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A Digital Borsa (Stock Exchange) for Grain: Epistemic Infrastructure, Competition Law, and the Reconstitution of Market Legibility in EU and BRICS Commodity Governance

Una Borsa digitale per i cereali: infrastrutture epistemiche, diritto della concorrenza e ricostruzione della leggibilità del mercato nella governance delle materie prime nell'UE e nei BRICS

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Abstract
Transnational grain trade is indispensable to food security yet structurally resistant to legal visibility. Price-relevant facts, contractual risk allocations, and informational architectures are frequently constituted through private infrastructures, limiting their legibility to public authorities and non-incumbent market participants. The resulting governance embodies a private-law problem of market memory. Embracing an EU and BRICS+ perspective, this article defends the thesis of a digitally engineered "borsa" (stock exchange) as a hybrid institutional infrastructure enabling fairness through structured legibility; a competition-law and private-law architecture, not merely a transparency instrument, producing a shareable evidentiary substrate for markets reliant on private contractual memory, documentary finance and platform-based data accumulation.

Il commercio transnazionale dei cereali è indispensabile alla sicurezza alimentare, ma strutturalmente resistente alla visibilità giuridica. Fatti rilevanti per i prezzi, allocazioni contrattuali del rischio e architetture informative sono frequentemente costituiti mediante infrastrutture private, limitandone l'intelligibilità per autorità pubbliche e operatori non consolidati, configurando un problema di diritto privato della memoria del mercato. L'articolo propone, nel contesto unionale e dello spazio BRICS+, una borsa digitale quale infrastruttura ibrida volta all'equità mediante leggibilità strutturata; un'architettura di diritto della concorrenza e privato, capace di generare un substrato probatorio condivisibile per mercati fondati su memoria contrattuale, finanza documentaria e accumulazione di dati su piattaforme.

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Keywords: Stock Exchange; Competition Law; Data Governance; Comparative Analysis.

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1. Market Memory, Epistemic Asymmetry, and the Infrastructural Consitition of the Gran Trade.

A "digital *borsa* for grain" names, at first glance, an institutional anachronism since a *borsa* evokes the spatially concentrated market places (Bruges, Antwerp, the Italian city-states) through which pre-modern commerce acquired the disciplined visibility of public pricing, reputational accountability, and contestable market facts.[1] To speak of a digital *borsa*, by contrast, seems to transpose a spatial solution into a networked environment whose defining property is the dissociation of exchange from place, and whose risks include both intensified opacity (through proprietary data architectures) and intensified coordination (through algorithmically mediated informational symmetry). Yet it is precisely this tension that makes the *borsa* a fruitful conceptual operator, understanding the historical *borsa* not as a moral emblem of "good capitalism" but as a "fairness technology": an institutional design that converted bids, offers, and price formation from private rumour into socially observable and therefore disciplinable facts. The contemporary grain trade, on

* Although the article is the result of joint observations of the two Authors, the Abstract and paragraphs 2 and 7 have to be attributed to Alexey Ivanov, while paragraphs 1, 3, 4, 5, 6, 8, 9, 10, 11 and 12 to Ettore M. Lombardi.

[1] On Bruges as a precursor and on the institutional history of the "bourse" concept, see H Houtman-De Smedt, 'The Banking System in Belgium Through the Centuries' in M Pohl and S Freitag (eds), *Handbook on the History of European Banks* (Aldershot 1994), 47 ff.

this view, is not "unfair" merely because it produces distributive outcomes that some actors dislike, but it is unfair because the basic conditions for contestable market knowledge, such as the conditions under which price-relevant facts are visible, verifiable, and institutionally recallable, are increasingly privately produced and strategically managed.[2] The article takes that claim as a starting point and asks, in a register suitable for private law and legal theory, what it would mean to reconstruct the *borsa*'s fairness function under current EU law and within the heterogeneous BRICS+ legal space.

The wager is that the deepest legal stakes are neither confined to "regulation" in the narrow sense nor exhausted by competition law enforcement against discrete infringements. Rather, the problem is one of infrastructural private law: the grain market is governed by a layered ecology of standard-form contracts, documentary practices (including documentary substitutes for possession and delivery), private dispute resolution, and data systems that together determine what counts as a trade event, how that event is evidenced, who may see it, and how it may travel across time and jurisdiction.[3] When these layers are controlled by concentrated private actors, market power is exercised not only in headline price-setting conduct but in the architecture of legibility itself. The capacity to make certain facts visible and others invisible, to define the taxonomies through which qualities and delivery milestones become comparable, and to determine the evidentiary pathways by which disputes can be proven, becomes a form of governance that private law must take seriously.

The EU–BRICS+ comparative frame is not ornamental as it is motivated by two features of the object domain.[4] First, grain trade is deeply transnational,

[2] M Scoppola, 'Trade Policies and the Strategies of Multinationals in the International Grain Market' (1993) 9(3) *Agribusiness* 189 ff., where the author underlines that multinational enterprises exert significant market power within international grain trading and thereby influence both the volume and geographical direction of trade flows. The pronounced vertical and horizontal integration observed in the cereals and cereal substitutes sectors, combined with diversification into adjacent activities, enables firms to deploy a broad spectrum of strategies, including global strategic coordination and transfer pricing, that shape international grain markets and potentially affect the effectiveness of trade policies. Further, see WW Wilson, 'Decentralization of grain trading: trends, implications, and challenges' (1995) 1 ff., https://ageconsearch.umn.edu/record/148784/files/1995-01-10-13.pdf.

[3] On private governance and concentration concerns in commodity trading, see K Deconinck, 'Concentration in world food commodity trading: the role of grain traders' (n 1); UNCTAD, 'Trade and development report 2023' (n 1).

[4] The comparative method is functional equivalence rather than taxonomic matching: the question is not whether the EU has a "market inquiry" exactly like South Africa's statutory market inquiry regime, but whether EU competences, such as the Commission's sector inquiry under Council Regulation 1/2003 (n 2), can play an analogous epistemic role in reconstructing market structure and informational flows. For concrete Commission practice and methodology, see

and its legal ordering is fragmented across jurisdictions whose private laws, competition laws, and market infrastructure regulations differ, yet whose participants are often bound together through standardised contracting and private arbitration.[5] Secondly, BRICS+ states occupy, in different ways, decisive positions in global commodity production, consumption, logistics, and finance, and the institutional imagination of a "digital *borsa*" becomes practically meaningful only if it can be designed to survive jurisdictional pluralism and to be implementable by states that do not share the EU's *acquis*, but do share concerns about food security, market concentration, and informational asymmetry.[6]

The study project usefully sharpens this comparative frame because it treats BRICS cooperation not as a diplomatic addendum to EU-style market governance, but as a distinct epistemic opportunity. According to the study, the BRICS competition authorities have already treated global food value chains as an object of joint research, moving from upstream concentration in seeds, traits, fertilisers and machinery to the grain-trading segment, where global trading has itself become a focus for research and potential investigation. This matters for the present article because the *borsa*'s legal function is not exhausted by the internal market logic of the EU. It must also be capable of being translated into a cooperation format in which producing, transit and consuming jurisdictions can pool evidence without collapsing their regulatory autonomy.[7]

The aim is therefore threefold, and the first aim is conceptual and it is direct to define "digital *borsa*" as a legal-institutional type distinct from neighbouring categories such as "exchange", "trading venue", "trade repository", or "data space", and to show why the *borsa* concept is not reducible to "more transparency" but refers to structured legibility under constraints of

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European Commission, 'Final report on the e-commerce sector enquiry' COM (2017) 229 final, and accompanying staff documents.

[5] On the transnational use of GAFTA standard forms and arbitration as a privately ordering device in grain trade, see GAFTA's description of contract usage and arbitration framework at 'Arbitration', https://www.gafta.com/Arbitration.

[6] On BRICS enlargement and member list (as at February 2026), see BRICS official site. On the global relevance of commodity traders and concentration in trading, see K Deconinck, 'Concentration in world food commodity trading: the role of grain traders' (n 1), and, on commodity trading firms and financial regulation concerns, European Commission, 'Review of the functioning of commodity derivatives markets and certain aspects relating to spot energy markets' (2025), 6 ff, https://finance.ec.europa.eu/document/download/1f0a18f3-b3dd-4a0f-9ddd-4838645d3a86_en?filename=2025-commodity-derivatives-markets-consultation-document_en.pdf.

[7] BRICS Competition Law and Policy Centre, 'Introduction: BRICS Cooperation for Food Security' (n 3) 13-14.

confidentiality and anti-collusion design.[8] The second aim is doctrinal and it is intended to map, with care, the *lex lata* resources within EU law and within selected BRICS+ jurisdictions that could support the creation of such an infrastructure, and to distinguish those resources from the *lex ferenda* measures that would be required where the present law is structurally insufficient.[9] The third aim is comparative-institutional and it is targeted at defend the proposition that competition authorities, within the EU through sector inquiry and within BRICS+ through market inquiries and analogous investigative powers, are uniquely positioned to create the evidentiary conditions for institutional redesign, because they can reconstruct the market's "real governance and informational structure" in a way that ordinary private litigation and fragmented regulatory reporting cannot.[10]

The same study also prevents a conceptual misunderstanding that would otherwise weaken the proposal. The BRICS Global Grain Exchange discussed in that project is not relevant here merely because it bears the label "exchange", but because it is defended as an institutional remedy capable of altering underlying market structures while preserving the advantages of market-based commodity trade. That emphasis supports the article's narrower legal claim: a digital *borsa* is not necessarily identical to a trading venue, and its juridical

[8] The analysis treats "transparency" as an ambiguous good since in competition law, increased market transparency may intensify rivalry by reducing search costs, but it may also facilitate collusion by enabling monitoring and punishment. The digital *borsa* is therefore not a proposal for indiscriminate disclosure but a way to assure "structured legibility": a governance approach that balances transparency with legitimate confidentiality, and that differentiates access levels, including granular access for supervisory authorities, from the aggregated or delayed information appropriate for market-wide publication. The article operationalises that idea by drawing on the architecture of trade repositories in financial regulation as an institutional analogue: a system can be designed to capture complete transactional data while exposing only calibrated slices to different audiences. On this point, see Regulation (EU) 648/2012 (EMIR), especially the trade repository and reporting architecture, and ESMA, 'ESMA updates EMIR Q&A and validation rules' (2017), https://www.esma.europa.eu/press-news/esma-news/esma-updates-emir-qa-and-validation-rules, addressing validations and data quality under Article 9. For the conceptual relevance of "trade repositories" as an institutional analogue of tiered access to complete transactional data, see Regulation (EU) 648/2012 (EMIR) and authoritative supervisory explanations of the Article 9 reporting obligation.

[9] For the need to distinguish investigatory competences from remedial powers in EU sector inquiries, see OECD, 'Market studies and other Market Analysis Tools for Competition Authorities – Note by the European Union' (2025), Working Party No 2 on Competition and Regulation, https://one.oecd.org/document/DAF/COMP/WP2/WD(2025)50/en/pdf, where it is noted that Article 17 of Regulation (EC) 1/2003 is investigatory and does not itself confer remedial powers.

[10] On EU practice of sector inquiry to reconstruct market conditions, see European Commission, 'Accompanying the document Report from the Commission to the Council and the European Parliament Final report on the E-commerce Sector Inquiry' COM (2017) 229 final.

centre of gravity lies in the governance of market memory, access, standards, data and auditability.[11]

No part of this ambition can be pursued responsibly without guarding against two symmetrical errors. The first is romantic regression since treating the medieval *borsa* as a model rather than as an analytic device, and thus ignoring the fact that pre-modern market visibility was achieved under coercive policing of hoarding, export bans, and provisioning magistracies that are neither normatively acceptable nor functionally replicable in contemporary market economies. The second is technocratic *naïveté*, assuming that digitisation is a frictionless solution, when in fact digitisation can entrench incumbency, intensify coordination risks, and shift power toward those who control taxonomies, interfaces, and access conditions. The article's thesis is that a digital *borsa* must be designed as a hybrid institutional infrastructure whose private-law foundations (standard forms, arbitration, documentary practices) remain operative but no longer exhaust the market's memory, and fairness is to be understood not as an ethical slogan but as an institutional achievement that must now be engineered digitally. Indeed, the article treats private law as constitutive for market infrastructure rather than as a residual field that merely "applies" once the infrastructure exists. Standard-form contracts and private arbitration, especially in global commodity trades, do not simply allocate risk after the fact, but they structure the incentives of disclosure, the evidentiary standards by which disputes are adjudicated, and the portability of documentary claims across jurisdictions.[12] A digital *borsa* must therefore be designed to be interoperable with private ordering - indeed, to be usable by it - while refusing to allow private ordering to monopolise the market's memory. That is why the slides insist that standard forms and private arbitration may continue to play a role, yet "no longer exhaust the market's memory".

2. The Borsa Before the Algorithm.

The *borsa*, approached as an institutional form, is usually narrated either as the romantic birthplace of capitalism or as the proto-financial ancestor of the modern exchange. Both narratives are defective for the purposes of legal theory as they foreground either affect (the nostalgia of merchants gathered in civic space) or teleology (the *borsa* as an early stage on the way to contemporary market infrastructures). This research instead insists on a more

[11] BRICS Competition Law and Policy Centre, 'Executive Summary' (n 3) 11; 'An Institutional Remedy: a Proposal for a BRICS Global Grain Exchange' 124-125.

[12] For GAFTA arbitration as a cornerstone of contractual enforcement and dispute resolution in grain trade (and thus a core component of the market's private "memory"), see GAFTA, 'Arbitration' (n 8).

analytically tractable proposition, and accordingly the *borsa* was a fairness institution insofar as it engineered visibility and verifiability under conditions of political sensitivity specific to grain and other vital commodities. The emphasis on grain is crucial since unlike luxury goods, grain provisioning is historically tethered to public order and to the legitimacy of political authority. The legal-institutional question is therefore not simply how to maximise allocative efficiency but how to constitute a market whose decisive facts can be publicly known, contested, and acted upon before scarcity becomes riot and private hoarding becomes political crisis.

The historical record supports, at least at a structural level, the claim that pre-modern polities developed institutions that aimed to render grain supplies, prices, and delivery arrangements administratively knowable. In Renaissance Venice, for example, a sequence of magistracies and physical infrastructures were devoted to monitoring stocks, organising imports, and supervising the baking trade, with reporting obligations that converted the city's grain reserves into administratively legible facts.[13] In Florence, grain provisioning involved a specialised magistracy, namely the "*Sei del Biado*", charged with purchase, transport, and sale of grain through a designated market space, and later institutional evolution toward provisioning bodies such as the *Abbondanza* and *Grascia.*[14] In Rome, the *Annona* functioned as an administrative apparatus concerned with purchase, storage, regulation of prices, weights, and measures, and supervision of bread production.[15] These examples are not invoked to legitimate their coercive aspects, rather, they reveal a stable institutional problem: vital markets generate political externalities, and polities respond by constructing mechanisms of legibility and accountability. The *borsa* belongs to this family of responses, though it does so through market form as much as through administrative command.

The historical material gains contemporary sharpness when read alongside the study's periodisation of concentration in global food value chains. Its timeline links industrialisation, monoculture cultivation, liberalised grain imports, the rise of agribusiness, financialised commodity markets, mega-mergers and, most recently, the joint effects of digitalisation and acute

[13] For Venice's dependence on imported grain and its institutional system for grain provisioning, including named magistracies and reporting on stocks, see M van Gelder, 'Supplying the Serenissima: The role of Flemish merchants in the Venetian grain trade during the first phase of the Straatvaart' (2004) 16(2) *International Journal of Maritime History* 39 ff.

[14] For the Florentine grain magistracy *Sei del Biado* and enforcement actions, see GW Dameron, 'Feeding the Medieval Italian City-State: Grain, War, and Political Legitimacy in Tuscany, c. 1150-c. 1350' (2017) 92 *Speculum* 976 ff.

