does not converge on a single institutional design for organized repo. Poland and Ukraine are the clearest cases with dated post-trade service endpoints, Czechia is better described as a central-bank-centered repo case, Turkey occupies an exchange-linked position built around Borsa Istanbul and MKK, and Hungary and Romania remain boundary cases in which counterparty capacity or legal setting exists without a clearly completed repo channel [12–14].

Table 2

Legal anchors across the six-country sample

Country	Legal anchor year	Legal anchor	Source basis
Ukraine	2021	Derivatives and netting reform fully effective	[21]
Poland	2004	Act on Certain Forms of Financial Collateral	[18]
Czechia	2004	Act No. 256/2004 Coll. and netting line	[19]
Turkey	2012	Capital-markets legal framework organized around Law No. 6362	[9]
Hungary	2004	Official legal-translation portal for the financial-collateral implementation line used in the coding	[20]
Romania	2004	Government Ordinance No. 9/2004 on financial collateral arrangements	[13]

Source: created by the author

Table 2 shows that legal anchoring is earlier and more uniform than operational market development. Poland, Czechia, Hungary, and Romania all have a 2004 legal anchor, yet their organized repo paths differ sharply. Ukraine stands apart as the latest joint-reform case, while Turkey takes an intermediate position with a 2012 legal anchor and a documented 2014 operating milestone. The comparison, therefore, treats legal anchoring as an enabling condition rather than a sufficient cause [13, 18–21, 24].

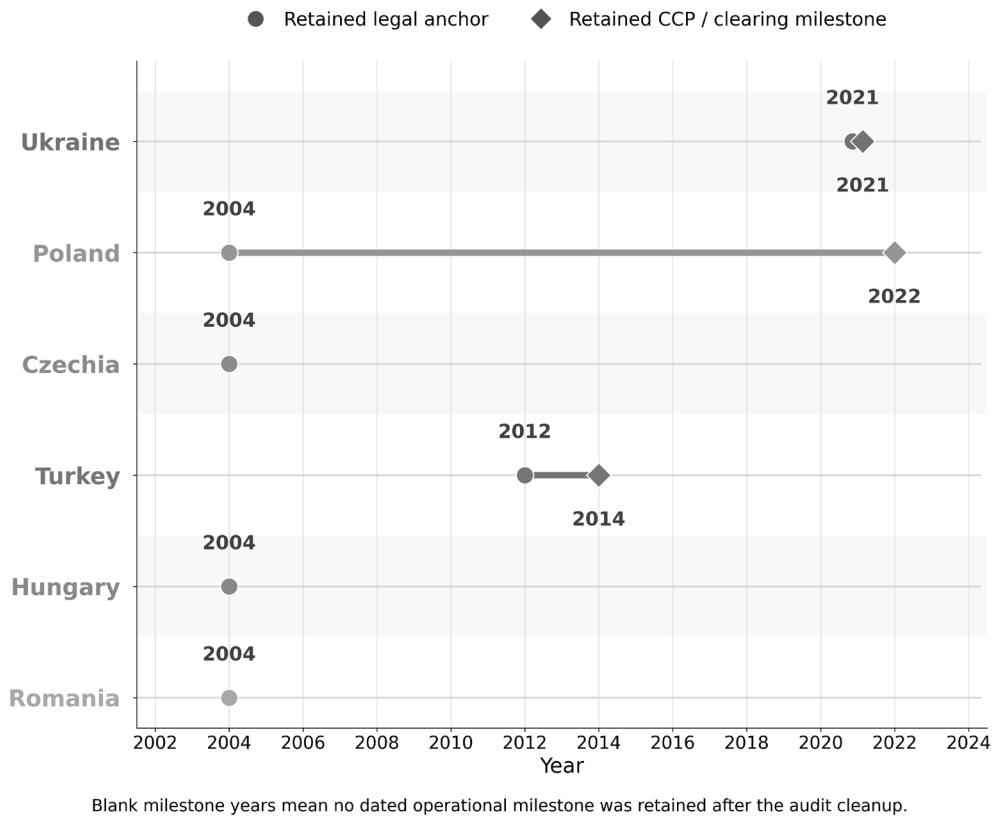


Figure 1. Timing of legal and operational milestones in organized repo development across the six-country sample.

Source: compiled by the author based on Tables 1 and 2.

