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Beyond Horizontal Harm: Digital Ecosystems, Innovation, and the Future of European Merger Control

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Abstract: This paper develops four proposals to modernize merger control in the European Union and beyond. First, merger control should be reinforced and reinvigorated to prevent the further rising of market power and to stop the ongoing decline of competition intensity. Second, the analysis highlights the need to incorporate systemic and cross-market power into both market definition and competitive assessment. Third, it challenges the traditional presumption that non-horizontal mergers are generally less harmful than horizontal ones, showing that vertical and conglomerate integration may reinforce ecosystem power and foreclose innovation. Finally, the paper proposes the use of rebuttable presumptions to address procedural asymmetries and under-enforcement. Together, these reforms would align merger control with contemporary economic research on digital ecosystems and enhance its capacity to safeguard contestability, innovation, and dynamic competition.

Keywords: merger control, merger guidelines, concentration, systemic market power, digital ecosystems, competition policy, market definition, rebuttable presumptions, competitiveness

JEL: K21, L40, L51

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I. Introduction

The European Commission's review of the Merger Guidelines falls into comparatively turbulent times. These times are characterized by technological disruptions, such as the rise of artificial intelligence, as well as the disarrangement and reorganization of global trade. Facing such dynamic challenges may call for more thorough and elaborate changes than in calmer times, thus making this a crucial reform for future competition dynamics and market concentration. Without commenting in great detail on the recently published Draft Merger Guidelines (European Commission 2026), we present four suggestions for a merger control reform in Europe – and beyond – that is resilient, increases social welfare, and protects the competition process. These science-based recommendations build upon research from economics and legal sciences over the last years, addressing aspects of innovation and competitiveness as important outcomes of resilient processes of dynamic competition. While we focus on European merger control, with adjustments to institutional differences, our four suggestions are general in nature and can also be applied to other merger control frameworks:

(1) Strengthen merger control and prevent underenforcement, which has led to rising market concentration and decreasing competition intensity over the last decades (chapter II).
(2) Integrate notions of and checks for across-market and systemic market power in merger control in order to prevent the emergence of even more entrenched positions of power within digital ecosystems (chapter III).
(3) Rethink the outdated hierarchy that exists between different types of mergers and re-invigorate the control of non-horizontal mergers (chapter IV).
(4) Strengthen the use of rebuttable presumptions as an instrument to achieve more effective merger control enforcement (chapter V).

Over the past two decades, the European Union has witnessed a gradual evolution of its merger control regime under the EU Merger Regulation (Council Regulation 139/2004). The Horizontal Merger Guidelines of 2004 and the Non-Horizontal Merger Guidelines of 2008 have long structured the assessment of competitive effects. Yet, both frameworks were conceived in an era before the rise of the digital world with intermediation, data aggregation, and multi-sided network effects and before the ongoing disruptions of international economic interrelations. Thus, aspects of dynamic and innovation-related dimensions tend to be neglected, even though they are central to today's markets (Kerber 2011; Motta & Peitz 2021; Budzinski & Mendelsohn 2023). Therefore, the European Commission's ongoing review process provides a policy

window to rethink merger control for the digital age and the current challenges. Similar debates are taking place elsewhere: in the US, the FTC's and DOJ's 2023 Merger Guidelines emphasize structural presumptions and the protection of potential competition (Guidelines 1 & 4); in the UK, the CMA has developed new guidance for digital mergers (CMA 2021). These initiatives share a common recognition: any framework of merger analysis that is based on narrow market delineations and short-term price effects fails to capture the competitive risks associated with data control, cross-market leverage, and innovation suppression. Moreover, procedural asymmetries in the burden of proof make it difficult for authorities to intervene in novel or complex cases, leading to systematic underenforcement.

This paper contributes to the ongoing reform debate by offering both conceptual clarification and policy proposals. Section II argues on a general level for strengthening merger control as the central ex-ante tool of competition policy, outlining how historical underenforcement has contributed to persistent concentration and decreasing competition intensity. In section III, the concept of systemic market power is introduced, emphasizing the need for merger assessments to capture cross-market leverage in order to prevent the emergence or further entrenchment of uncompetitive ecosystems, especially in the digital economy. Section IV challenges the long-standing assumption that non-horizontal mergers are generally less harmful and section V proposes rebuttable presumptions as an instrument to rebalance burdens and enhance enforcement efficiency in merger assessment procedures. In section VI, we conclude by summarizing the key recommendations and discussing their implications for competition policy.