[15] On the Roman *Annona*'s institutional functions in purchase, storage, regulation of prices, weights and measures, and supervision of milling and baking, see P Erdkamp, 'The food supply of the capital' in P Erdkamp (ed), *The Cambridge Companion to Ancient Rome* (Cambridge University Press 2013) 262 ff.

financialisation. The point is not that the medieval *borsa* can be restored, but that each historical phase creates its own epistemic institution. Where the nineteenth- and twentieth-century grain order privileged scale, standardisation and liquidity, the present phase requires an institution capable of making scale and liquidity legally observable.[16]

The Bruges bourse is instructive precisely because it is remembered as a commercial meeting place whose institutional effect was to concentrate dispersed traders into a focal venue. The *National Bank of Belgium*'s historical account stresses Bruges' crucial role in the development of the stock exchange as a market institution, and it links the etymology of "bourse" to the Bruges context.[17] What matters for the present argument is not the accuracy of any single origin myth but the functional logic: *i)* concentration produces observability, *ii)* observability produces reputational discipline, and *iii)* reputational discipline produces contractability under uncertainty. Therefore, centralised venues allowed reputations to be formed and tested through repeated observable interactions, thus bids and offers became socially observable facts rather than private rumours, and the very existence of a "market price" became a public fact that could be verified and contested. These are not descriptive trivialities, but they imply a transformation in private law's epistemic conditions since when price formation is publicly observable, disputes concerning quality, delivery, and price become disputes against a background of shared market facts, since when price formation is privately mediated and contract terms are standardised under private dispute resolution, the possibility of contestation becomes internally bounded by the very institutions whose operation is contested.

It is tempting, at this point, to rest on the notion that digitisation simply recreates observability under new technical conditions, but that temptation must be resisted, and the resistance begins already at the level of historical analogy. The medieval *borsa* did not produce "more information" in the abstract, but it produced a specific kind of information: information whose social publicity made it normatively and politically actionable. The *borsa* was therefore not merely an informational platform but a governance device: it made certain facts, such as bids, offers, standards of quality and measure, publicly contestable, and therefore subjected market conduct to an ambient discipline that could be mobilised by both merchants and political authorities. The idea that *borsa* was a carefully designed institutional response to the political sensitivity and social consequences of grain trade captures this point

[16] BRICS Competition Law and Policy Centre, Figure 6 'Conceptualization of Historical Concentration of Global Food Value Chains', (n 3) 23.

[17] L Bultinck and S Schoeters, 'The Origins of the Stock Exchange: From the Ter Buerse Inn to Wall Street' (17 January 2024), https://museum.nbb.be/en/resources/origins-stock-exchange-ter-buerse-inn-wall-street.

and frames the contemporary question correctly. The question is not whether digitisation can increase efficiency, but it is whether digitisation can reconstruct contestable market facts without reproducing the *borsa*'s coercive political economy and without enabling new modalities of collusion and exclusion.

The legal-theoretical upshot is that "fairness" must be reconceived as an institutional achievement relating to legibility: fairness is not an ethical slogan but an institutional achievement that must now be engineered digitally. To transpose this claim into the idiom of private law is to say that fairness in vital markets is a function of the distribution of epistemic power, which can see, record, verify, and contest the facts that determine contractual performance, price formation, and the allocation of risk. If the *borsa* is a historical name for an institution that redistributed that power by making market facts public, the digital *borsa*, if it is to be more than a rhetorical flourish, must be a legally constituted infrastructure that redistributes epistemic power under contemporary constraints of scale, confidentiality, and transnational fragmentation.

At this stage, a further theoretical clarification is required, because the concept of "public pricing" is double-edged. Competition law has long understood that transparency may both enhance and harm competition, and in the EU, the jurisprudence on concerted practices treats information exchange as potentially anticompetitive where it reduces uncertainty about competitors' conduct: a single meeting may suffice where the exchange enables undertakings to substitute cooperation for the risks of competition.[18] The presumption that undertakings take account of information exchanged with competitors, subject to proof to the contrary, is a doctrinal mechanism that translates transparency into a potential vehicle of coordination.[19] In the digital context, the risk is not hypothetical. The Court's analysis in *Eturas*, concerning travel agencies using a shared computerized booking system in which a system administrator disseminated a message capping discounts and implemented a technical restriction, shows how a shared information system may facilitate tacit assent to anticompetitive conduct, while simultaneously raising evidentiary questions about knowledge, rebuttal, and the presumption of innocence.[20] Those cases concern consumer services rather than grain, yet they are jurisprudentially central to any digital *borsa* proposal because they

[18] See Case C-8/08 *T-Mobile Netherlands BV and Others* EU:C:2009:343, paras 23-24 (collusion forms and criteria) and 61–62 (single meeting sufficiency, subject to conditions).

[19] See *T-Mobile Netherlands BV and Other,* paras 51–53 (presumption of causal connection where undertakings remain active; obligation on national court to apply).

[20] Case C-74/14 *'Eturas' UAB and Others v Lietuvos Respublikos konkurencijos taryba* EU:C:2016:42 paras 39–41 (presumption of innocence and rebuttal limits), 43–49 (shared system, technical restriction, conditions for presumptions, and rebuttal evidence).

demonstrate the doctrinal sensitivity of EU competition law to infrastructures that simultaneously coordinate information and constrain conduct.

The implication is that a digital *borsa* cannot be a *naïve* transparency machine, and if it were to publish granular, real-time, counterparty-identifiable trade data, it could convert the infrastructure of fairness into the infrastructure of collusion. Fairness through legibility thus requires structured legibility since the informational architecture must be designed so that the market's decisive facts can be reconstructed and contested by those with legitimate epistemic claims, including supervisory authorities, while the public-facing outputs are sufficiently aggregated, delayed, or anonymised to avoid becoming a monitoring device for coordinated strategies. The research anticipates precisely this point, differentiating between tiered transparency for market participants and granular access for authorities, and insisting that the goal is not indiscriminate disclosure but structured legibility balancing transparency with legitimate confidentiality. The historical *borsa* delivered fairness through publicity because the primary collusion risks were different and because the political economy of grain provisioning made certain forms of public discipline normatively acceptable. The digital *borsa* must deliver fairness through design because contemporary competition law recognises transparency as both remedy and threat.

This is the conceptual hinge on which the rest of the article turns. The *borsa* before the algorithm is not a template to be copied but a diagnostic device as it reveals that the juridical problem of vital markets is not exhausted by the validity of individual contracts or by ex post dispute resolution. It is a problem of market memory and contestability, a problem that is institutional before it is transactional. The remainder of the article therefore proceeds by showing how contemporary grain markets have evolved into systems whose "memory" is privately governed, and by defending, through EU and BRICS+ doctrinal analysis, the feasibility and limits of reconstructing a digital *borsa* as a hybrid institutional infrastructure capable of restoring the fairness function under modern conditions.

3. The Present Condition: Structural Globalisation, Opaque Governance, and Practical Impunity.

The contemporary grain trade must be approached as an institutionalised system of coordination whose most salient characteristic is not merely cross-border scope, but a structural form of globality in which price formation, risk transfer, and logistics allocation are functionally coupled across multiple jurisdictions and asset forms. The point is not exhausted by the banal observation that "grain is traded internationally", rather, the global grain market is an informationally integrated order in which incremental events, such

as weather forecasts, port congestion, sanctions, export licensing, freight rates, geopolitical risk, policy announcements on biofuels, shifts in feed demand, or changes in derivative positioning, are translated into price signals that travel instantaneously and, crucially, are acted upon through vertically integrated infrastructures that span origination, storage, shipping, and distribution. The legal interest of this globality is that it alters the conditions under which private law can plausibly be relied upon to generate governance through decentralised contracting, and likewise alters the conditions under which public enforcement can plausibly be relied upon to generate governance through ex post sanction. When markets are transparent, global coupling can, at least in principle, stabilise allocation by widening the set of substitutes and smoothing local scarcity through import substitution. When markets are opaque, the same coupling amplifies informational asymmetry and market power, because the informational premium attached to control of stocks, flows, and optionality scales with the degree of interconnectedness: the more the world is informationally one market, the more valuable it is to possess privileged information about the facts that constitute that market.

The study project gives this structural globality a technically important competition-law form by arguing, as a hypothesis for inquiry, that the principal grains - wheat, maize, soybeans, rice and close feed substitutes - may function as a single integrated market rather than as isolated product markets. Its SSNIP discussion emphasizes demand-side substitution across end uses, while its econometric exercise reports statistically significant price interdependence across the grain complex. For private law, the consequence is that contractual facts in a wheat sale, a maize shipment or a soybean hedge may no longer be intelligible only within the bilateral contract: they participate in a unified evidentiary field in which substitution, hedging and routing decisions transmit scarcity and power across commodities.[21]

The resulting doctrinal problem is that the constitutive facts of exchange, namely who holds what, where, under what conditions of delivery, with what options to delay, reroute, substitute, blend, or withhold, are themselves increasingly produced within private contractual ecosystems, recorded in proprietary systems, and then filtered through a dense network of standard forms and private dispute resolution. The legal system's familiar taxonomy, which distinguishes the "private" realm of contract and property from the "public" realm of regulation and sanction, misdescribes the actual architecture. In the present condition, private ordering is not merely a mode of allocating risk between counterparties, but it is also the dominant mode of producing,

[21] BRICS Competition Law and Policy Centre, Box 1 'Applying the SSNIP Test' (n 3) 20; BRICS Competition Law and Policy Centre, Box 2 'A Multi-Faceted Evidentiary Approach to Validate the Unified Market' (n 3) 21-22.

storing, and withholding the information that would be needed for either contractual accountability at scale or regulatory accountability at all. This is the governance gap in its strict private-law sense since governance fails not because law is absent, but because the legal system's operative predicates: the facts it must ascertain in order to classify conduct as lawful or unlawful—are not legible at the relevant temporal and institutional scale.

From the standpoint of private law, global grain markets represent an extreme case of distributed factuality. In a textbook model of sale, the core facts relevant to rights and obligations are localisable and temporally discrete: delivery, conformity, payment, transfer of risk, and the occurrence of force majeure. Even where such a model is complicated by documentary obligations and logistics chains, it presupposes that the relevant facts are reconstructible *ex post* from reasonably stable records. By contrast, in the grain trade as actually organised, the facts that matter for systemic governance are not merely those that determine whether A breached toward B, but those that determine whether parallel conduct is market-driven or coordinated, whether supply was strategically withheld or simply delayed by congestion, whether price spikes reflect scarcity or manipulation, and whether the "spot" price is in fact a derivative of derivative positioning rather than of physical fundamentals. These are not merely "economic" questions external to law, but they are questions that, when framed within the legal system, become questions about classification under competition law, market abuse law, contract doctrines (good faith, duty of disclosure, misrepresentation), and the allocation of loss under doctrines of frustration or force majeure. Yet they are questions that require access to a continuously updated map of inventories, flows, and contractual options, precisely the kind of map that the present infrastructure does not yield to public or rival private observers.

This is why documentary factuality is not peripheral. The study's account of trader-intermediated structured finance shows that the transaction is increasingly converted from a physical delivery relation into a bundle of receivables, hedges, risk positions, platform records and enforceable documentary claims. The remark attributed in the study to the CEO of Covantis - that traders trade documents rather than commodities - is legally suggestive: the commodity remains material, but the legally operative object of control is often the authenticated documentary sequence through which the commodity can be financed, rerouted, pledged, insured and disputed.[22]

The legal system's first response to distributed factuality is often to treat it as evidentiary complexity and to adjust standards of proof, presumptions, and

[22] BRICS Competition Law and Policy Centre, Figure 9 'Trader-Intermediated Ecosystem of Finance' (n 3) 29, including the statement attributed to the CEO of Covantis; see also BRICS Competition Law and Policy Centre, 'The Financial Intermediation Role of Traders' (n 3) 40–42.

burdens. This is doctrinally intelligible but practically inadequate in the grain context because the relevant facts are not merely hard to prove, but they are institutionally inaccessible. A presumption is useful when facts exist and can, with effort, be discovered, but it is useless when facts are systematically sequestered behind proprietary systems, confidentiality claims, and jurisdictional fragmentation. The second response is to rely on disclosure duties and reporting obligations, thereby converting distributed facts into shared facts. That move is familiar in securities and derivatives regulation, where transparency is the precondition for market integrity. The grain trade, however, sits in an awkward liminal space because it is simultaneously a physical commodity market (with spot transactions and logistics) and a financialised market environment (with derivative instruments, indices, and benchmarks). The doctrinal *apparatus* for transparency is highly developed on the financial side, far less so on the physical side, and this asymmetry matters not only for regulators but also for private law, because private-law doctrines that presuppose informational symmetry or at least contestability[23] become systematically biased when one side of the market has structurally superior knowledge that is not merely privately acquired but infrastructurally produced.[24]

A further complication is that structural globalisation does not merely expand the spatial range of transactions, but it also destabilises the implicit allocation of epistemic responsibility between parties and the state. In the canonical liberal picture, the state supplies a stable legal framework and adjudication, while parties supply information about their preferences and performance through contract. That picture presupposes that information relevant to legality is either produced publicly (prices, volumes, corporate disclosures) or can be elicited by public authority when needed. In global grain markets, major informational variables, such as stock levels, routing decisions,

[23] For instance, doctrines about mistake, misrepresentation, or the reasonableness of reliance.

[24] J Clapp, 'ABCD and Beyond: From Grain Merchants to Agricultural Value Chain Managers' (2015) 2(2) *Canadian Food Studies/La Revue canadienne des études sur l'alimentation* 126 ff, where the A. affirms that, although the structure of agricultural commodity trading firms has evolved considerably over time, corporate concentration has historically remained a defining characteristic of the sector. The four dominant firms, which are commonly referred to as the "ABCD" group, namely Archer Daniels Midland (ADM), Bunge, Cargill, and Louis Dreyfus, trace their origins to the nineteenth and early twentieth centuries. Initially established as privately held, family-owned grain merchants with distinct regional specializations, these enterprises have since developed into highly diversified and structurally complex corporations. Their activities now extend beyond the purchase and sale of grain to encompass a broad portfolio of agricultural and non-agricultural commodities, as well as integrated operations spanning finance, production, processing, and distribution. More recent entrants have similarly adopted increasingly sophisticated organizational structures and diversified operational models in order to maintain competitiveness within the sector.

internal risk positions, are produced and stored privately, and public authority can elicit them, if at all, only episodically, after delays, and often only through contested processes that themselves presuppose jurisdictional leverage. The state's legal power becomes a power to ask questions in a context where the answers are expensive to obtain and where their reliability is hard to assess because the baseline for independent verification is missing. This is why "jurisdiction without visibility is jurisdiction without effect", in the sense that, on the one side, jurisdiction names the legal competence to act, and, on the other, visibility names the infrastructural possibility of acting effectively.

4. High concentration and limited disclosure as a governance problem.

The present condition is further marked by a widely observed and persistently difficult-to-measure concentration among large trading houses with global reach. The research emphasises the duality since concentration is asserted as a structural feature, yet verification is difficult because disclosure of trading volumes and stock positions is limited, especially where key firms are privately held and thus not subject to the full discipline of public markets. The legal significance of this duality is not confined to the standard competition-law question of whether market power exists. It also concerns the meta-governance question of whether the legal system can even know, with sufficient confidence and timeliness, whether market power exists and how it is exercised.