Figure 1 highlights the uneven timing between legal recognition and operational launch: Poland shows a long lag, Ukraine a compressed 2021 sequence, Turkey an intermediate pattern, and Czechia, Hungary, and Romania lack a dated operational endpoint in the present comparison.

Table 3

Descriptive macro-financial context, 2024

Country	Gross domestic product, current USD bn	Gross domestic product per capita, current USD	Private bank credit, % of gross domestic product	Listed market capitalization, % of gross domestic product
Ukraine	190.7	5,389	13.4	—
Poland	917.8	25,104	33.6	21.5
Czechia	347.0	31,823	48.0	10.0
Turkey	1,359.1	15,893	36.0	27.9
Hungary	222.7	23,292	32.1	18.7
Romania	382.6	20,080	22.7	12.4

Source: World Bank comparison series compiled from the World Bank Data API [22].

Table 3 situates the institutional comparison within a broader macro-financial context. Poland and Turkey are the largest economies in the sample, Czechia leads by GDP per capita and private-credit depth, and Ukraine combines the weakest depth indicators with a compressed reform sequence and a dated service launch. These contrasts suggest that market size and financial depth condition the environment in which organized repo develops, but do not by themselves determine the institutional route [22].

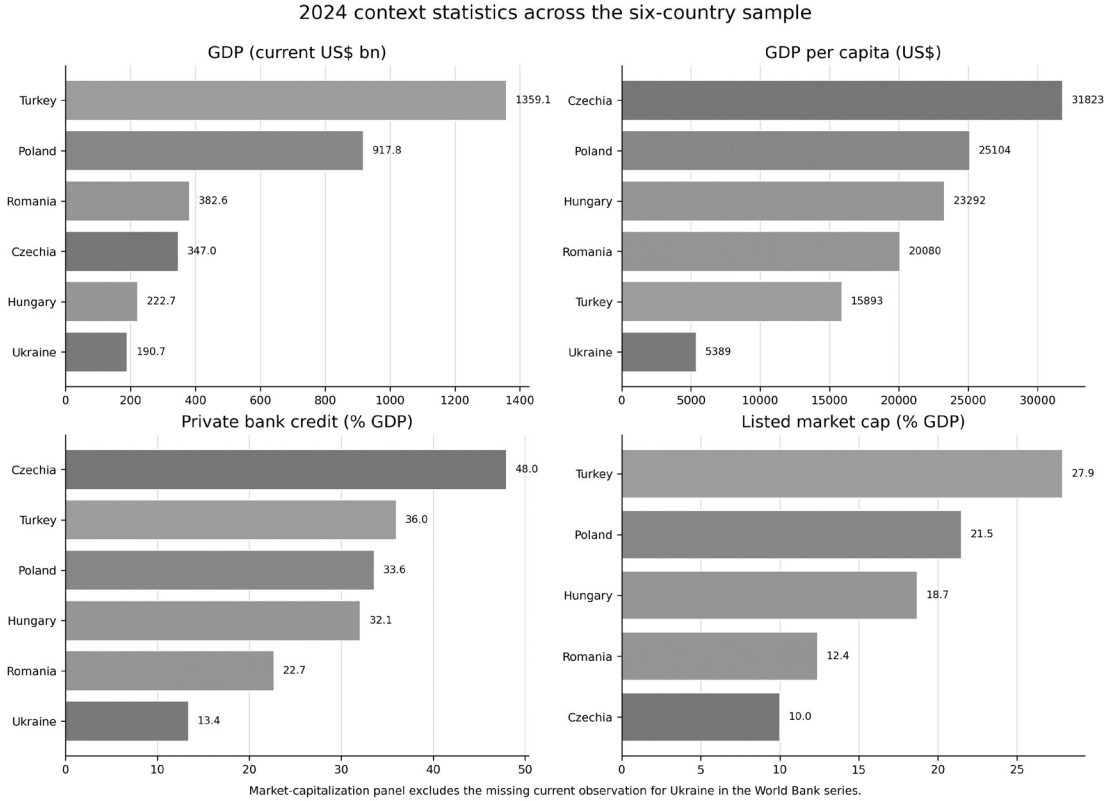


Figure 2. Descriptive macro-financial context across the six-country sample, 2024.
Source: compiled by the author based on the World Bank Data API [22].

Figure 2 visually summarizes the same dispersion and underscores that larger economies or highly developed banking systems may not all take the same route toward structured repo markets.