II. The Case for Strengthening Merger Control

A. The Imbalance of Market Power and Efficiency

The case for strengthening merger control is rooted in three developments that reinforce each other: (A) theoretical and empirical advance in science pointing towards an imbalance between market power effects and efficiency gains from mergers between big companies, (B) a significant increase in concentration accompanied by a decrease in competition intensity over the last decades, and (C) institutional frictions leading to underenforcement. Among the three pillars of competition policy – (i) combating anticompetitive cartels and collusion, (ii) preventing anticompetitive concentration by merger control, and (iii) supervising dominant and powerful companies in order to limit the anticompetitive abuse of their market power – merger control plays a particular role from an economics perspective. On the one hand, modern market theory (industrial economics) clearly demonstrates that the probability of illegal collusion

increases with concentration because coordinating illegal collusion is facilitated by a small number of cartel members. Thus, limiting market concentration reduces the risk of illegal collusion. On the other hand, decades of antitrust policy experience show that an effective supervision of dominant companies is challenging for a number of reasons, inter alia, the creativity of powerful companies to innovate on abusive conduct, irreversibility of damage done before corrective interventions take place, a notorious lack of sound and effective remedies, as well as the lobby power of dominant firms to gain support of politics for their vested interests. Thus, an active and effective merger control is important to prevent concentration through external firm growth from generating market power.[1] In addition, modern industrial economics convincingly demonstrates that mergers and acquisitions in heterogenous oligopolies carry a high probability of anticompetitive effects, even when overall market concentration is still low (so-called unilateral oligopoly effects; inter alia, Werden & Froeb 2008; Keating & Willig 2015).[2] Merger control should therefore not be viewed as a substitute for abuse control or sector-specific regulation. Rather, these instruments are complementary. The particular advantage of merger control lies in its preventive character. Whereas abuse control and regulatory interventions often address market power only after it has emerged, merger control can intervene before power structures become entrenched and, for instance, before systemic market power develops into a persistent structural feature of the market (see section III).

Furthermore, modern theoretical and empirical research in economics reveals that a large share of mergers and acquisitions do not improve profitability and efficiency, so that procompetitive effects countervailing the anticompetitive effects are rather unlikely. Empirical ex post studies confirm on the one hand that efficiencies cannot be realized in roughly half of all mergers and acquisitions, with the numbers of failures increasing with the overall size of the combination and the similarity of the merging companies (Agrawal et al. 1992; King et al. 2004; Cartwright & Schoenberg 2006). On the other hand, ex post case studies show anticompetitive effects for many mergers and acquisitions that successfully passed merger control scrutiny (see meta-studies by Kwoka 2012, 2014; Argentesi et al. 2021; Stöhr 2024). Economic theory explains

[1] Note that the need for abuse control of dominant companies originates from the possibilities to obtain market power without mergers and acquisitions, i.e., through disruptive innovation (somehow preventing imitation forces to erode the advantage in the course of time) or internal growth. These ways towards market power cannot be perfectly prevented without considerable harm through side-effects. Nowadays, abuse control seems to be working as (a very imperfect and expensive) corrective instrument for a lenient or ineffective merger control – but this is not the original idea.

[2] While this newer theory explicitly addresses the more common and more frequent case of markets (oligopolies) with heterogeneous goods, the landmark Williamson trade-off (Williamson 1968) – that provides the theoretical fundamentals for balancing anticompetitive allocation effects with procompetitive efficiencies – sensitively relies on the assumption of homogeneous goods.

these empirical results by, inter alia, the relevance of power-obtaining merger motives, notorious difficulties in realizing synergy potentials in post-merger management, and a deficient selection of M&A-targets due to self-interests of managers (empire building, increased income, career options, etc.) and consultants (deal-making and retaining follow-up mandates, etc.) including more cognitive factors like herd behavior on financial markets (pressing for merger and acquisition activity for its own sake) or pre-emptive and white-knight mergers (inter alia, Trautwein 1990; Goel & Thakor 2009; Budzinski & Kretschmer 2016; Gaughan 2017). Altogether, the state of research provides a note of caution to accept market power in the hope of efficiency gains.