The BRICS Centre Study strengthens this point by replacing a merely descriptive vocabulary of "large traders" with the analytical vocabulary of "orchestrating power". It identifies four constitutive dimensions: deep financial embeddedness, interlinkages between corporate groups, ownership of digital platforms and extensive vertical integration. This formulation is useful for legal analysis because it avoids treating concentration as a static market-share fact and instead directs inquiry toward the set of relationships through which the relevant undertaking orchestrates finance, information, logistics and contractual access. It also cautions that the theory remains a hypothesis requiring stronger evidence, which is precisely why an evidentiary institution rather than a purely condemnatory legal narrative is required.[25]

In the literature on agricultural commodity trading, concentration is often described through the shorthand of the "ABCD" firms, namely ADM, Bunge, Cargill, and Louis Dreyfus, while also noting the increasing salience of additional large actors, including state-linked and regionally dominant firms, as well as firms whose competitive advantage lies in logistics and data rather than

[25] BRICS Competition Law and Policy Centre, Executive Summary (n 3) 10–11; BRICS Competition Law and Policy Centre, Figure 10 'The ABCD+ Traders' Ecosystem Power Concept' (n 3) 30.

in classical brokerage. Some scholar has traced the historical evolution of these firms from geographically specialised grain merchants to complex "value chain managers" that integrate trading, finance, processing, and distribution.[26] The same scholarship and policy reporting emphasise that precise market share figures are difficult to establish with confidence, precisely because the informational environment is itself shaped by the market's leading actors.[27] The doctrinal relevance is immediate as competition law's analytical core, namely market definition, market power assessment, effects analysis, depends on data. Where the market's leading participants are not merely beneficiaries of opacity but contributors to it through minimal disclosure of logistics and stock information, the competition-law assessment becomes structurally dependent on the regulated parties' cooperation, thereby weakening both deterrence and legitimacy. In a fully transparent market, public enforcement can at least plausibly claim to be an external constraint, while in an opaque and concentrated market, public enforcement becomes, at best, an episodic audit of a privately curated archive.

The same study reports that the ABCD+ group - ADM, Bunge, Cargill, Louis Dreyfus and related satellite traders - commands an estimated 70-80% of global bulk grain trade, while also documenting the emerging roles of COFCO, Wilmar, Olam and other actors. The article should not treat this estimate as a dispositive finding of dominance, but it is enough to justify an infrastructural analysis. Where such a concentrated cluster controls not only trade flows but also financing channels, digital post-trade execution and strategic logistics, the legal question becomes how authorities and weaker counterparties can reconstruct the actual perimeter of power.[28]

One must be careful, however, not to overclaim in the face of evidentiary uncertainty. The proposition that concentration exists does not by itself entail that unlawful collusion is occurring, or that market power is being abused, or that manipulation is present. The more defensible claim is institutional since concentration combined with opacity increases the value of private informational advantages and increases the governance significance of the informational substrate. It also increases the probability that parallel conduct will be ambiguous between market-driven adaptation and coordinated strategy, thereby raising the expected enforcement costs for authorities and

[26] Clapp, 'ABCD and Beyond' (n 30) 126.

[27] S Murphy, D Burch and J Clapp, *Cereal Secrets: The World's Largest Grain Traders and Global Agriculture* (Oxfam Research Report 2012), https://www.oxfam.org/en/research/cereal-secrets-worlds-largest-grain-traders-and-global-agriculture, where the authors emphasise dominance of major traders and the difficulty of precise quantification given limited disclosure.

[28] BRICS Competition Law and Policy Centre, 'The ABCD+ Oligopoly: An Emerging Ecosystem of Traders' (n 3) 27–28.

the expected litigation costs for private claimants.[29] In such a setting, even well-designed substantive rules, such as prohibitions on cartels, abuses of dominance, or manipulative practices, can become under-enforced simply because the informational basis for triggering and sustaining enforcement is thin.

This is particularly salient for a commodity like grain, where the relation between physical supply and price is mediated by storage, substitution across varieties and origins, and temporal arbitrage. Stock positions and logistics flows are not peripheral details as they are the market. If, as the slide deck notes, largest firms provide minimal disclosure of logistics data despite controlling significant portions of global grain movements, the legal system faces a structural asymmetry: the actors most capable of shaping the market's physical state are also those whose informational opacity most undermines external assessment. That combination creates a distinctive kind of power that is not reducible to a single doctrinal category. It is partly market power in the competition-law sense, partly informational power in the platform-governance sense, and partly infrastructural power in the property-and-contract sense, because control over storage, shipping slots, and routing options is a control over the feasible set of contractual performance.

Logistics confirms the point. The study maps ABCD+ ownership of port and maritime-access facilities and links competition concerns in the Bunge/Viterra merger to logistical bottlenecks identified by CADE and by the Canadian Competition Bureau. For the *borsa* thesis, ports and silos are not merely physical assets; they are epistemic choke points. Control over an elevator, port slot or export corridor generates information about congestion, availability and timing, and that information can be converted into a bargaining advantage unless the legal infrastructure records it in a form capable of supervisory and private-law use.[30]

5. Private ordering, standard forms, and arbitration as informational infrastructure.

A further defining feature of the present condition is the sophistication and density of private ordering, in terms of dominance of standard-form contracts and prevalence of private arbitration in resolving disputes[31], so that private

[29] J Clapp, 'The Problem with Growing Corporate Concentration and Power in the Global Food System' (2021) 2 *Nature Food* 404 ff, where the author develops a conceptual pathway through which concentration can translate into power and governance concerns.

[30] BRICS Competition Law and Policy Centre, Figure 3 and accompanying discussion of logistics, ports and the Bunge/Viterra merger (n 3) 18–19.

[31] In this regard, see ES Cohen, *From Sources to Impact: Contracts, Dispute Resolution Systems and Governance in a World of Legal and Regulatory Pluralism* (2006) 1 ff,

systems, though commercially efficient, structurally reduce public visibility into defaults, systemic stress, and market-wide patterns. In doctrinal terms, this is the transformation of contract from a bilateral instrument of exchange into a collective infrastructure of governance. Standard forms do not merely reduce transaction costs, but they encode a normative order, namely allocation of risk, specification of quality, timing of notices, documentary requirements, and dispute resolution. When such forms become dominant across a market, they become, functionally, a private statute, and as a consequence the question is not whether this is normatively good or bad, but if such a private statute controls what becomes knowable to outsiders, because it defines what must be recorded, what may be withheld, what is treated as commercially irrelevant, and what is channelled into confidential resolution.

The standardising function of private ordering should also be read against the study's food-security diagnosis. Modern grain trade obtains scale through Panamax-compatible bulk logistics, silos built for unified produce, standardised commodity contracts and digital platforms that increasingly become default vehicles for trading activities. This architecture reduces transaction costs but also narrows the market's tolerated forms of heterogeneity. In private-law terms, standard forms and platform workflows do not merely express market practice; they select the forms of practice that can be seen, financed and enforced.[32]

In the grain trade, trade associations and specialised arbitral regimes have long supplied standardisation and enforcement. Leading examples include the *Grain and Feed Trade Association* (*Gafta*) and the *Federation of Oils, Seeds and Fats Associations* (*FOSFA*), which promulgate contract forms and operate arbitral mechanisms.[33] Their existence is not a problem, but it is a functional response to the need for fast, expert adjudication and predictable risk allocation in a high-volume sector. The private-law difficulty is that such mechanisms, by design, reduce external observability as arbitration is ordinarily justified by party autonomy, confidentiality, and expertise. Those virtues have systemic costs when the sector governed by arbitration is also a sector of

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https://www.researchgate.net/profile/Edward-Cohen-3/publication/228554477_From_Sources_to_Impact_Contracts_Dispute_Resolution_Systems_and_Governance_in_a_World_of_Legal_and_Regulatory_Pluralism/links/00b4951d4dfc1ce214000000/From-Sources-to-Impact-Contracts-Dispute-Resolution-Systems-and-Governance-in-a-World-of-Legal-and-Regulatory-Pluralism.pdf; MR Patterson, 'Standardization of Standard-Form Contracts: Competition and Contract Implications' (2010) 52 *William & Mary Law Review* 327 ff; H Collins, 'Regulatory Competition in International Trade: Transnational Regulation through Standard Form Contracts' in H Eidenmüller (ed), *Regulatory Competition in Contract Law and Dispute Resolution* (Baden-Baden 2013) 121 ff.

[32] BRICS Competition Law and Policy Centre, 'Food Security and Global Grain Trade' (n 3) 16.

[33] GAFTA, 'Arbitration', https://www.gafta.com/Arbitration; FOSFA, 'Arbitration', https://www.fosfa.org/arbitration/.

macroeconomic significance and potential systemic vulnerability since what appears as bilateral efficiency can become collective opacity.

The informational consequence is not merely that disputes are hidden, but it is that the market's pathology becomes less legible to law. Defaults, renegotiations, substitutions, and disputes over quality or delivery are not random noise, as they are signals of stress. In a transparent system, such signals can be aggregated to detect systemic risk, while in a privately ordered system with confidential arbitration, those signals are sequestered within institutional silos. This matters for competition law and market abuse law, but it also matters for private law itself. Consider the role of "commercial reasonableness" or "usage" in interpreting standard forms. If the evidentiary record of how the market actually behaves is privately held, then the evolution of trade usage becomes epistemically monopolised by insiders. Outsiders, such as small traders, farmers' cooperatives, or new entrants, face an asymmetry not only in bargaining power but in interpretive power[34]: they cannot easily demonstrate what is "market standard" because the record of practice is inaccessible. The same asymmetry undermines the capacity of courts, when they do become involved, for example, in enforcement of arbitral awards, interim relief, or insolvency-related disputes, to assess the sector's practices independently.[35]

The relationship between private ordering and public enforcement thus cannot be captured by the simplistic opposition between *lex mercatoria* and state law.[36] One may accept, with contemporary scholarship, that the "law merchant" was never fully autonomous from state institutions and that medieval and early modern trade was sustained by mixed ecologies of local norms, intermediaries, and factual assessments.[37] The contemporary grain

[34] S Murphy, 'Concentrated Market Power and Agricultural Trade' (2006) 1 *Ecofair Trade Dialogue Discussion Papers* 9 ff; D Zimmerli, 'Something old, something new: relying on the traditional agricultural cooperative to help farmers solve the power imbalance in modern meatpacker production contracts' (2014) 24 *San Joaquin Agricultural Law Review* 59 ff.

[35] A Taubman, 'Cereal Offenders: Access and Equity in Trade Negotiations on Knowledge Resources' in J Kesan (ed), *Agricultural Biotechnology and Intellectual Property: Seeds of Change* (London 2007) 97 ff.

[36] For more details, *ex plurimis*, see GR Delaume, 'Comparative Analysis as a Basis of Law in State Contracts: The Myth of the *Lex Mercatoria*' (1988) 63 Tulane Law Review 575 ff; K Highet, 'Enigma of the *Lex Mercatoria*' (1988) 63 Tulane Law Review 613 ff; G Alpa, 'Il diritto commerciale tra *lex mercatoria* e modelli di armonizzazione' (2006) *Contratto e impresa* 86 ff; F Galgano, 'The New *Lex Mercatoria*' (1995) 2 *Annual Survey of International & Comparative Law* 99 ff; R Michaels, 'The True *Lex Mercatoria*: Law Beyond the State' (2007) 14 *Indiana Journal of Global Legal Studies* 447 ff; A von Bogdandy and S Dellavalle, 'The *Lex Mercatoria* of Systems Theory: Localisation, Reconstruction and Criticism from a Public Law Perspective' (2013) 4(1) *Transnational Legal Theory* 59 ff.

[37] *Ex multis*, see LE Trakman, *The Law Merchant: The Evolution of Commercial Law* (Littleton 1983) 7 ff.

trade is not a revival of a stateless order, but it is a technologically updated private infrastructure that coexists with, and often displaces, public processes of fact production. The public legal system retains formal authority, even so the private system controls much of the informational substrate on which public authority depends, and the consequence is not necessarily illegality, still it is an institutional shift in the *locus* of epistemic sovereignty.[38]

Financialisation deepens the private-law significance of this documentary order. The study describes a shift from bank-mediated documentary trade finance to trader-intermediated structured finance, in which commodity traders use revolving credit facilities, receivables, securitisation platforms, ABCP markets and derivatives to transform commercial trade into financial deal flow. A digital *borsa* must therefore be capable of recording not only the sale and delivery event, but also the documentary and financial consequences that determine whether the sale has become an input into a wider risk-transfer structure.[39]

6. The governance gap as an evidentiary problem: law's dependence on legibility.

The conducted analysis frames the governance gap in explicitly private-law terms since the constitutive facts of exchange are generated and stored within closed contractual ecosystems largely invisible to public authorities, and even where authorities possess formal powers, they often lack the evidentiary substrate necessary to reconstruct market behaviour.[40] This is the central diagnosis that must be made precise if it is to support a credible thesis about

[38] For an interesting perspective, see R Bruce Hall, 'Explaining "Market Authority" and Liberal Stability: Toward a Sociological–Constructivist Synthesis' (2007) 21(3) *Global Society* 319 ff., where the author examines the foundations of the historical stability of the liberal global economic order by analysing the social mechanisms through which populations in economically and institutionally advanced states have conferred legitimacy upon "market authority." Drawing on Max Weber's sociology of legitimacy and Anthony Giddens' account of modernity, the A. conceptualises this process through a constructivist framework centred on the evolving structure of intersubjective public belief as an explanatory heuristic. Within this framework, liberalism is critically assessed for conflating individual choice with genuine consent in its treatment of market processes, and particular attention is paid to the systemic vulnerabilities that arise from internal inconsistencies in liberal understandings of market authority, legitimacy, and political obligation.

[39] BRICS Competition Law and Policy Centre, Figure 9 (n 3) 29; BRICS Competition Law and Policy Centre, 'The Financial Intermediation Role of Traders' (n 3) 40–42; BRICS Competition Law and Policy Centre, Box 6 'Forms of Access to Capital' (n 3) 41.

[40] G Majone, 'The Regulatory State and Its Legitimacy Problems' (1999) 22(1) *West European Politics* 1 ff; F Gilardi and M Maggetti, 'The Independence of Regulatory Authorities' in D Levi-Faur (ed), *Handbook on the Politics of Regulation* (Edward Elgar 2011) 201 ff; W Davies, *The Limits of Neoliberalism: Authority, Sovereignty and the Logic of Competition* (SAGE 2014) passim; J E Cohen, *Between Truth and Power* (OUP 2019) passim.

institutional design. The governance gap, so understood, is not a vague complaint about "lack of transparency", yet it is a structural mismatch between the legal system's mode of operation and the market's mode of fact production.[41]

The evidentiary deficit is especially acute because the study describes a revenue-asset disconnect in which traders may derive income from markets different from the physical assets that merger review tends to observe. Where derivative-linked or structured-finance revenue is central to the business model, a competition authority that counts elevators or port assets but cannot reconstruct derivative exposures, financing relationships and data flows is observing only the visible shell of market power. The borsa's supervisory layer is thus not an embellishment; it is the minimum institutional condition for connecting physical and financial facts.[42]

Therefore, a market can frustrate enforcement even without defying requests if it is organised so that relevant data is diffuse, proprietary, or non-standardised, and this is precisely the situation in the global grain trade. Here relevant data includes real-time stock positions across a distributed network of silos and ports, contractual options embedded in multiple layers of back-to-back contracts, internal risk positions, and logistics decisions that may be justified by operational constraints but that can also be strategic. The legal question "was supply strategically withheld?" cannot be answered by a single contract or a single email, but it requires an integrated picture.

The same is true of market abuse regimes insofar as they extend to commodity derivatives and, in defined ways, to related spot commodity contracts.[43] The EU's *Market Abuse Regulation* defines market manipulation in terms that explicitly include conduct that gives false or misleading signals as to supply, demand, or price of a financial instrument or a related spot commodity contract, and it extends certain prohibitions to spot commodity conduct where

[41] An exemplary case in Competition law can be found under EU law, where the Commission possesses extensive investigative powers and, through Regulation (EC) 1/2003, can request information, conduct inspections, and carry out sector inquiries. These powers, however, presuppose that relevant information exists in discoverable form, that it can be obtained within a time horizon consistent with enforcement, and that it can be interpreted with sufficient reliability to support legal conclusions. See Regulation (EC) 1/2003, arts 17–20 (sector inquiries; requests for information; inspections).