The comparison yields four main results.

First, an organized repo in the sample rarely emerges through a pure stand-alone tri-party-agent model. The dominant paths are instead central-counterparty-mediated, exchange-linked, legal-depository, or central-bank-centered [6–8, 11, 12].

Second, legal requirements are established sooner and more consistently than practical operational goals. Four of the six cases share a 2004 legal anchor, yet their operational repo paths differ sharply [13, 18–20]. The legal baseline matters, but it does not, by itself, produce a stable, organized segment.

Third, post-trade infrastructure determines whether legal readiness becomes a visible, organized market segment. Poland's 2022 clearing launch and Ukraine's 2021 repo-with-risk-control launch are the clearest examples [6, 7]. Romania illustrates the opposite configuration: a legal basis is present, but the operational clearing leg remains incomplete in the current comparison [14].

Fourth, central-bank-centered repo use can coexist with weak or absent stand-alone tri-party services. This pattern is most evident in Turkey and Czechia [8, 10, 11]. This does not make central-bank operations identical to market turnover. It does show that repo practice can be institutionally organized around the central bank without reproducing the benchmark tri-party form.

The country narratives sharpen the comparison without changing its logic. Poland provides the clearest dated clearing endpoint, whereas Czechia represents the central-bank-centered route: both have early legal anchors, but only Poland has a dated repo-clearing milestone [6, 8, 18, 19]. Turkey combines market scale with an exchange-linked ecosystem centered on Borsa Istanbul and MKK, while Ukraine is the latest case of synchronized reform, with legal and operational changes concentrated in 2021 [7, 9–11, 21, 23]. Hungary and Romania remain boundary cases, showing either mature counterparty capacity without a repo-specific launch date or a legal framework involving a CCP component that remains non-functional within this evidence set [12–14].

Clearstream remains outside the sample as a benchmark-only case. Its function is analytical rather than comparative: it clarifies the classic tri-party form, while the central-bank-centered and the exchange-linked cases in this study are treated as institutional substitutes rather than literal replicas of that benchmark [8–11, 25].

Overall, the cases indicate that organized repo becomes durable when legal certainty is matched by an institution capable of performing the operational functions typically associated with tri-party infrastructure.

Three institutional prerequisites stand out.

- Legal usability. A legal basis for collateral and netting is necessary, but it does not by itself generate an organized repo segment. Poland and Romania show opposite outcomes built on the same basis: legal readiness without an operational mechanism produces different market outcomes [13, 14, 18].
- Post-trade capacity. A market needs an institution or institutional combination that can lower operational frictions. In the study, this role is most often performed by a clearing house, a settlement center with counterparty functionality, or an exchange-linked architecture [6, 7, 10, 11].
- A workable relation to the central bank. Repo usage centered on the central bank can facilitate market development, yet it risks functioning as an institutional proxy rather than a bridge to private-sector expansion [4, 8, 10].

The functional application of the law requires a more restrictive definition than the simple existence of a statute: market participants must be able to rely on collateral transfer, close-out, and enforcement rules without treating each transaction as a special legal case. Post-trade capacity is the main factor that separates the cases in this group, because organized repo requires a practical channel for allocating collateral, coordinating settlement, and managing counterparty exposure in a repeatable way [6, 7]. A workable relation to the central bank matters for the same reason. Czechia shows a case in which the central bank anchors the operating framework directly, whereas Turkey shows a broader, exchange-linked, post-trade setting in which central-bank interaction remains important but is not reducible to a neutral tri-party service [8–11].

Collectively, these conditions demonstrate that the key metric is not just the legal status of a repo operation, but its development into a functional, organized market. The comparison, therefore, focuses on which institutional combinations perform the functions needed for organized repo to work in each market, rather than on proximity to a textbook tri-party model.

These prerequisites support four dominant routes in the sample:

- Integrated clearing path - Poland
- Late joint-reform path - Ukraine
- Central-bank-centered path - Czechia
- Exchange-linked hybrid path - Turkey

Hungary and Romania sit at the edges of this typology rather than outside it, showing that mature infrastructure or legal anchoring alone may remain only partial bridges to organized repo [12–14]. This typology is intended as a conceptual framework for analysis rather than a linear sequence of development: it compresses a heterogeneous record into comparable routes and avoids a false dichotomy in which tri-party repo is viewed through a simple presence-or-absence lens. In smaller markets, the relevant functions are often distributed across clearing, settlement, exchange, and central bank institutions rather than concentrated in a single, stand-alone service [6–8, 10].