B. The Rise of Concentration and the Decline of Competition Intensity

Recently, a number of papers empirically studied the development of concentration, competition intensity, profit margins, and the size of firms in large samples of industries and over the last decades (for North America and Europe, see Gutièrrez & Philippon 2018; Grullon et al. 2019; Autor et al. 2020; De Loecker et al., 2020; Affeldt et al. 2021; Koltay et al. 2023; Bajgar et al. 2025). In contrast to the everyday notion that competition has been getting fiercer and more intensive during the last decades, these studies find significant evidence of the opposite: across industries, concentration is rising, competition intensity is declining, profit margins are rising, and superstar firms are accumulating more and more economic power. Despite using different data sets and different methodologies, these studies all arrive at coherent results, which is a clear indication of the robustness of the results.

Thus, there is considerable evidence that competition has been weakened over the last four to five decades and market power has been rising. On the one hand, this reinforces the diagnosis that merger control needs to be less lenient and, instead, more active and stricter. The general trend towards less competition and more concentration needs to be stopped and reversed in order to avoid further damage to social welfare. Next to this general insight, the striking empirical evidence also raises considerable doubts on popular policy narratives, for instance on promoting competitiveness over competition.[3] In reality, market development was not characterized by too much competition but, instead, by a trend away from competition and towards economic power. Thus, we call for caution towards vested interests claiming protection from competition in whatever disguise would be helpful to promote social welfare. The deficits in European competitiveness that, for instance, the Draghi report (2024) identifies so forcefully

[3] See on such types of narratives with a critical view: Libman (2025); Budzinski & Stöhr (2025).

are plausibly not caused by too much competition but rather by competition-taming over-regulation and over-bureaucratization.

The empirical evidence of an ever-increasing concentration trend is also worrying because de-concentration instruments and remedies – such as the unbundling of dominant companies – are difficult to implement effectively and efficiently and rarely ever happen. Therefore, increased concentration is often irreversible (at least for long periods in time) and once markets have tipped, there is a high probability that no feasible remedy can restore effective competition (Seldeslachts et al. 2009; Bougette et al. 2025, 2026). This re-emphasizes the importance of effective merger control as the only ex ante tool to prevent concentration from tipping into anticompetitive constellations.

C. Underenforcement in Merger Control

Several economic studies identify a systematic underenforcement in merger control, both in the US and in Europe (inter alia, Baker & Shapiro 2008; Budzinski & Ruhmer 2010; Salop 2018; Valletti & Zenger 2019; Valletti 2021; Lancieri & Valletti 2024; Kwoka & Valletti 2026). Especially (but not only) for Europe, institutional and political-economic reasons for this underenforcement are discussed.

- The institutional factors relate to, inter alia, an overblown importance of (static) market delineation and definition (inter alia, Baker & Shapiro 2008; Farrell & Shapiro 2010; Stöhr & Budzinski 2026), an inappropriate allocation of the burden of proof combined with (implicitly and explicitly) over-ambitious thresholds for evidence (inter alia, Budzinski & Ruhmer 2010; Valletti 2021; Lancieri & Valletti 2024), as well as a mismatch between traditional legal procedures and new scientific instruments to gather and analyze evidence (Budzinski & Ruhmer 2010; Budzinski & Ruhmer 2010, Budzinski & Noskova 2022).

- The political-economic factors relate to, inter alia, a combination of lobbying power by companies, political pressure from politicians and governments, as well as the self-interest of competition authorities to obtain and maintain a good reputation (Cowgill et al. 2021; Lancieri et al. 2023). While a merger prohibition entails a high likelihood of a subsequent court challenge and, thus, a risk of losing the case, a settlement involving commitments and obligations is superior in satisfying the interests of the parties involved: the firms get their deal through (albeit with modifications) and the competition authority avoids potentially reputation-damaging (and cost-expensive) challenges of their decisions (Budzinski & Kuchinke 2012). However, economic research shows that

settlements and remedies perform poorly in preserving competition and that prohibitions are significantly superior in this regard (Seldeslachts et al. 2009).