[42] BRICS Competition Law and Policy Centre, 'Market Definition Mismatch in Financialized Sectors' (n 3) 37; BRICS Competition Law and Policy Centre, 'What Are Regulators Missing? Market Redefined' (n 3) 40–41; BRICS Competition Law and Policy Centre, 'Cross-Market Effects and Derivative Markets as Neighbouring Markets' (n 3) 44–45.

[43] K Evagora and G Licnachan, 'Market Abuse and the Commodities Markets' (2007) 15(4) *Journal of Financial Regulation and Compliance* 482 ff; P Cinquegrana, 'The Need of Transparency in Commodity and Commodity Derivatives Markets' (ECMI Research Report 3, 2008), https://www.files.ethz.ch/isn/94947/003_The%20Need%20for%20Transparency.pdf; NC Schofield, *Commodity Derivatives: Markets and Applications* (Wiley 2021).

it affects the price or value of relevant financial instruments.[44] In principle, this provides a doctrinal bridge between derivatives markets and physical commodity markets, and, in practice, the bridge is only as strong as the data that allows authorities to trace causation and intent across the spot–derivatives interface. Where spot markets are opaque, enforcement risks degenerating into a narrow focus on observable derivatives conduct, leaving the physical market, where withholding, routing, and stock accumulation occur, under-governed.

A comparative glance across BRICS jurisdictions underscores that the governance gap is not uniquely European. BRICS has expanded beyond its original membership, and the political economy of grain is central to several BRICS and BRICS+ states, both as producers and as importers. Competition-law regimes across BRICS jurisdictions generally provide formal mechanisms for investigating anti-competitive conduct, yet their practical capacity to reconstruct market behaviour in a global, data-intensive sector depends on cross-border cooperation and on the existence of standardised, accessible records. Where the market's informational substrate is privately held and transnational, national jurisdiction tends to confront the same problem: enforcement is feasible against local manifestations of conduct, but difficult against global strategies implemented through integrated supply chains and data-driven trading. This is not an argument for surrendering to private power, nevertheless it is an argument that the locus of effective governance is the infrastructure that produces records.

The governance gap should thus be conceptualised as a problem of legal epistemology as law is a classificatory practice that depends on facts.[45] If in private law, the facts that matter are those that determine whether rights and obligations were created, transferred, performed, or breached, in public economic law, the facts that matter are those that determine whether conduct distorted competition or manipulated markets. In both cases, the legal system must have access to facts in forms it can process, such as stable records, auditable data, credible testimony. When the market is organised so that relevant facts are produced in proprietary systems and shielded by confidentiality, trade secrecy, and private dispute resolution, the legal system's epistemic access is degraded. The result is not merely under-enforcement, but

[44] Regulation (EU) 596/2014 on market abuse (market abuse regulation) [2014] OJ L173/1, arts 2(2), 12(1)–(2), 15 (scope extension to certain spot commodity conduct, definition and prohibition of market manipulation).

[45] For more details, see G Teubner, 'How the Law Thinks: Toward a Constructivist Epistemology of Law' (1989) 23(5) *Law & Society Review* 727 ff; S Geoffrey, 'Epistemology and Legal Institutions' (1991) 4 *International Journal for the Semiotics of Law* 309 ff; M Van Hoecke (ed), *Epistemology and Methodology of Comparative Law* (Hart 2004); G Samuel, *Epistemology and Method in Law* (Routledge 2016).

it is a shift in the functional constitution of the market, where actors with privileged access to facts, because they control logistics and data, operate in a space of practical impunity, not in the sense that their conduct is necessarily unlawful, but in the sense that the probability of legal contestation and sanction is structurally reduced.

The study's proposed method of ecosystem mapping supplies a practical response to this legal epistemology. It suggests mapping counterparty networks, contractual relationships, identifiable harm mechanisms and ecosystem-based theories of harm, noting that global traders operate through extensive networks of banking syndicates, passive investors and operational counterparties across many jurisdictions. This is precisely the evidentiary logic a digital borsa should institutionalize: not surveillance for its own sake, but a legally bounded map of who holds the rights, information and financial interests that make a trade event competition-relevant.[46]

7. Practical impunity through opacity: "jurisdiction without visibility".

The article's formulation of "practical impunity" is carefully framed as the problem is not that law is absent or that formal powers are lacking; it is that the market's factual reality is insufficiently legible to law.[47] This formulation is particularly important for avoiding two common errors in legal scholarship on global markets. Indeed, if the first error is voluntarism, or the assumption that stronger substantive prohibitions will solve governance problems, the second one is institutional fetishism, or the assumption that expanding an agency's

[46] BRICS Competition Law and Policy Centre, 'Concentration, Financialization, and Regulatory Capability Enhancement' (n 3) 59–60; BRICS Competition Law and Policy Centre, Box 11 'Mapping Traders' Ecosystems' (n 3) 58.

[47] In more general terms and also for an historical point of view, see T Jackson, *Impunity and Capitalism: The Afterlives of European Financial Crises, 1690–1830* (CUP 2022), where the author interrogates the attribution of responsibility for financial crises and the evolving allocation of liability for their prevention and remediation. Through the analytic lens of "impunity," Jackson reconceptualises the history of capitalism and inequality by demonstrating how financial crises were gradually reclassified, from events understood as culpable misconduct to phenomena treated as quasi-natural disasters. Focusing on the legal regulation of capital markets during a period of rapid financial expansion, from the 1709 bankruptcy of Europe's wealthiest financier, through the 1720 stock market crash, to the 1825 Latin American debt crisis, the A. argues that recurrent episodes of public indignation and ad hoc reform generated attempts to construct a more equitable financial order. These reforms, however, primarily reconfigured the distribution and modalities of impunity rather than eliminating it. Over time, financial crises came to be normalised as systemic outcomes of impersonal international markets, with diffuse causation, attenuated accountability, and costs disproportionately absorbed by domestic populations.

formal powers will solve governance problems. Both errors treat the problem as one of will and competence rather than of infrastructure.[48]

The correct analytic move is to distinguish substantive norms from the institutional conditions of their enforceability[49], where substantive norms can be fully specified and normatively compelling, yet ineffective if the factual substrate is inaccessible. Conversely, a rich factual substrate can make even relatively open-textured norms enforceable because the informational environment reduces ambiguity and raises the expected probability of detection. In the grain trade, opacity has the effect of lowering the expected probability of detection and of increasing ambiguity about whether observable conduct is benign or strategic. This dual effect is precisely what makes opacity an enabling condition for practical impunity.

The EU competition-law regime illustrates the distinction since Articles 101 and 102 *TFEU* provide the substantive prohibitions, and *Regulation 1/2003* supplies the enforcement framework. [50] The Commission can initiate proceedings on its own initiative and can conduct sector inquiries where the trend of trade between Member States, the rigidity of prices, or other circumstances suggest that competition may be restricted or distorted[51]. Yet sector inquiries, like all investigative tools, depend on the availability of meaningful data, and if the relevant data on stocks, flows, and internal decision-making is proprietary, non-standardised, and dispersed across multiple jurisdictions, the inquiry may become an exercise in reconstructing a moving target from partial traces. One may respond that authorities can compel information, but in reality compulsion is costly and slow, and it is structurally limited when the relevant facts are embedded in operational systems rather than in discrete documents, and when global firms can segment information across subsidiaries and jurisdictions. Even in the presence of extraterritorial jurisdiction doctrines (implementation or qualified effects), enforcement remains dependent on factual reconstruction.[52]

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[48] LD Hill, *Grain Grades and Standards: Historical Issues Shaping the Future* (University of Illinois Press 1990) passim.

[49] For further details, see N MacCormick, 'Norms, Institutions, and Institutional Facts' (1998) 17(3) *Law and Philosophy* 301 ff; DH Cole, 'Laws, Norms, and the Institutional Analysis and Development Framework' (2017) 13(4) *Journal of Institutional Economics* 829 ff.

[50] Consolidated Version of the Treaty on the Functioning of the European Union [2012] OJ C326/47, arts 101–102; Regulation (EC) 1/2003, arts 17–20 (sector inquiries; requests for information; inspections).

[51] Regulation (EC) 1/2003, art 17 (sector inquiries).

[52] See Case C-413/14 P *Intel Corp v Commission* EU:C:2017:632, paras 40-49 (accepting jurisdiction based on implementation test or qualified effects test; qualified effects framed as foreseeable, immediate and substantial effects). For further analysis, see R Whish and D Bailey, *Competition Law* (10th edn, OUP 2021), where the authors discuss of EU jurisdictional reach and enforcement architecture and of verification required for pinpoint pages in this interface.

The BRICS study converts this general point into an enforcement sequence: a joint sector inquiry into global grain trade, followed where justified by parallel investigations into platform-facilitated collusion-like conduct. That sequence is doctrinally attractive because it respects the distinction between market knowledge and infringement finding. A sector inquiry need not presuppose unlawfulness; it creates a shared factual frame from which national authorities can identify overlapping theories of harm, send coordinated information requests and design proportionate interventions.[53]

Moreover, the grain trade's private ordering amplifies this dynamic by creating an alternative epistemic regime, and arbitration not only resolves disputes, yet it also produces awards, findings, and settlement patterns that, if public, would constitute a rich dataset for identifying systemic stress and recurrent practices. In a confidential system, those outputs are sequestered, and the market thus produces its own internal "law" and internal records, but the public legal system cannot access them at scale. This is a paradigmatic instance of jurisdiction without visibility where the state can declare norms and, in principle, apply them, but cannot see the market in the way required to apply them effectively.

The result is a governance paradox: in a highly globalised market, the need for transparency is amplified because the externalities of local conduct propagate globally, yet the institutional structure of the market, dominated by a small number of global actors and governed through private ordering, tends to produce opacity. This paradox can be captured through an implicit matrix: as market power increases, transparency requirements should increase to preserve market integrity, but in the present condition, high market power coexists with low transparency. The doctrinal implication is that enforcement regimes designed for markets where prices, volumes, and ownership are publicly observable will underperform in markets where those variables are privately held. The theoretical implication is that private law cannot be treated as a neutral background, but it is part of the market's epistemic constitution.

At this point, one must also avoid a third error that is conflating opacity with illegality. Opacity can be a rational response to legitimate concerns, such as protection of trade secrets, avoidance of opportunistic behaviour by counterparties, security concerns, and the maintenance of competitive advantage. The aim cannot be to abolish confidentiality as such as the legal aim must be to distinguish legitimate confidentiality from opacity that undermines market integrity and governance. That distinction cannot be made at the level of abstract principle alone, yet it requires institutional design that permits

[53] BRICS Competition Law and Policy Centre, 'A Joint Sector Inquiry by the BRICS Competition Authorities' (n 3) 121–122; BRICS Competition Law and Policy Centre, 'Parallel Investigations Into Digital Platforms as Suspected Facilitators of Collusion-Like Activity' (n 3) 122–123.

regulated transparency: the production of auditable, standardised, and appropriately access-controlled records that allow both private dispute resolution and public oversight to operate without collapsing into either total secrecy or total publicity.

The present condition, then, sets the stage for the central normative fork analysed in the next Part since digitisation is not a neutral technological upgrade. It can either intensify opacity by migrating market facts into ever more sophisticated proprietary platforms, or it can be used to build a new *borsa*-like infrastructure that makes constitutive market facts legible under controlled conditions. The claim is not that a medieval institution can be replicated in the digital age, but that the *borsa*, conceptually reconstructed, names the institutional function of public fact production for market governance. Whether digitisation will serve that function or its opposite is the question to which the argument must now turn.

8. Digitisation as a Fork in the Road: Transparency or Technologically Upgraded Opacity.

The turn to digitisation in commodity exchange is often narrated as an uncontroversial modernisation since paper is displaced by workflow automation, dispersed communications are replaced by integrated interfaces, and post-trade frictions are reduced by the seamless coupling of contracting, performance, and verification. Yet for private law and legal theory the relevant question is not whether digitisation increases "efficiency" in the abstract, but whether it reconfigures the conditions of legal intelligibility under which exchange becomes normatively assessable and institutionally governable.[54] The central claim defended in this section is that digitisation is not merely a technical layer added onto pre-existing contracting ecologies, but a constitutive institutional choice that reallocates control over the market's memory, and thereby reallocates power over the evidential substrate on which both private adjudication and public enforcement depend. The conceptual hinge is the difference between digitisation as legibility and digitisation as enclosure as that difference cannot be read off from the presence of code, interfaces, or data streams, but it is a function of who designs the system, who controls entry, who retains the informational residue of transactions, and which legal entitlements are engineered into the infrastructure as default rules.[55] The "digital *borsa*" thesis, properly understood, is therefore not a

[54] I Lianos, KH Eller and T Kleinschmitt, 'Towards a Legal Theory of Digital Ecosystems' (2024) UCL CLES Research Paper Series 1/2024, 5 ff.

[55] A Ottolia and D Wielsch, 'Mapping the Information Environment: Legal Aspects of Modularization and Digitalization' (2003–04) 6 *Yale Journal of Law and Technology* 174 ff., where the authors underline that, in particular, through the deployment of *Digital Rights Management*

celebratory thesis about technology but a juridical thesis about institutionalising visibility under conditions of high concentration, cross-border fragmentation, and deeply entrenched private ordering.

The provocative idea can be stated with precision since a digitised grain market could, in principle, reproduce the medieval *borsa*'s fairness-function, namely public intelligibility of decisive variables, at a scale far exceeding any pre-modern institution, precisely because digital systems can record transactions in real time, automate verification processes, maintain audit trails, and coordinate across borders without relying on the physical co-presence that historically underwrote observability. Yet the same digitisation can invert the function of visibility by internalising the market's memory within proprietary platforms and deepening informational asymmetries through the creation of private data silos, algorithmic opacity, and technically mediated complexity that operates as a practical shield against contestation.[56] The crucial point is that both outcomes are technologically feasible, yet it is the institutional and legal architecture that selects between them.[57] In this sense, "digitisation as a fork in the road" is not rhetoric but taxonomy because the fork tracks whether the decisive facts of exchange are made durable and contestable as public-relevant facts, or whether they are rendered durable only as privately owned, strategically deployable informational assets.

The digitalisation section of the study project confirms that the fork is already visible. It identifies digital platforms as new nodes in the grain value chain, collecting upstream data on soil, water, pesticide use, fertiliser use, yield and productivity, and downstream data on prices, volumes, market trends and

(*DRM*) systems, private actors are capable of establishing technologically embedded enforcement mechanisms that operate functionally independent of direct state intervention. This development generates increasingly complex configurations between private autonomy and public sovereignty, as normative constraints are implemented through code rather than exclusively through law. Within such hybridised arrangements, where regulatory function and technical infrastructure converge, the preservation of individual freedom becomes more difficult, given that compliance is structurally pre-configured and less susceptible to traditional forms of legal contestation or public oversight.

[56] P Popiel, 'Regulating datafication and platformization: Policy silos and tradeoffs in international platform inquiries' (2022) 14(1) *Policy & Internet* 28 ff., where the author identifies as a central concern in contemporary international policy debates the problem of regulatory "silos" in the oversight of digital platform markets. In the A.'s account, the pervasive processes of platformization and datafication blur traditional policy boundaries, thereby complicating both the conceptual delimitation of regulatory domains and the coordination of coherent, cross-sectoral responses. To substantiate this claim, the A. surveys an expanding body of expert inquiries into digital platforms, treated as an empirical proxy for the broader transnational policy debate, highlighting how these investigations variously address issues of market concentration, data protection and privacy risks, as well as the dissemination of disinformation.