The typology situates the article more accurately within the existing scholarly discourse. The benchmark tri-party model remains analytically useful, but evidence indicates that in emerging markets, structured repo systems typically evolve through institutional recombination - the creative repurposing of existing frameworks, rather than through the direct copying of established international models. The contribution is therefore comparative and classificatory: it identifies the combinations through which organized repo becomes workable in smaller markets and explains why the effects of legal reform depend on the surrounding post-trade setting.

From a policy perspective, the cases point to sequencing rather than to a universal reform checklist. Formal statutory adjustments do not, by themselves, catalyze the formation of an active repo market, and infrastructure investment alone is insufficient when legal treatment remains uncertain. What matters is aligning legal certainty, post-trade capacity, and central bank interaction to reduce counterparty uncertainty. The nature of this alignment varies by market, manifesting as either CCP-intermediated, settlement-based, or exchange-driven. The policy lesson is institutional fit rather than institutional uniformity.

The paper has three main limitations. First, some features that likely matter for repo development, especially collateral breadth and detailed legal protections, are still better described narratively than in a uniform cross-country coding frame. Second, due to the lack of uniformity in repo indicators across jurisdictions, these data points are treated as qualitative context rather than a uniform dependent variable. Third, the six-case design supports comparison and interpretation, not a ranked causal model.

Those limits also define the next stage of research. A useful extension would be to build a more formal coding frame for collateral eligibility, haircut practices, market access, and whether central clearing is established or non-existent within a more extensive sample of developing economies. Another extension would be to trace whether the institutional routes identified here are associated with differences in turnover stability, collateral breadth, or resilience during stress. The current paper stops short of those exercises owing to the heterogeneous nature of the available global evidence. Still, the comparison offered here provides a structured basis for such later work by identifying the institutional margins along which countries actually differ.

Conclusions. The paper leads to three takeaways:

1. Organized repo in the sample emerges mainly through institutional substitutes rather than through classic stand-alone tri-party-agent structures.
2. Legal readiness without operational post-trade infrastructure does not produce a stable, organized repo segment.
3. Ukraine’s case suggests that synchronized legal and infrastructural reform can compress the path to organized repo formation.

From a policy perspective, the key takeaway is that fostering repo markets in emerging economies requires a holistic institutional framework rather than isolated reforms. While legal modernization is critical, it must be functionally integrated with the institutional frameworks for settlement, clearing, valuation, and collateral management. Existing legal reforms in Ukraine are a necessary foundation, but they are not the sole determinant of future market growth; they also depend on how market systems and collateral conventions develop in tandem.

The primary contribution of this research is not to advocate for a universal institutional template. The article demonstrates that structured repo markets can emerge via diverse pathways, which become comparable once the analysis moves beyond formal terminology to operational functions. This reframing matters for both scholarship and policy. For scholarship, it moves the comparison away from a narrow question about whether a textbook tri-party agent exists. The policy implication is that success requires integrating a cohesive institutional set comprising legal protections, operational capacity, and inter-agency coordination.

The comparison also clarifies Ukraine’s place within the cross-country sample. The study does not characterize Ukraine as a fully developed institutional benchmark. Rather, it serves as an illustrative example of how legal reform and operational design moved unusually close together. This makes it a constructive case for analyzing the phasing of institutional changes across

similar market contexts. Ukraine's case indicates that when legislative reform and infrastructural development are closely integrated, the transition from fragmented arrangements to an organized repo segment may be shorter than the long gap observed in Poland. Alongside this, the article does not claim that the Ukrainian path is automatically replicable elsewhere. The institutional fit of any reform package remains market-specific.

Finally, the article makes a narrower negative claim that is still worth stating directly. The findings suggest that the existence of an organized repo market cannot be determined by any single metric, such as legislative reform, central bank activity, or the mere presence of a Central Securities Depository (CSD) or Central Counterparty Clearing (CCP). What matters is the linkage between these elements. A market becomes analytically visible as an organized repo case when its legal basis, operational channel, and collateral-management functions are connected in a way that enables repeated secured funding through a recognizable institutional route. That is why the article treats organized repo as an institutional-combination problem rather than as a single-institution problem.

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