Altogether, there is a case for re-invigorating merger control by improving the institutional factors (for instance, by putting more emphasis on rebuttable presumptions, see section V) and by protecting enforcers from political pressure. In this regard, the current trend towards including reasonings of competitiveness into merger control – mentioned in the Draft Merger Guidelines (European Commission 2026), following up on the Draghi report (Draghi 2024) and the EU Competitiveness Compass (Budzinski & Mendelsohn 2025) – is worrying. It represents an invitation for lobby groups to inject their vested interests and their rent-seeking desires into merger control proceedings in the name of a buzzword (Budzinski & Stöhr 2025). The vague use of the term competitiveness without a clear reference to a theory-driven concept and the ambiguous meaning of the term due to its application in various and considerably deviating meanings sends a problematic signal. It entails the danger of socially deficient merger control decisions that merely benefit the supra-competitive profits of powerful incumbent companies at the expense of society, innovation dynamics, and welfare. Obviously, this would further fuel market concentration. The notion that sensible competitiveness requires a high and vital competition intensity, as also mentioned here and there in the Draft Guidelines, urgently needs more prominent and more systematic emphasis.

III. Integrating Across-Market and Systemic Market Power

In recent years, the concept of digital ecosystems has gained increasing prominence in competition law and economics, reflecting profound changes in market organization driven by digitization, platformization, and data-driven business models (Fuller et al. 2019; Jacobides & Lianos 2021; Robertson 2021; Hornung 2023; Stylianou & Carballa-Smichowski 2024). From an economic perspective, ecosystems are best understood as complex constellations of vertically, conglomerate, and laterally related products and services, coordinated by one or more core firms and characterized by strong complementarities, technological and contractual interdependencies, and network effects (Stöhr 2025; Stöhr & Budzinski 2026). Within such structures, competitive dynamics deviate from those assumed in traditional single-market analysis. Market power no longer arises primarily from dominance in one narrowly defined market but instead emerges from interactions across multiple interrelated markets. To capture this phenomenon, recent scholarship has developed the concept of ecosystem or systemic market power, which denotes a form of economic power stemming from a firm's position within a network of interdependencies rather than from control over a single market. Systemic market

power arises from the interdependencies between the products and services offered, which are consciously internalized by the firms (Budzinski & Stöhr 2024; Stöhr 2025; Stöhr & Budzinski 2026). These systemic resources, such as data, algorithms, platforms, and ecosystems, constitute nodes of intermediation that mediate interactions among otherwise distinct market participants.

Systemic market power manifests itself through at least two interrelated mechanisms. First, intermediation power arises where ecosystem firms control key interfaces or platforms that mediate interactions between different user groups (Schweitzer et al. 2019). This role generates asymmetric dependencies and enables strategies such as self-preferencing, discriminatory access conditions, strategic incompatibilities, and the raising of entry barriers. Second, cross-market power allows firms to leverage advantages acquired in one market – such as access to data, financial resources, or user attention – to gain competitive advantages in other, sometimes non-adjacent, markets (Bourreau 2020; Heidhues et al. 2024; Mendelsohn & Viertel Iñíguez 2025). Importantly, these forms of power may exist even where the firm does not hold a dominant position in any single market. Systemic market power thus constitutes a distinct category alongside traditional forms of market power, such as single-firm dominance or collective dominance (Budzinski & Stöhr 2024). While systemic market power has emerged most visibly in digital ecosystems, the concept is not confined to digital markets. In principle, systemic market power may arise wherever firms internalize interdependencies across multiple markets and control strategically important nodes of intermediation, coordination, or access. Digital markets provide particularly salient examples because network effects, data accumulation, and platform-mediated interactions amplify these dynamics. Nevertheless, similar mechanisms may also emerge elsewhere, for instance in complex industrial, technological, or pharmaceutical ecosystems. Accordingly, systemic market power should be understood as a general concept with pronounced practical relevance in digital markets. What unites cases of systemic market power in every industry, is the ability of the ecosystem's core firm to act as a market-internal regulator, shaping the rules of interaction, interoperability, and competition within the system (Crémer et al. 2019; Hornung 2023).