[57] Further, see R Feasey and A de Streel, 'Data Sharing for Digital Markets Contestability: Towards a Governance Framework' (Report, CERRE 2020) passim.

consumer preferences. This confirms that the relevant legal problem is not limited to post-trade dematerialisation. It extends across the value chain, because each data layer can be integrated into a predictive account of future supply, demand and price behaviour.[58]

The appropriate analytic unit is not "data" in the generic sense, but what might be called the constitutive facts of exchange since those facts without which the rights and obligations generated by grain contracting cannot be reconstructed, contested, or enforced. In the present ecology, those facts are dispersed across standard-form contracts, private communications, logistics documentation, inspection certificates, and the internal records of trading houses and intermediaries, while digitisation promises to compress this heterogeneity into machine-readable event streams. The private-law consequence is immediate because once "trade events" become data points inside a platform, control over the platform becomes control over the evidential conditions of contractual performance and breach. In other words, digitisation relocates the site at which "fact" is produced for law. That relocation matters for arbitration no less than for public enforcement. Indeed, if in arbitration, platform records may function as privileged documentary evidence, structuring the factual narrative available to the tribunal, in public enforcement, platform records may determine whether competition authorities can reconstruct market behaviour ex post in a manner sufficient to establish an infringement standard. The legal-theoretical implication is that digitisation is a second-order ordering device as it does not only order transactions, but orders the orderability of transactions by law.[59]

The literature on informational capitalism has long emphasised that the central struggle in data-driven economies is not merely about monetising information, but about stabilising entitlements in information through a mixture of contract, intellectual property, confidentiality, and infrastructural control.[60] That diagnosis is particularly apt for commodity markets where informational advantage can be converted into market power in ways that are difficult to police through traditional ex post legal tests, precisely because the most probative evidence is privately generated and privately held. Digitisation, in this setting, should be treated as a technique of entitlement: a means of converting ephemeral informational asymmetries into durable, legally

[58] BRICS Competition Law and Policy Centre, 'Section 3: Key takeaways' (n 3) 67; BRICS Competition Law and Policy Centre, 'The Role of Data and Digital Platforms in the Grain Value Chain' (n 3) 68–69.

[59] For further details, see RR Campos, *Metamorphoses of Global Law: On the Interaction of Law, Time, and Technology* (Hart 2025) passim.

[60] See A Marciano, A Nicita and GB Ramello, 'Big data and big techs: understanding the value of information in platform capitalism' (2020) 50(3) *European Journal of Law and Economics* 345 ff; L Dencik and others, 'Data and Capitalism' in *Data Justice* (Sage 2022) 11 ff.

insulated assets.[61] If one accepts that framing, the question becomes: which forms of entitlement does digitisation instantiate, and through which doctrinal pathways are they stabilised?

The first pathway is contractual since industry-led digitisation initiatives in global grain markets, namely systems designed by major agribusiness firms to automate post-trade processes and replace paper-based contracting with integrated digital workflows, present themselves as neutral infrastructures for efficiency. But their governance raises foundational private-law questions about power, access, and accountability, such as *i)* who sets the platform's terms of participation, *ii)* which contractual terms allocate rights in the transaction's informational residue, *iii)* which liabilities are disclaimed, *iv)* which audit rights exist, *v)* which evidential presumptions are embedded, *vi)* which dispute-resolution clauses are imposed, and *vii)* which informational outputs are made available to participants or withheld as proprietary products. The familiar private-law structure of adhesion is not eliminated by digitisation, but it is technologised[62], and standard-form contracting migrates from paper forms into click-through architectures and *API* specifications, while the material consequences of those terms become more difficult to observe because they are expressed as technical constraints and permissions. The more the grain trade's contractual ecology is "integrated" into a single workflow, the more the platform operator can use contractual design to define what counts as a

[61] L Royakkers and others, 'Societal and ethical issues of digitization' (2018) 20(2) *Ethics and Information Technology* 127 ff., where the authors examine the social and ethical implications of contemporary digitisation through the lens of six dominant technologies, namely the Internet of Things, robotics, biometrics, persuasive technologies, virtual and augmented reality, and digital platforms. Drawing on a systematic review of the scientific literature, they identify six recurrent normative concerns, such as privacy, autonomy, security, human dignity, justice, and balance of power, against which current technological developments frequently appear to strain or conflict. The A.'s argue that this new wave of digitisation exerts sustained pressure on core public values and emphasise the need for conceptual clarity among stakeholders seeking to shape digital society responsibly. While supervisory frameworks have matured most significantly in the domains of privacy and data protection, oversight mechanisms addressing discrimination, autonomy, human dignity, and structural power imbalances remain comparatively underdeveloped.

[62] For a more general analysis of the topic, see S Koos, 'Digital Globalization and Law' (2022) 6(1) *Lex Scientia Law Review* 33 ff., where the author investigates whether contemporary and prospective processes of digitalisation undermine the normative centrality of trust and the role of human behaviour as a mediating foundation of legal norms. It is argued that technological globalisation and the ubiquity of the internet have already eroded state territorial sovereignty, thereby weakening systemic trust in law. The A. further contends that digital infrastructures increasingly marginalise human conduct and emotionality as structuring elements of legal regulation, with technicity progressively displacing traditional juridical forms. By linking deterritorialisation to the emergence of disruptive digital technologies, the A. raises broader questions concerning the future function of ethics within the legal order of an advanced digital society, while reserving detailed normative and legislative proposals for subsequent inquiry.

"transactional fact" for participants, and to reserve other facts as its own informational surplus.[63]

Covantis and TRACT illustrate the private-law stakes of platformisation. TRACT is described as a sustainability standardisation platform co-owned by ADM, LDC and Cargill, together with SustainIT, while Covantis is a post-contract execution platform founded by major traders to digitise logistics, delivery, quality and quantity control, and documentary exchange. Both are presented as efficiency-enhancing, but both also relocate the market memory of compliance, execution and data verification into infrastructures whose governance is itself a competition-law object.[64]

The second pathway is exclusionary control over participation since when the same concentrated group of actors designs the platform, controls who participates, and retains ownership of the data exhaust, digitisation risks becoming enclosure rather than transparency.[65] This is not simply a political concern about corporate power, but it is a juridical concern about the creation of a private gatekeeping function over the evidential core of a market.[66] The

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[63] C Casalegno and others, 'From transactions to cooperation: Developing supply chain of ancient grains between relationships and joint interests' (2020) 122(5) *British Food Journal* 1381 ff.; C Maughan and others, 'Against the grain: a commons approach to the governance of "alternative grain networks"' (2025) 13(1) *Agricultural and Food Economics* 9 ff., where the authors critique the environmental, social, and economic unsustainability of industrial monoculture-based grain production and examine the emergence of territorially embedded "alternative grain networks" (*AGN*s) across Europe. Through three case studies analysed within an adapted "food as a commons" framework, they explore the actors, motivations, and governance arrangements underpinning these initiatives. They argue that AGNs' transformative potential depends not only on shared material resources and agronomic knowledge, but also on the collective governance of values and territorial supply-chain infrastructures, conceptualised as a "commons for food" capable of supporting a more sustainable and equitable grain system.

[64] BRICS Competition Law and Policy Centre, 'TRACT: A Sustainability Standardization Platform' (n 3) 70–73; BRICS Competition Law and Policy Centre, 'Covantis: Digitalization of Post-Contract Execution' (n 3) 73–75.

[65] See C Ciborra, 'Imbrication of Representations: Risk and Digital Technologies' (2006) 43(6) *Journal of Management Studies* 1339 ff; R Clarke, 'Risks inherent in the digital surveillance economy: A research agenda' (2019) 34(1) *Journal of Information Technology* 59 ff., where the author contends that the digitisation of commercially relevant data has precipitated a qualitatively new phase of business digitalisation, culminating in what is termed the "digital surveillance economy." At its core lies a business model predicated upon the large-scale aggregation and exploitation of personal data to enable behavioural targeting, consumer manipulation, and individualized pricing calibrated to users' maximum willingness to pay, where individuals are effectively incentivised to disclose data at minimal cost. The A. argues that this model poses systemic risks not only to individual autonomy and democratic institutions but also to corporate legitimacy, and outlines a research agenda aimed at assessing whether institutional adaptation, market backlash, or deeper structural transformation will shape its trajectory.

[66] See R Van Loo, 'The New Gatekeepers: Private Firms as Public Enforcers' (2020) 106(2) *Virginia Law Review* 467 ff., where the author observes that, over the past two decades, administrative agencies have increasingly deputised private firms to perform quasi-regulatory functions

platform is then not merely a venue, but a quasi-jurisdictional authority that defines the conditions of market access, and thus of competition, through technical standards and contractual permissions. The legal-theoretical problem is that such a platform can present itself as a "market" while operating as a private regulatory device whose rulemaking is insulated by contract and by the practical inability of smaller actors to bargain.[67]

The third pathway is informational appropriation as in grain markets, information about stocks, flows, freight, blending, and timing is itself a strategic asset that confers competitive advantage. If digitisation produces a consolidated record of those variables, the governance question becomes whether that record is constituted as a shared infrastructure enabling contestability, or as a private asset reinforcing incumbency. The risk is particularly acute because informational advantage in grain markets is not merely a matter of superior forecasting, but it can be a matter of controlling and observing logistics chokepoints and inventory positions, which can shape price formation in ways that may be difficult to distinguish from "market-driven" outcomes ex post. In such a setting, digitisation without public oversight may entrench power rather than discipline it, and the normative corollary is that technology must be treated as an institutional choice, not a neutral upgrade.[68]

At this point, the doctrinal inquiry must shift from diagnosis to legal articulation, and, in this direction, the EU's recent data governance

through legal rules, guidance, and judicial orders. Firms are required to incorporate contractual inspection rights *vis-à-vis* third parties and to discipline detected misconduct, thereby assuming responsibilities analogous to those of public regulators. This model of "enforcer-firms" carries significant theoretical and policy implications: it expands corporate public duties, reshapes internal governance structures, and offers resource-constrained regulators new compliance tools. At the same time, the A. cautions that poorly designed frameworks risk generating broad zones of unaccountable private authority, rendering these administrative gatekeepers central to any contemporary theory of the firm or regulation.

[67] In more general terms, see CM Bruner, 'States, Markets, and Gatekeepers: Public-Private Regulatory Regimes in an Era of Economic Globalization' (2008) 30 *Michigan Journal of International Law* 125 ff., where the author illuminates the diversity of international economic regimes by examining the "public-private gatekeeper," an under-theorized regulatory form in which conventional distinctions between state and market, public and private authority, hard and soft law, and international and domestic policy are effectively blurred.

[68] BA Greenberg, 'Rethinking Technology Neutrality' (2015) 100 *Minnesota Law Review* 1495 ff., where the author challenges the purported neutrality of "technology-neutral" regulation, arguing that such neutrality is illusory. Legislative drafting and interpretation are invariably shaped by contingent social and political contexts, and even the selection of technologies to which neutral treatment is extended reflects normative judgments concerning the balance between protecting authors and fostering technological development. Furthermore, the *ex ante* inclusion of unforeseen technologies risks future distortions, as legal frameworks calibrated to prior policy compromises may inadequately accommodate novel uses, thereby producing discriminatory effects against emergent technologies.

instruments, while not drafted for grain markets as such, are highly instructive because they demonstrate a clear legislative recognition that private law rules are "key" to the overall framework for data sharing, and that digitisation creates systemic risks of contractual imbalance and data enclosure that cannot be neutralised by exhortations to innovate. *Regulation (EU) 2023/2854* (the *Data Act*) is especially notable for its explicit attempt to adapt contract law in order to prevent the exploitation of contractual imbalances that hinder fair access to and use of data[69]. The doctrinal significance is twofold, since, first, the EU legislator explicitly situates data-sharing governance within private law rather than treating it as an exclusively regulatory domain, and, second, it introduces a structured intervention into business-to-business contracting that is difficult to reconcile with the classical liberal narrative in which enterprise-to-enterprise contracting is presumptively self-correcting.[70]

The *Data Act*'s architecture is not reducible to a single entitlement as it creates rights of access and makes-available obligations in relation to "connected products" and "related services," but its deeper private-law relevance lies in its recognition that, absent intervention, data-sharing arrangements are likely to be shaped by bargaining power, standard-form contracting, and technical control of interfaces[71]. The *Regulation* accordingly requires, in specified contexts, that data holders make data available under fair, reasonable, and non-discriminatory terms and in a transparent manner, and it couples those requirements with a regime for controlling unfair contractual terms in *B2B* relations. [72] This is not merely consumer-style fairness transplanted into commercial law, yet it is a targeted attempt to address a specific pathology of the data economy: the use of unilateral terms to control access to the informational inputs necessary for downstream competition and innovation. The key legal-theoretical move is to treat unfairness not as a moral category, but as a structural category, and thus an indicator that a stronger party has used control over data access to impair the other party's ability to protect legitimate commercial interests in the data.[73]

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[69] Regulation (EU) 2023/2854 of the European Parliament and of the Council of 13 December 2023 on harmonised rules on fair access to and use of data and amending Regulation (EU) 2017/2394 and Directive (EU) 2020/1828 (Data Act) [2023] OJ L 2854, recital 5.

[70] Data Act, recitals 60–62, art 13(1), art 50 (temporal application of Chapter IV).

[71] M Pathak, 'Data Governance Redefined: The Evolution of EU Data Regulations from the GDPR to the DMA, DSA, DGA, Data Act and AI Act' (2024) 10(1) *European Data Protection Law Review* 43 ff.

[72] Data Act, art 4(1) (user access rights), art 4(4) (prohibition on making the exercise of rights unduly difficult by interface design), art 5(1) (user right to share data with third parties).

[73] On this topic, see M Turčan, *Ethical Dimensions of the Theory of Law* (Comenius University 2025) passim, https://dspace.uniba.sk/xmlui/bitstream/handle/123456789/240/Ethical_Dimensions_of_the_Theory_of_Law.pdf?sequence=1.

This is highly relevant to the grain-trade digitisation fork as if industry-led platforms become the *locus* at which the facts of exchange are recorded and rendered usable, then control over access to those records is likely to be allocated through the platform's standard terms. Absent a regime constraining unfair terms, the platform can convert infrastructural control into contractual entitlement and it can insist on broad licences over data exhaust, impose asymmetrical audit and disclosure duties, and allocate liability for system errors or data integrity failures to weaker parties. The *Data Act*'s Chapter IV regime, which renders unilaterally imposed unfair terms non-binding, provides a legislative template for resisting such outcomes, and it also clarifies a crucial methodological point for comparative private law: in data-driven markets, contractual freedom is not best understood as an abstract capacity to choose terms, but as the practical capacity to contest the institutional design choices that determine which terms can be proposed in the first place.[74]

The *Data Act* also illustrates the legal construction of "transparency" as a bounded, purposive notion rather than an ideal of indiscriminate disclosure since its text distinguishes between access for users and data sharing with third parties, introduces constraints on manipulation and non-neutral interface design, and addresses the interaction between data sharing and trade secret protection[75]. For the digital *borsa* thesis, the most instructive provisions are those on trade secrets, because they instantiate the central doctrinal tension in any attempt to produce market legibility: how to render decisive variables contestable without forcing the disclosure of legitimately confidential business information in a way that destroys incentives to invest or creates expropriative externalities.

The *Regulation* requires that trade secrets be preserved and disclosed only where necessary for the relevant purpose, and it demands that data holders and recipients agree proportionate technical and organisational measures to preserve confidentiality. It also permits withholding or suspension of data

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[74] In this sense, see P Vincent-Jones, 'Contractual governance: Institutional and organizational analysis' (2000) 20(3) *Oxford Journal of Legal Studies* 317 ff., where the author analyses contract as a central governance mechanism in contemporary economic and social relations, situating the discussion within broader interdisciplinary scholarship on contracting. Against the backdrop of outsourcing and the privatisation of public services, contract is shown to structure not only market and quasi-market exchanges but also regulatory relationships between the state and citizens in areas such as welfare, education, and criminal justice. The A. proposes a framework for evaluating the quality of governance relationships according to the relational character of contractual norms, arguing that democratic participation and citizenship must play a constitutive role in shaping responsive contractual regulation.

[75] Data Act, arts 4(6)–(8) (trade secret preservation and exceptional refusal), 5(9)–(11) (trade secrets *vis-à-vis* third parties, withholding/suspension, exceptional refusal on serious economic damage).

sharing when agreed measures are not implemented or confidentiality is undermined, and it allows refusal in exceptional circumstances where the trade secret holder can demonstrate that serious economic damage is highly likely despite protective measures. What matters here is not only the substantive balance struck, but the juridical structure: the *Regulation* does not treat "trade secret" as a trump that annihilates data-sharing obligations, nor does it treat transparency as a trump that annihilates secrecy. Instead, it treats secrecy as a legally protected interest that must be reconciled with access rights through a regime of proportionate measures, reasons-giving, and recourse mechanisms. This is precisely the kind of structure a digital *borsa* would require if it is to avoid both extremes of the fork: enclosure through secrecy claims, and destructive disclosure through naive transparency.

A further element of the *Data Act*'s architecture has direct relevance to the political economy of digitised infrastructures: its explicit reference to the *Digital Markets Act* (*DMA*) gatekeeper concept in constraining data flows. In Article 5(3), the *Data Act* excludes undertakings designated as gatekeepers under Article 3 of *Regulation (EU) 2022/1925* from being eligible third parties for the user's right to share data.[76] One need not generalise the *DMA*'s specific logic to the grain trade in order to extract the legal-theoretical point: the EU legislator treats gatekeeper *status* as structurally incompatible with certain data-access pathways, because gatekeepers can leverage intermediary control and informational advantage in ways that threaten competition and fairness. The concept of "gatekeeper" thus functions as an institutional diagnosis since it identifies a form of infrastructural power that requires *ex ante* constraints on data appropriation. In the context of grain-market digitisation, this underscores that the central risk is not only bilateral unfairness in contracting, but the systemic accumulation of data as infrastructural power in the hands of a few intermediaries.

Yet data governance instruments alone cannot decide the fork, because digitisation can also transform the structure of competitive interaction, including by creating conditions under which coordination becomes easier. Here EU competition law, and particularly the Commission's updated horizontal cooperation guidance, becomes doctrinally pivotal. The *2023 Guidelines* on the applicability of Article 101 *TFEU*[77] to horizontal co-operation agreements adopt an expansive understanding of information exchange that explicitly includes

[76] Data Act, art 5(3); Regulation (EU) 2022/1925 of the European Parliament and of the Council of 14 September 2022 on contestable and fair markets in the digital sector and amending Directives (EU) 2019/1937 and (EU) 2020/1828 (Digital Markets Act) [2022] OJ L 265/1, art 3 (gatekeeper designation).

[77] European Commission, 'Guidelines on the applicability of Article 101 of the Treaty on the Functioning of the European Union to horizontal co-operation agreements' [2023] OJ C 259/1, paras 370–373 (scope and forms of information exchange).

raw data, pre-processed data, and meaningful information "of any form", and they emphasise that exchanges may occur indirectly through third parties such as service providers, platforms, online tools, or algorithms. The practical implication is that a digital infrastructure that appears to be a neutral post-trade utility may, in competition-law terms, constitute a mechanism for information exchange if it transmits competitively sensitive variables among competitors, whether directly or through shared tools. This matters for the digital *borsa* thesis because it shows that "transparency" is not unambiguously pro-competitive since in tight oligopolies, increased transparency can facilitate collusion by allowing firms to monitor one another's strategies. If the medieval *borsa*'s public pricing constrained opportunism under very different institutional and competitive conditions, in contemporary concentrated markets, unstructured transparency can entrench coordination rather than discipline it.

The CADE analysis of TRACT is particularly instructive for the design of a lawful *borsa*. The remedies described in the study require technological separation between the joint venture's software, hardware, data spaces and cloud and the parties' own digital ecosystems; compliance-by-design; open and non-discriminatory access; data exchange only between parties with a commercial relationship; and a prohibition on using the platform as a centre for joint decision-making. These conditions are not peripheral safeguards. They are the legal grammar of a *borsa* that must be transparent enough to be useful and insulated enough not to become a cartel technology.[78]

The *2023 Guidelines* are explicit on a point that is central to contemporary debates about algorithmic markets because firms cannot evade liability by attributing their conduct to algorithms. Algorithmic pricing or optimisation tools remain under the firm's control in the relevant legal sense, and the use of a shared optimisation algorithm that takes commercial decisions based on competitively sensitive data feeds can amount to horizontal collusion[79]. The *Guidelines* also caution that the aggregation of commercially sensitive information into a pricing tool offered by a single IT company to which various competitors have access can generate infringement risks. The relevance to grain-market digitisation is immediate since if a platform consolidates post-trade records and couples them with analytical services, such as forecasting, optimisation, benchmarking, it may become a functional coordination device even if no explicit agreement to collude is articulated. The risk is not limited to deliberate cartelisation, yet it includes the technologised reduction of strategic

[78] BRICS Competition Law and Policy Centre, 'Box 13. Remedies in the TRACT Case' (n 3) 73.

[79] Horizontal Guidelines (n 83), paras 380, 402–403 (algorithmic decision-making and liability, shared optimisation algorithms and indirect exchanges).

uncertainty that competition law treats as problematic when it arises from concertation rather than from market observation.

The *OECD*'s analysis of algorithms and collusion reinforces this concern by emphasising that algorithms can amplify collusion risks and raise hard questions about the boundaries of "agreement" and tacit coordination, even in markets lacking the classic structural features associated with collusion[80]. While OECD reports do not bind, they are highly relevant as authoritative policy analysis supporting a doctrinally cautious approach to digitised transparency in concentrated markets. The combined lesson of *EU Guidance* and *OECD* analysis is that a digital *borsa* cannot be designed as a simple maximal-disclosure device, and the legal problem is to create legibility for accountability without creating a coordination substrate for incumbents. That is a design problem in the strong sense: a problem of engineering legal constraints into the architecture so that certain informational flows are enabled (those necessary for verification, audit, and oversight) while others are constrained (those that would transmit future pricing intentions, individualised strategic variables, or granular positions among competitors).[81]

From the standpoint of private law theory, this produces a distinctive normative tension since the classical private-law imagination tends to treat information as either part of the contractual bargain (and therefore within party autonomy), or as part of the protected sphere of confidentiality and trade secrecy (and therefore within exclusionary control). But the digitised grain market reveals an intermediate category: information as infrastructural input whose governance structures the feasibility of competition itself.

Once information is understood as infrastructure, the legal question shifts from "who owns the data" to "which entitlements in the data are consistent with competitive market ordering and with the public accountability of vital supply chains." This is precisely the conceptual space in which modern platform regulation has emerged: the recognition that intermediaries can become "essential infrastructure for a host of other businesses that depend upon" them, and that this infrastructural position enables them to exploit informational asymmetries and collected data in ways that traditional doctrinal tests focused narrowly on price effects may fail to capture.

The pertinence of this literature to the grain trade is not that grain platforms are identical to e-commerce platforms, but that the structural logic of

[80] OECD, *Algorithms and Collusion: Competition Policy in the Digital Age* (OECD Roundtables on Competition Policy Papers No 206, 2017), https://www.oecd.org/daf/competition/algorithms-and-collusion-competition-policy-in-the-digital-age.htm.

[81] JE Cohen, *Between Truth and Power: The Legal Constructions of Informational Capitalism* (OUP 2019), where the author theorizes a general framework on legal constructions of informational capitalism.

intermediated markets, namely dependency, data capture, and rule-setting through private terms, recurs across sectors.[82]

Returning to the conceptual fork previously introduced, its legal significance can be stated with sharper edges. Digitisation that is designed as a private workflow under the control of dominant traders tends toward enclosure because it stabilises informational entitlements in favour of incumbents through three mutually reinforcing mechanisms, namely *i)* contractual terms of participation, *ii)* technical control of interfaces and analytics, and *iii)* the practical transformation of market facts into privately owned data products. By contrast, digitisation that is designed as a digital *borsa* in the strong sense must treat market memory as a shared institutional resource subject to structured legibility requirements, such as recorded in auditable forms, preserved as evidence, and accessible under differentiated conditions that reconcile confidentiality with accountability. That reconciliation cannot be achieved through exhortation, yet it requires legal design choices about governance, access, and evidential architecture.

The EU's *Data Act* and *Data Governance Act* illustrate that such legal design is no longer conceptually alien to contemporary European private law since the EU legislator is willing to restructure contractual freedom in data contexts, impose proceduralised secrecy protections, and create regulatory scaffolding for data intermediation services that must take competition-law compliance seriously.[83]

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[82] See LM Khan, 'Amazon's Antitrust Paradox' (2017) 126 Yale Law Journal 710, 710 ff., where the author demonstrates how online platforms function as pivotal intermediaries that govern access to essential digital infrastructures and are positioned to leverage data generated through platform participation in ways that may disadvantage rival firms operating within or alongside the platform ecosystem. The A.'s analysis highlights that dominant platforms, by integrating across business lines and leveraging data collected from third-party sellers and users, can entrench their power in ways that traditional antitrust doctrine fails to capture. In particular, the A. argues that because online platforms like *Amazon* act as intermediaries and gather extensive information through their operations, they can use that informational advantage to undermine competitors, realizing a dynamic that directly informs many contemporary accounts of informational leverage in platform markets.

[83] L Zoboli and M Bernatt, 'The Interplay of Data Protection, Competition Law, IP Law and Data Sharing' in L Zoboli and M Bernatt (eds), *Data Sharing Regulation in Europe* (Routledge 2025) 183 ff., where the authors examine the coherence of the EU data law framework governing data sharing, including the Data Act, Digital Markets Act, Data Governance Act, General Data Protection Regulation, Open Data Directive, and the Regulation on the Free Flow of Non-Personal Data. The authors identify structural gaps and normative tensions within this regime and advances proposals for a more balanced and internally consistent approach that reconciles data-driven innovation with privacy, competition, and intellectual property protection, highlighting the development of *Common European Data Spaces* as a potential mechanism of systemic alignment.

The comparative question for EU law and BRICS jurisdictions is therefore not whether digitisation should occur, but which entitlements and institutional forms should govern the market memory that digitisation produces. The BRICS dimension adds an additional layer, namely divergent regimes of data governance, sovereignty, and competition enforcement capacity, which will be treated systematically in the next section, while here it suffices to insist that any serious digital *borsa* proposal must be normatively bilingual, capable of translating the same institutional principle (legibility under conditions of concentration) into divergent legal orders without collapsing into either techno-solutionism or jurisdictional parochialism.

In summary, digitisation will not automatically restore the fairness-function of the *borsa*, but in concentrated markets it may deepen the very opacity and practical impunity it promises to overcome, by relocating market memory into private infrastructures insulated by contract and protected by technical complexity. The legal task is to prevent "transparency" from becoming either an *alibi* for enclosure or a naive invitation to coordination, and the digital *borsa* thesis remains viable only if it is reconceived as an institutional-legal project: the construction of a hybrid evidential infrastructure that makes decisive facts verifiable and contestable for the right audiences, at the right level of granularity, under enforceable governance constraints. The next section will argue that such an infrastructure is possible, and that the most plausible path to its construction runs through a deliberately designed combination of standardisation, tiered disclosure, structured confidentiality, and competition-by-design, anchored in an evidentiary foundation that can support both private adjudication and public oversight across jurisdictions.

9. The Digital Borsa as a Competition-Law Institution.

The preceding analysis has treated the "digital *borsa* for grain" as neither a mere trading venue nor a purely informational service, but as a deliberately engineered institutional technology that mediates the legal intelligibility of commodity exchange. That framing has decisive consequences for the law of restrictive agreements, for regulatory design, and for the private-law structuration of evidence and enforceability.

In orthodox antitrust doctrine, the paradigmatic legal object is the agreement or unilateral conduct as the informational environment is typically presupposed as a fact that may aggravate or mitigate competitive risk. Yet in markets structurally prone to opacity rents, because contractual fragmentation, bilateral confidentiality, and decentralized logistics jointly render market-wide states of affairs practically unknowable to participants *ex ante* and to adjudicators *ex post*, the informational environment is not merely an empirical background. It is a legally relevant part of the market's

institutional constitution and it determines what can be known, by whom, at what temporal granularity, and under what evidentiary burdens.

The central claim proposed here is that the digital *borsa* should be understood as a lawful public–private infrastructure for producing structured, tiered, and contestable market knowledge, rather than as an "information exchange" in the antitrust sense. Whether that claim can be sustained *lex lata* depends on design choices that map onto the internal grammar of Article 101 *TFEU* and functional equivalents in BRICS jurisdictions. Thus the *borsa* must be built to reduce the epistemic asymmetries that enable exploitation and opportunism while simultaneously preventing the creation of a coordination device that substitutes "practical cooperation" for the "risks of competition".

The conceptual hinge is the distinction between disclosure that enables decentralized rivalry and disclosure that enables coordination. EU competition law has long treated "concerted practice" as a category capable of capturing forms of mutual orientation that fall short of a concluded agreement but nonetheless displace independent decision-making. The canonical formula in the case law defines concerted practice as a form of coordination which, without being taken to the stage of an agreement properly so called, knowingly substitutes for the risks of competition practical cooperation leading to market conditions that do not correspond to normal market conditions, having regard to the nature of the products, the importance and number of undertakings, and the size and nature of the market concerned.[84] That formula is not merely descriptive, but it is diagnostic since it indicates that the legal system is normatively committed to preserving the informational uncertainty that makes rivalry meaningful, while acknowledging that some degree of mutual predictability is the inevitable by-product of market interaction.

A digital *borsa* that publishes, in real time and at firm-level granularity, transaction prices, volumes, and delivery commitments would therefore carry an obvious Article 101 risk: the instrumentality of transparency could become the instrumentality of coordination. But this familiar caution can be overstated if it is treated as a categorical objection to any institutionalization of visibility. The deeper doctrinal question is whether, and under what conditions, an infrastructure that generates market intelligibility can be characterized as facilitating tacit assent to a "common anticompetitive practice", or instead as enabling the kind of contestable knowledge that reduces coercive bargaining power and opportunistic renegotiation without creating a focal point for collusion.

[84] See Joined Cases 40–48, 50, 54–56, 111, 113 and 114/73 *Coöperatieve Vereniging "Suiker Unie" UA and Others v Commission* [1975] ECR 1663, paras 26 (definition of "concerted practice"), 28 (holistic evaluation of evidence).

The *Eturas* judgment supplies an analytically precise warning and, simultaneously, a blueprint for lawful design. There, the Court confronted a digital environment in which a system administrator disseminated a message capping discounts through an internal platform, and participating undertakings were alleged to have tacitly assented. The Court held that a concerted practice may be inferred, in the absence of direct evidence, from coincidences and indicia that, taken together, constitute evidence of infringement absent another plausible explanation, and it indicated that where undertakings are aware of the content of a message recommending anticompetitive conduct, their continued use of the system, absent distancing, can support an inference of tacit assent, provided the other elements of concerted practice, such as subsequent market conduct and a causal relationship, are also present.[85]

The jurisprudential significance, for present purposes, lies in the Court's sensitivity to digital infrastructures as vectors of legally relevant communication and to the modalities by which "awareness" and "assent" may be inferred. A grain *borsa* that includes standardized messaging, bid/ask aggregation, or rule-based "recommended" pricing parameters could, if misdesigned, replicate the *Eturas* risk profile: the platform itself would become the locus of a communicated norm, and the compliance of users could be read as tacit adherence.