While traditional merger analysis uses the notion of market power as the ability of a firm to profitably raise prices or reduce output within a well-defined market, in the digital economy and taking into account the concept of systemic market power described above, such definitions often fail to capture the breadth and depth of control exercised by core ecosystem firms. The rise of systemic market power, the capacity to influence competition across multiple interdependent markets simultaneously, marks a fundamental shift in this regard and should be

recognized both in market definition and in the subsequent assessment of the competitive effects of a merger.

A. Implications for Market Definition

Conventional approaches to market definition, centered on static assessments of substitutability, are ill-suited to capture the economic realities of ecosystems described above (OECD 2022). Their main limitation lies in the inability to account for the deliberate internalization of interdependencies and the creation of complementarities between products and services that are central to firms' strategic behavior in ecosystem-based markets (Robertson 2021; Stylianou & Carballa-Smichowski 2024). In digital ecosystems in particular, firms actively design and organize their offerings to generate cross-product synergies, network effects, and user lock-in (Hornung 2023; Heidhues et al. 2024). This does not render competitive constraints from substitutes irrelevant; however, it requires that merger analysis extends beyond isolated markets and systematically considers effects across interconnected markets within the ecosystem.

A defining feature of ecosystems is that market boundaries are no longer exogenous or stable, but become endogenous and subject to change. Mergers may endogenously alter market delineation, for instance by reshaping substitution patterns or integrating previously distinct services. Where firms possess such power, snapshot-based market delineation loses much of its explanatory value for identifying competitive harm, particularly in the context of mergers that modify competitive interaction or enhance control over market boundaries (Stöhr & Budzinski 2026). Firms that control access to users – e.g., through search engines, recommender systems, operating systems, or app stores – can integrate formerly separate services and markets, thereby redefining competitive relationships in ways that are difficult to capture empirically ex ante. Similar effects arise in data-driven mergers, where transactions that appear conglomerate on the basis of pre-merger market delineation may create vertical or even horizontal interdependencies post-merger.

These dynamics fundamentally alter the role of market definition in merger control. Rather than serving merely as preparatory input for the effects analysis, market delineation should become part of the effects analysis itself. Assessing mergers in ecosystems requires analyzing plausible post-merger scenarios of market evolution, including the incentives and capacity of the merged entity to alter market boundaries. Different strategies of integration or bundling may give rise to distinct pro- and anticompetitive effects, which cannot be inferred from static pre-merger market structures alone (Stylianou & Carballa-Smichowski 2024; Stöhr & Budzinski 2026). Purpose-driven market definitions can be employed to isolate relevant interdependencies within

an ecosystem and to identify non-horizontal mechanisms of harm that would otherwise remain obscured by systemic complexity. Overall, incorporating systemic market power into market definition enables merger control to better capture cross-market leverage, ecosystem-wide foreclosure risks, and the long-term restructuring of competition (Stöhr & Budzinski 2026). This approach is essential not only for digital ecosystems but also for mergers in traditional industries characterized by complex multi-market interdependencies.

B. Implications for the Competitive Assessment

At the moment, the treatment of systemic market power within the competitive assessment is inconsistent across instruments. The Commission has recognized types of across-market effects in abuse of dominance cases, such as Google Search (Shopping) (Case AT.39740) and Google Android (Case AT.40099) as well as in the Draft Guidelines for Art. 102 TFEU, where it found that the firm leveraged dominance in one market to favor its own services in adjacent markets. However, we do not currently see this being taken into account in the assessment of merger cases. This asymmetry undermines coherence. Merger control functions as an ex-ante instrument designed to prevent the creation or strengthening of (any form of) market power through external growth, whereas abuse control intervenes ex post once such power has materialized. Given this complementarity, (at least partly) recognizing systemic market power in abuse control while not including it systematically in merger control leads to conceptual inconsistency and enforcement gaps. If systemic leverage of market power across the sector is accepted as a legitimate theory of harm in Article 102 TFEU enforcement, it should also inform merger assessments that risk creating or strengthening such power to leverage. Integrating systemic market power into merger control would thus align ex-ante and ex-post enforcement, ensuring consistency and legal predictability (Stöhr & Budzinski 2026).