Accordingly, the lawfulness of the digital *borsa* must be pursued through an institutional design that structurally precludes the platform from functioning as a conduit for individualized strategic signals or for normatively loaded recommendations. The relevant principle is not "opacity", but "structured non-identifiability combined with auditability", and the *borsa* should be engineered so that the data most relevant to bargaining fairness and to the reduction of exploitation, namely quality-adjusted price ranges, verified delivery performance metrics, standardized contract-term distributions, and aggregate inventory/logistics constraints, are made available at a level of generality that improves the outside options of weaker parties and enables regulators and courts to test ex post claims of market conformity, while the data most useful for coordination, such as firm-specific current offers, individualized transaction counterparts, and immediate forward commitments, remain non-public, accessible only to the contracting parties, and subject to robust access controls.

The point is to replace the bilateral secrecy that enables opportunistic *ex post* exploitation with a regime of tiered legibility that supports contestation, without creating a live coordination channel. In antitrust terms, the *borsa* must

[85] See Case C-74/14 *Eturas UAB and Others v Lietuvos Respublikos konkurencijos taryba* EU:C:2016:42, paras 42 (elements of concerted practice), 55–57 (tacit assent inference conditioned on awareness and other elements).

provide "information as infrastructure" rather than "information as communication".[86]

This distinction can be further sharpened by deploying a legal-technical taxonomy of "visibility layers". At the first layer, the *borsa* performs evidentiary registration since the platform creates tamper-resistant records of concluded contracts, delivery milestones, quality certifications, and payment events. This layer is, in principle, private between counterparties, but it generates admissible evidence for disputes and regulatory investigations.

The three visibility layers should therefore be calibrated to the four dimensions of orchestrating power identified by the study. Financial embeddedness requires a field capable of linking physical trades to financing and derivative exposures; corporate interlinkages require beneficial-ownership and control metadata; platform ownership requires audit logs and interoperability safeguards; vertical integration requires logistics and storage-event reporting. Without this correspondence, the borsa would risk recording transactions while leaving the power architecture that gives those transactions their market meaning outside the evidentiary perimeter.[87]

At the second layer, the *borsa* performs market-statistical synthesis as it produces anonymized, time-lagged, and quality-adjusted indices and distributions that can be used by market participants to evaluate reasonableness, by courts to assess good faith and fair dealing standards (where applicable), and by regulators to detect anomalies.

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[86] In this regard, see DM Lamberton, 'An information infrastructure for development' (2001) 19(3) *Prometheus* 223 ff., where the author advances an information-theoretic perspective on development, with particular emphasis on the role of telecommunications. The A. contends that, despite its analytical significance, information economics has remained overshadowed by the rhetoric of the "new economy," which portrays digital markets as self-sufficient and technologically autonomous. In contrast, the Author argues that the central challenge lies not in adapting to a purportedly novel online economy, but in addressing the deeper socio-economic transformations that have progressively destabilised traditional assumptions of economic efficiency and the policy paradigms built upon them. Further, see I Semenets-Orlova and others, 'Information Exchange and Communication Infrastructure in the Public Sector' in *Conflict Management in Global Information Networks* (2019) 519 ff., where the authors analyse the defining features and evolving trajectories of public-sector communication infrastructures across European states, highlighting both historical patterns and contemporary developments. They argue that the expansion of governmental communication has strengthened reciprocal channels between state and society, facilitated the incorporation of public opinion, and modernised governmental information practices. Emphasising that effective public communication is integral to policy implementation, the Authors anticipate the progressive formalisation of "codes of communication" and regulatory standards governing government advertising within democratic systems.

[87] BRICS Competition Law and Policy Centre (n 3) Figure 10, 30; BRICS Competition Law and Policy Centre, 'A Joint Sector Inquiry by the BRICS Competition Authorities' (n 3) 121–122.

At the third layer, the *borsa* performs supervisory intelligibility because it provides regulators, namely competition authorities, market surveillance bodies, and (where derivatives are implicated) financial supervisors, with controlled access to granular data for investigative purposes, with procedural safeguards for confidentiality and trade secrets.

Only the first and third layers involve granularity, while only the second layer is broadly public.

The legality of the *borsa* under EU competition law should then be assessed not by the mere fact of "information exchange", but by whether the architecture creates an "undetermined number" of bilateral or multilateral data-sharing relationships in a manner that maintains independence of decision-making and prevents the emergence of tacitly shared norms.

The relevant *lex lata* constraints do not lie solely in Article 101, while Article 102 *TFEU* is equally central where the *borsa* becomes an essential gateway, standard-setter, or unavoidable repository of commercially valuable information. If participation becomes practically necessary for market access, for example, because major buyers require Borsa-registered performance histories, or because financing and insurance become conditional on *borsa*-verified documentation, the entity operating the *borsa* may acquire a position of dominance in a market for trade-data intermediation or for verification services. In that event, exclusionary access rules, discriminatory fees, or self-preferencing in associated services could constitute abuse.

The legal argument for a digital *borsa* must therefore treat non-discrimination, interoperability, and contestable governance not as aspirational policy virtues but as antitrust-relevant design constraints. The *borsa's* membership criteria, data-access protocols, and fee schedules must be framed as objective, transparent, and proportionate, with review mechanisms that prevent covert exclusion. In a market already marked by structural bargaining inequality, a dominant data intermediary could reconstitute the very rent extraction the *borsa* is meant to defeat, now by controlling the "credible history" necessary for contracting.

This antitrust sensitivity also clarifies a deeper methodological point about institutional remedies. In commodity markets, enforcement focused solely on discrete episodes of collusion or abuse risks remaining episodic because the systemic causes of opacity rents persist: the same informational fragmentation that enables exploitation also hinders detection. A *borsa*, by contrast, is a structural remedy aimed at improving detectability and contestability.

That move is doctrinally intelligible within EU competition law's remedial *repertoire* since *Regulation 1/2003* authorizes sector inquiries where trade between Member States may be affected by trends suggesting that

competition may be restricted or distorted[88]. While such inquiries are classically investigatory rather than institution-building, the insight is that a sector inquiry can generate the evidentiary basis for recommending or imposing remedies that target the market's informational constitution, including commitments that require standardized reporting, interoperability, or non-discriminatory access to essential data. The *borsa* proposal can thus be situated as a legally disciplined response to a diagnostic finding: that the grain market's epistemic architecture systematically impedes both competitive self-correction and effective enforcement.

From the remedial standpoint, the study's proposal for a BRICS Global Grain Exchange is valuable because it treats institutional design as a competition remedy, not as an industrial-policy ornament. It argues that a well-designed exchange would replace opaque private governance with public rules, increase price transparency, reduce counterparty risk through central clearing, and improve participation by smaller producers, cooperatives and national traders through open, non-discriminatory access. Those elements are not necessarily identical to the digital borsa proposed here, but they are functionally convergent: both seek to reconstitute market legibility by changing the institutional conditions under which trade facts are produced.[89]

10. Data Governance, Evidentiary Infrastructure, and the Private Law of Trade Information in EU Law.

The doctrinal plausibility of a digital *borsa* increases when it is mapped onto the emergent EU legal framework for data access and intermediation, where two instruments are structurally salient: the *Data Governance Act* and the *Data Act*. The former defines and regulates "data intermediation services" as services aiming to establish commercial relationships for data sharing between an undetermined number of data subjects and data holders on the one hand and data users on the other, through technical, legal, or other means, while excluding certain closed-group or value-added aggregation services.[90] The latter establishes harmonized rules on fair access to and use of data, including rights of users of connected products and related services to access data and

[88] Regulation (EC) 1/2003 art 17 (sector inquiries).

[89] BRICS Competition Law and Policy Centre, 'An Institutional Remedy: A Proposal for a BRICS Global Grain Exchange' (n 3) 124–125.

[90] Regulation (EU) 2022/868 of the European Parliament and of the Council of 30 May 2022 on European data governance and amending Regulation (EU) 2018/1724 (Data Governance Act) [2022] OJ L 152/1, arts 2(11) (definition of "data intermediation service"), 10 (data intermediation services subject to requirements and notification).

to share it with third parties, and imposes constraints on unfair contractual terms unilaterally imposed in *B2B* data-access contexts.[91]

For the EU data-governance mapping, the study helps specify which data are likely to matter. It identifies upstream agronomic and productivity data, downstream price and volume data, platform-generated execution data, sustainability metrics, logistics data, trading-volume information and transportation-infrastructure usage. A digital *borsa* cannot be legally credible if it merely collects price points. It must define trade events through a taxonomy that captures quality, timing, delivery, routing, certification, financing relevance and platform-generated audit logs, while allocating each field to the appropriate public, participant or supervisory access layer.[92]

Even if a grain *borsa* is not, strictly speaking, a "data intermediation service" within the meaning of the *Data Governance Act* in every instantiation, because many commodity trade data are generated not by connected products but by contractual and logistical events, the conceptual structure of the *Act* illuminates how EU law is beginning to treat the intermediation of data relationships as a regulable market role rather than as an ungoverned private ordering.

A grain *Borsa* designed as an intermediation service would therefore sit within a legal environment increasingly attuned to the risks of concentrated data control, including the need for organizational separation and neutrality conditions that prevent the intermediary from exploiting data to compete with its users.

The *Data Act* is particularly relevant because it provides legal techniques for addressing a chronic problem in commodity contracting: the use of unilateral terms to appropriate informational advantage. In *B2B* contexts, a contractual term concerning access to and use of data, or liability and remedies for breach or termination of data-related obligations, that has been unilaterally imposed by one enterprise on another is not binding if unfair, and unfairness is articulated through a standard that captures gross deviation from good commercial practice in data access and use, contrary to good faith and fair dealing.[93]

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[91] Regulation (EU) 2023/2854 of the European Parliament and of the Council of 13 December 2023 on harmonised rules on fair access to and use of data and amending Regulation (EU) 2017/2394 and Directive (EU) 2020/1828 (Data Act) [2023] OJ L 325/1, art 5 (user right to request sharing with third parties).

[92] BRICS Competition Law and Policy Centre, 'The Role of Data and Digital Platforms in the Grain Value Chain' (n 3) 68–69; BRICS Competition Law and Policy Centre, 'Covantis: Digitalization of Post-Contract Execution' (n 3) 74–75; BRICS Competition Law and Policy Centre (n 3) 122–123.

[93] Data Act, art 13 (unfair contractual terms unilaterally imposed on another enterprise), 8(2) (non-binding effect of unfair terms in relevant contexts).

The immediate doctrinal significance is not that the *Data Act* directly governs grain sale contracts as such, but that it legitimates, as a matter of EU regulatory policy embedded in binding law, the view that data-access arrangements are susceptible to structural unfairness and therefore appropriate objects of mandatory control. That is the precise normative register in which a grain *borsa* should be justified: as a mechanism that reduces the ability of powerful trading partners to impose data opacity through contractual dominance and to convert that opacity into opportunistic ex post rent extraction.

One must, however, resist an overly linear story of "more data equals better markets". EU law simultaneously protects confidential business information through the *Trade Secrets Directive*, which defines trade secrets as information that is secret in the sense of not being generally known or readily accessible, has commercial value because it is secret, and has been subject to reasonable steps to keep it secret.[94]

A grain *borsa* that records contract prices, counterparties, delivery routes, or financing terms will necessarily handle information that may qualify as trade secrets. A coherent legal design must therefore treat confidentiality not as the negation of visibility but as a parameter within visibility. The *borsa*'s architecture should embed the *Directive*'s logic as it should require contributors to classify sensitive fields, implement access controls, and provide for procedural mechanisms allowing parties to contest disclosure requests. At the same time, it should prevent over-classification from recreating opacity rents by allowing the platform's governance to challenge secrecy claims where information is not, in fact, secret or where aggregation and time-lagging neutralize competitive sensitivity.

The doctrinal implication is that a *borsa*'s "public layer" must be constructed so that it does not disclose trade secrets within the *Directive*'s meaning, while its "supervisory layer" must be built with confidentiality guarantees appropriate for disclosure to public authorities and for use in proceedings.

The connection to private law is not merely instrumental but structural since many disputes in grain trading, such as quality claims, late delivery, force majeure controversies, documentary compliance under letters of credit, and allegations of repudiation, turn on factual questions for which evidence is fragmented across counterparties and intermediaries. The *borsa*'s evidentiary registration layer would directly alter the epistemic posture of such disputes by creating standardized, time-stamped, and verifiable records.

[94] Directive (EU) 2016/943 of the European Parliament and of the Council of 8 June 2016 on the protection of undisclosed know-how and business information (trade secrets) against their unlawful acquisition, use and disclosure [2016] OJ L 157/1, art 2(1) (definition of trade secret).

In EU law, the legal recognition of electronic signatures and electronic evidence is anchored in *eIDAS*, which provides that an electronic signature shall not be denied legal effect and admissibility as evidence solely on the ground that it is electronic, and that a qualified electronic signature has the equivalent legal effect of a handwritten signature[95]. That provision does not, of itself, compel any particular institutional form, but it supplies the necessary legal substrate for an evidentiary infrastructure in which contract conclusion, amendments, and confirmations can be authenticated in a manner that is portable across Member States and resistant to *ex post* denial.

The *borsa*, if designed to rely on qualified signatures or equivalent trust services, would thus operate not in a normative vacuum but within a framework that facilitates cross-border enforceability and evidentiary reliability.

The same point can be restated through the lens of private enforcement and disclosure. Although the *borsa* is not proposed primarily as an antitrust litigation tool, it would inevitably affect the evidentiary ecology of competition disputes and of related civil claims. Indeed, the *Antitrust Damages Directive* requires Member States to ensure that national courts can order disclosure of relevant evidence within the control of defendants or third parties, subject to proportionality and confidentiality protections.[96] The *Directive*'s significance for the *borsa* lies in its implicit recognition that informational asymmetry is a structural barrier to rights realization.

A *borsa* that retains standardized datasets and audit trails could reduce the need for intrusive disclosure by making certain information routinely available in structured form, while simultaneously improving proportionality analysis because data fields can be disclosed in redacted or aggregated formats. In other words, the borsa is capable of reconciling two values that often collide in litigation: the claimant's need for evidence and the defendant's need to protect confidential information. That reconciliation is not accidental, but it is the central institutional promise of a tiered-legibility design.

At the level of sector-specific regulation, the *borsa* proposal must also take account of the legal regime governing commodity derivatives and market integrity, because grain markets are routinely entangled with futures, options, and other derivatives instruments used for hedging and speculation. *MiFID II* and *MiFIR* provide the definitional and supervisory architecture for trading venues and for transparency, while the *Market Abuse Regulation* extends

[95] Regulation (EU) 910/2014 of the European Parliament and of the Council of 23 July 2014 on electronic identification and trust services for electronic transactions in the internal market (eIDAS) [2014] OJ L 257/73, art 25(1)–(3) (legal effects of electronic signatures).

[96] Directive 2014/104/EU of the European Parliament and of the Council of 26 November 2014 on certain rules governing actions for damages under national law for infringements of the competition law provisions of the Member States and of the European Union [2014] OJ L 349/1, art 5 (disclosure of evidence).

market integrity norms to certain behaviours related to spot commodity contracts when they affect or are affected by financial instruments.[97] It would be a category mistake to treat a grain *borsa* for physical trade as automatically subject to the full trading-venue regime applicable to regulated markets or *MTF*s. Yet it would be equally mistaken to treat the physical market as legally insulated from financial-market integrity norms where informational flows cross the boundary between spot and derivatives markets.

The physical-financial interface also requires specific attention. The study explains that traders can combine physical commodity flows with securitisation, derivative positions and access to capital-market investors, thereby creating aligned incentives and shared exposure across physical and financial markets. For a *borsa* operating in the EU orbit, this means that MAR, MiFID/MiFIR and competition law cannot be treated as separate silos: the relevant supervisory data model must allow competent authorities to ask whether a physical-market event, a platform record and a derivatives position are functionally connected.[98]

The design consequence is that the *borsa's* public layer must be calibrated so that it improves price discovery and reduces opportunism without creating channels for manipulation of benchmarks or for dissemination of false or misleading signals. The *borsa's* supervisory layer should, correspondingly, be designed for cooperative access by competent authorities, subject to jurisdictional competence rules.

Finally, the *borsa* must be situated within the EU's minimum-harmonization response to bargaining asymmetry in agricultural supply chains. *Directive (EU) 2019/633* targets unfair trading practices in *B2B* relations in the agricultural and food supply chain, establishing a minimum list of prohibited practices that deviate grossly from good commercial conduct and are imposed unilaterally by stronger parties.[99] The *Directive*'s scope is not identical to the grain trading ecosystem envisaged here, especially where transactions occur between large traders, processors, and global intermediaries. Yet the *Directive* embodies a legislative judgment that, in agricultural contexts, bargaining inequality is not merely a distributive inconvenience but a structural risk to market fairness and

[97] Directive 2014/65/EU of the European Parliament and of the Council of 15 May 2014 on markets in financial instruments (MiFID II) [2014] OJ L 173/349; Regulation (EU) 600/2014 of the European Parliament and of the Council of 15 May 2014 on markets in financial instruments (MiFIR) [2014] OJ L 173/84; Regulation (EU) 596/2014 of the European Parliament and of the Council of 16 April 2014 on market abuse (Market Abuse Regulation) [2014] OJ L 173/1.

[98] BRICS Competition Law and Policy Centre, 'The Financial Intermediation Role of Traders' (n 3) 40–42; see Box 8, 'Exercise of Control Through Securitization Agreements', in BRICS Competition Law and Policy Centre (n 3) 45.

[99] Directive (EU) 2019/633 of the European Parliament and of the Council of 17 April 2019 on unfair trading practices in business-to-business relationships in the agricultural and food supply chain [2019] OJ L 111/59.

stability. That judgment supports, at least as a matter of legislative coherence, the claim that institutional interventions aimed at reducing informational exploitation in grain trade are normatively aligned with EU law's broader trajectory.

The *borsa*, in this sense, should be understood as complementary to the *Directive*: rather than adding another layer of *ex post* prohibition, it changes the *ex ante* informational conditions under which unfair practices become feasible.

11. Comparative Institutionalization in BRICS Jurisdictions: Convergent Antitrust Grammar, Divergent Institutional Capacities.

A comparative analysis across BRICS jurisdictions reveals a pattern of conceptual convergence accompanied by institutional divergence. The convergence lies in the basic grammar of competition law: all BRICS jurisdictions maintain prohibitions on anticompetitive agreements and on abuses of dominance (or functional equivalents), and all possess investigative powers capable of addressing coordination and exclusion in principle. The divergence lies in the degree to which competition enforcement is institutionally equipped to confront informational infrastructures as such, rather than merely discrete instances of collusion or exclusion.

The BRICS study also supplies a concrete institutional genealogy for this comparative section. It recounts the 2015 decision by BRICS competition authorities to launch a joint research project on global food value chains, the subsequent use of a value-chain perspective in the Bayer/Monsanto merger context, and the 2024-2025 meetings in Cairo, Johannesburg and UN Trade and Development fora where a BRICS-wide sector inquiry into grain was discussed. This history matters legally because it shows that the borsa proposal would not start from institutional zero: it would build on an existing practice of joint competition-law knowledge production.[100]

The digital *Borsa* proposal should therefore be framed, in comparative terms, not as a uniform legal transplant but as a modular institutional architecture capable of being adapted to divergent legal systems while preserving a common core of neutrality, auditability, and tiered transparency.

Brazil's competition regime, structured by *Law No 12.529* of 30 November 2011, provides the legal basis for prevention and repression of infringements against the economic order through the *Brazilian System for the Defence of Competition*.[101] The statute's constitutional orientation toward free initiative, free competition, consumer protection, and repression of abuse of economic power is doctrinally congenial to an infrastructural remedy aimed at reducing

[100] BRICS Competition Law and Policy Centre, 'Introduction' (n 3) 13–14.

[101] Lei Nº 12.529 de 30 de Novembro de 2011 (Lei do Sistema Brasileiro de Defesa da Concorrência) [Brazil], art 1 (purpose and constitutional orientation).

structural opacity rents. Brazil's institutional challenge in commodity sectors has often been to reconcile enforcement with the political economy of export-oriented production and with concentrated market structures.

A digital *borsa* in the Brazilian context would likely require careful governance to ensure that it does not become captured by dominant trading houses or by vertically integrated processors. The *lex ferenda* implication is that any *borsa*-like initiative should be accompanied by legally enforceable governance constraints, such as non-discriminatory access, transparent fees, and an oversight mechanism capable of auditing both data integrity and exclusionary practices.

India's *Competition Act* empowers the Competition Commission of India to inquire into contraventions relating to anticompetitive agreements and abuse of dominance.[102] India's commodity markets are deeply entangled with public procurement, minimum support policies, and varied layers of regulation at both central and state levels. In such an environment, the legal relevance of a digital *borsa* is not confined to private bargaining, but it extends to the state's capacity to evaluate market outcomes and to detect distortions. Yet that expanded relevance also increases the institutional risk that the *borsa* becomes a vehicle for administrative control rather than for contestable market knowledge. The correct comparative lesson is therefore not that India should replicate an EU-style data intermediation regime, but that any *borsa*-like infrastructure must preserve a legally protected zone of commercial autonomy for market participants while ensuring that public authority access is rule-bound, proportionate, and subject to confidentiality constraints.

China's *Anti-Monopoly Law*, as amended in 2022, explicitly applies both to monopolistic practices within China and to practices outside China that eliminate or restrict competition in China's domestic market. [103] This extraterritorial reach is particularly significant for grain trade, given the globalized nature of commodity supply chains and the role of multinational traders. The *Law*'s contemporary emphasis on data and platform-related issues, including the express articulation, in the amending decision, of attention to data- and algorithm-enabled conduct in the broader antimonopoly policy environment, suggests a legal culture increasingly attentive to informational infrastructures.

The challenge, however, is that a *borsa*-like infrastructure could be interpreted, in the Chinese context, as a strategic state capacity rather than as a neutral market institution. If the *borsa* is to operate as a device for fair

[102] Competition Act 2002 (Act No 12 of 2003) [India], s 19 (inquiry into certain agreements and dominant position of enterprise).

[103] Anti-Monopoly Law of the People's Republic of China (adopted 30 August 2007, amended 24 June 2022, effective 1 August 2022) [China], arts 1–3 (objectives and scope), 2 (extraterritorial application).

contracting rather than as an instrument of industrial policy, its governance must be designed to ensure that data access and disclosure rules are intelligible as competition-enhancing rather than as discretionary. For cross-border transactions, the additional complexity would be data localization and cross-border transfer controls. Because those issues cannot be authoritatively specified here without further verified sources, the present argument proceeds as a hypothesis: that a BRICS-compatible *borsa* must be designed to permit jurisdictionally segmented data storage and access controls while maintaining functional interoperability through standardized metadata and index outputs.

Russia's *Federal Law No 135-FZ "On Protection of Competition*" provides the legal foundation for preventing monopolistic activity and unfair competition, and includes provisions addressing the handling of protected secrets by the antimonopoly authority.[104] In a jurisdiction where commodity sectors may be politically sensitive and where the state's role in market organization can be significant, the *borsa*'s legitimacy depends on a dual assurance: *i)* that the platform will not be used to impose anticompetitive administrative restrictions, and *ii)* that confidential business information submitted for regulatory or evidentiary purposes will not be improperly disclosed.

The existence of statutory duties of confidentiality for the authority supports the doctrinal possibility of a supervisory layer in which the regulator can access granular data under strict secrecy obligations. Yet Russia's comparative challenge is the credible independence of governance: if market participants suspect that data submission will be used for non-competition purposes, participation incentives may collapse or the platform may become a tool of selective enforcement. The lex ferenda conclusion is that any *borsa* in this environment must include legally enforceable limitations on data use and disclosure, coupled with transparent procedural rights for parties.

South Africa's *Competition Act 89 of 1998*, as amended, is distinctive within BRICS for the explicit statutory architecture of "market inquiries", which are formal inquiries into the general state of competition, levels of concentration, and market structure, without necessarily referring to the conduct of a particular named firm.[105] This statutory form is particularly well suited to the infrastructural logic defended in this article. Market inquiries, properly understood, are mechanisms for diagnosing systemic competitive distortions and for generating structural remedies. A digital *Borsa* can be conceptualized as precisely such a remedy: a durable institutional intervention responding to diagnosed features that impede, restrict, or distort competition, including

[104] Federal Law No 135-FZ of 26 July 2006 'On Protection of Competition' [Russian Federation], art 26 (duty of the antimonopoly authority to preserve protected secrets).
[105] Competition Act 89 of 1998 [South Africa], s 43A(1) definition of "market inquiry".

barriers to entry created by informational asymmetry and bargaining power. South African law thus provides, at least in principle, a legal pathway for integrating a *Borsa* into a broader remedial strategy: a market inquiry could establish the empirical and legal basis for mandating or incentivizing standardized reporting and neutral intermediation. The comparative lesson is that jurisdictions with explicit market inquiry powers are institutionally closer to the *Borsa* remedy, because their legal system already recognizes that competition problems may be structural and informational rather than merely episodic and behavioural.

Across BRICS, therefore, the legal feasibility of a digital *borsa* hinges on translating a common conceptual architecture into jurisdiction-specific governance guarantees. The shared antitrust grammar supplies the normative justification, which is preventing coordination and abuse while promoting contestable market conditions.

The divergence in institutional capacities and political economy implies that the same architecture must be realized through different legal instruments: in some jurisdictions through competition-law commitments and sector inquiries, in others through dedicated legislation establishing a neutral data intermediary with specified oversight and confidentiality rules, and in still others through hybrid public–private governance anchored in enforceable statutory constraints.

At the same time, the study's questionnaire-based approach counsels institutional humility. The aim should not be a single centralized BRICS database imposed irrespective of constitutional and administrative differences, but a federated evidentiary architecture in which national authorities retain decisional autonomy while agreeing on minimum data fields, confidentiality protocols, interoperability standards and shared analytical questions. The comparative conclusion is therefore modular: common epistemic infrastructure, differentiated legal implementation.[106]

12. Lex Lata Plausibility and Lex Ferenda Necessity.

The central thesis exposed in this article is that a digital *borsa* for grain should be conceptualized as an evidentiary and informational infrastructure that reconstitutes the market's legally relevant epistemic conditions. The doctrinal advantage of this conceptualization is that it avoids the false alternatives that dominate much discussion of transparency in commodity markets: either the market remains opaque, with exploitation and opportunism

[106] BRICS Competition Law and Policy Centre, 'A Joint Sector Inquiry by the BRICS Competition Authorities' (n 3) 121–122; BRICS Competition Law and Policy Centre, 'Concluding Remarks' (n 3) 127.

flourishing in the shadows, or it becomes fully transparent, with collusion risks amplified by the elimination of informational uncertainty.

EU competition law's jurisprudence on concerted practices and tacit assent in digital environments demonstrates that infrastructures can be anticompetitive where they enable the emergence of communicated norms and facilitate mutual orientation toward supracompetitive outcomes.

At the same time, EU data governance and evidence law demonstrate an increasingly explicit recognition that data-access arrangements are regulable and that evidentiary reliability can be institutionally supported through interoperable trust services.

The *borsa* proposal is, in this sense, neither a naïve transparency project nor a purely technocratic intervention, but it is a legal-institutional design aimed at transforming the informational constitution of grain trade in a manner consistent with competition law, trade secrecy protections, and cross-border enforceability.

Lex lata, the feasibility of the *borsa* turns on four interlocking propositions.

First, an infrastructure that records transactions and produces anonymized, time-lagged indices can be distinguished, as a matter of legal characterization, from an "information exchange" that facilitates coordination, provided the platform is designed to preclude individualized strategic signalling and normative recommendation.

Second, the platform must be governed as a neutral intermediary whose access rules and fees are objective, transparent, and non-discriminatory, so that it does not become a dominant gatekeeper capable of reproducing rent extraction through data control.

Third, trade secrets and confidentiality must be embedded as parameters within a tiered visibility architecture, preventing both unlawful disclosure and strategic over-claiming of secrecy that would recreate opacity rents.

Fourth, evidentiary registration must rely on legally recognized authentication mechanisms, so that the platform's outputs can function as admissible and portable evidence in disputes and enforcement.

Lex ferenda, the case for the *borsa* becomes stronger still. Competition enforcement that remains focused on discrete infringements risks underperforming in markets where the structure of information itself is a source of market power and where evidentiary fragmentation impedes both deterrence and redress.

The lex ferenda claim must nevertheless be expressed with evidentiary discipline. The study itself characterizes its theory of ABCD+ orchestrating power as a hypothesis requiring stronger evidence; that methodological caution is not a weakness but a reason to institutionalize evidence production. The digital *borsa* is justified precisely because the existing market architecture

makes the hypothesis difficult to test using ordinary disclosure, merger notification and fragmented market-abuse surveillance.[107]

The appropriate institutional response is therefore partly investigatory and partly constitutive: sector inquiries and market studies should diagnose the informational features that impede competition and then support remedies that institutionalize lawful legibility.

In the EU, *Regulation 1/2003* provides a pathway for sector inquiries that can ground such structural remedies, while in South Africa, statutory market inquiry powers make the logic even more explicit. In other BRICS jurisdictions, the institutional pathway may require dedicated legislation or enforceable governance frameworks to ensure neutrality and confidentiality and to avoid capture.

The digital *borsa* is thus best defended as a legally disciplined institution for producing contestable market knowledge: knowledge that is sufficiently rich to constrain exploitation and opportunism, sufficiently structured to support adjudication and enforcement, and sufficiently insulated to preserve the uncertainty that rivalry requires. If the argument of this article is accepted, the implication for doctrine is that competition law and private law should be read together in informationally complex markets: competition law supplies constraints on coordination and gatekeeper power, while private law supplies the categories of evidence, enforceability, and relational fairness through which market intelligibility becomes legally meaningful.

The implication for adjudication is that courts and authorities should treat informational architectures as potential loci of both harm and remedy, requiring careful analysis of how platform design mediates autonomy and dependence. The implication for legislation and regulatory design is that durable improvements in market fairness cannot be achieved solely by prohibiting unfair practices ex post; they require building institutions that make fairness contestable ex ante.

On that view, a digital *Borsa* for grain is not an optional technological enhancement but a paradigmatic legal infrastructure for a market whose central pathologies are, at their root, epistemic.

Seen in that light, the article's thesis and the study project's policy proposal converge. The study calls for cooperative inquiry, parallel investigations where warranted, and institutional remedies capable of reshaping the value chain; the article translates that agenda into the language of private law, evidentiary infrastructure and competition-by-design. Both reject the false choice between state replacement of markets and ungoverned private ordering. The legally decisive task is to ensure that market-based grain trade produces public-

[107] BRICS Competition Law and Policy Centre, 'Executive Summary' (n 3) 10–11.

relevant facts before those facts are converted into private informational rents.[108]

[108] BRICS Competition Law and Policy Centre, 'Section 7' (n 3) 121–126; BRICS Competition Law and Policy Centre, 'Concluding Remarks' (n 3) 127.