Merger control's preventive function makes it uniquely suited to address systemic market power before it becomes entrenched. Historical experience shows that once ecosystem dominance solidifies, remedies are often ineffective (Ganesh 2024). The Google Android case demonstrates how ex-post intervention, after years of exclusionary conduct, struggles to unwind entrenched structures. By contrast, Illumina/Grail (2022) illustrates how merger control can act pre-emptively to prevent the formation of cross-market leverage that would foreclose innovation. In Illumina/Grail, the Commission identified a risk that Illumina's control over next-generation sequencing technologies could enable it to foreclose rival developers of cancer detection tests, downstream users of its sequencing technology. Although the parties did not operate in directly overlapping markets, the vertical integration threatened to distort innovation

incentives in the entire ecosystem of genomic diagnostics (Case M.10188). The Commission's (temporary) prohibition therefore exemplifies how cross-market and innovation effects can justify intervention even in the absence of traditional horizontal overlaps.

In ecosystem contexts, mergers may not primarily increase concentration within individual markets but may instead enhance a firm's ability to exercise systemic market power, for example by expanding intermediation roles, strengthening cross-market leverage, or increasing the capacity to reshape market boundaries. Such effects are inherently non-horizontal and often unfold over time, making them difficult to detect through static price- or market-share-based analysis alone. Data plays a central role in this context. The accumulation and combination of large, heterogeneous datasets can significantly reinforce systemic market power by enabling cross-market inference, personalized targeting, and exclusionary strategies (Mendelsohn & Viertel Iñíguez 2025). The 2020 Google/Fitbit merger illustrates these risks: by combining Fitbit's health data with Google's extensive advertising and platform data, the transaction raised concerns about reinforcing dominance in digital advertising and adjacent markets. Although the Commission approved the merger subject to behavioral commitments, critics have questioned whether such remedies are capable of addressing the long-term, dynamic effects of data integration within ecosystems (Bria et al. 2020; Caffarra & Valletti 2020). These concerns highlight the limitations of remedy-based approaches that focus on short-term conduct while leaving underlying structural and systemic effects largely unaddressed. Similar issues arise in the context of artificial intelligence (AI), where mergers, acquisitions, or strategic partnerships may strengthen systemic market power by integrating data infrastructures, computational resources, and foundational models. Recent debates surrounding Microsoft's partnership with OpenAI and Amazon's investment in Anthropic demonstrate how partial acquisitions and minority shareholdings can generate de facto control over strategically essential inputs without necessarily triggering comprehensive merger scrutiny (Carugati 2024; Hagiu & Wright 2025). From a systemic perspective, such arrangements may substantially alter competitive dynamics across multiple markets, even if they fall short of traditional notions of control.

Theories of harm, specifically targeted at elements of systemic market power, should therefore entail cross-market foreclosure, where control over one platform allows exclusion of competitors in adjacent markets, data entrenchment, where data combination yields competitive advantages that cannot be replicated by rivals, innovation foreclosure, where integration of upstream and downstream R&D capabilities discourages independent innovation, and interoperability foreclosure, where a merged entity can restrict or degrade compatibility to limit rival's access to users or data. These theories would align with emerging enforcement practice

and economic research emphasizing the specific nature of competitive harm in digital ecosystems (Motta & Peitz 2021; Heidhues et al. 2024).

Overall, merger control must incorporate ecosystem structures and systemic market power both in the process of market definition and in the substantive competitive assessment. This requires a more dynamic and forward-looking approach that focuses on cross-market interdependencies, incentives to redesign market boundaries, and the long-term evolution of competitive structures. Purpose-driven market definitions can be employed to model plausible post-merger scenarios and to assess whether a transaction is likely to entrench systemic market power to the detriment of competition. Integrating these concepts into merger control enhances coherence between ex ante and ex post instruments, improves legal certainty, and aligns enforcement practice with contemporary research on competition in ecosystem markets.

IV. Rethinking the Hierarchy: Horizontal vs. Non-Horizontal Mergers

If across-market effects reflect ecosystem-level competitive dynamics and market definition subject to dynamic change, the traditional hierarchy between horizontal and non-horizontal mergers becomes difficult to sustain. The enforcement strategy in merger control has long rested on the assumption that horizontal mergers are inherently more likely to harm competition than non-horizontal (vertical or conglomerate) ones. This hierarchy is embedded in the European Commission's 2008 Non-Horizontal Merger Guidelines, which open by explicitly stating that such mergers generally do not raise competition concerns (para. 11). The assumption reflected industrial-organization insights from pre-digital times: vertical integration was often associated with a rational, efficiency-consideration-based choice between 'make or buy' and other efficiencies such as the elimination of double marginalization, while conglomerate mergers were largely viewed as benign portfolio diversification strategies with little incentive for exclusionary conduct (Levy & Sarnat 1970). Implicit in this logic, however, were assumptions of clear market boundaries, limited interdependencies between markets, and stable competitive interaction. In dynamic digital ecosystems of markets, however, the classical distinction between horizontal and non-horizontal mergers loses much of its analytical force (Monteiro 2025), leading to prominent industrial economists calling for a re-invigorating of vertical merger control (inter alia, Salop 2018). To elaborate this argument, this section first looks at innovation effects of horizontal mergers and then questions the usefulness of a stark distinction between horizontal and non-horizontal mergers.

A. Horizontal Mergers and Dynamic Competitive Harm

The economic theory of horizontal mergers has evolved significantly beyond the traditional focus on short-run effects. It recognizes that mergers may harm competition dynamically by weakening incentives to innovate, invest, or disrupt incumbent firms. This "Innovation Theory of Harm (ITOH)" (Federico et al. 2017; Kokkoris & Valletti 2020; Motta & Tarantino 2021; Valletti 2025) provides the central insight that firms often compete not only in existing product markets, but also in innovation races. When two firms independently invest in R&D, each has incentives to innovate to win future profits from rivals. A merger internalizes part of this rivalry: the merged entity no longer gains as much from innovating against itself. As a result, incentives to pursue competing research paths, product improvements, or disruptive technologies declines (Federico et al. 2017). In this sense, the ITOH extends standard unilateral-effects logic into a dynamic setting. Rather than asking whether a merger raises prices today, the question becomes whether it reduces incentives to innovate tomorrow (Valletti 2025). Overall, competition policy should not only protect existing competition but also preserve the process of disruption through which new entrants challenge incumbent firms with innovative technologies and business models. Particularly in dynamic industries, competition frequently occurs 'for the market' rather than solely 'within the market'. As a result, the elimination of nascent or potential competitors may significantly reduce future competitive pressure even in the absence of substantial current market overlap (Federico et al. 2020).

While the ITOH primarily focuses on the incentives of a firm to innovate, a complementary perspective emphasizes the importance of preserving diversity among innovators and innovation trajectories. According to evolutionary and knowledge-based theories of competition, competition fosters innovation by enabling parallel experimentation with different technological trajectories and business models (Kerber 2011, 2018, 2023). Diversity among firms increases the likelihood that alternative ideas, solutions, and innovation paths are explored simultaneously. This process facilitates mutual learning, comparison of competing approaches, and the generation of dispersed knowledge, thereby accelerating discovery and technological process (Kerber 2011). From this perspective, the competitive harm resulting from a merger may not only stem from the elimination of innovation rivalry in the conventional sense, but also from a reduction in the diversity of experimentation within the market. When independent firms pursuing distinct innovation strategies are combined, the merged entity may rationalize research efforts, discontinue alternative development paths, or prioritize a narrower set of technological options (Farrell 2006). The resulting loss of diversity can reduce the scope for experimentation and learning, thereby slowing the generation of new knowledge and weakening dynamic

competition (Kerber 2011, 2018). Consequently, merger control should take into account the intensity of innovation competition as well as the preservation of diversity as a driver of long-run innovation and economic discovery.

However, not all mergers automatically harm innovation. Under certain circumstances, mergers may generate efficiencies by combining complementary technologies, eliminating duplicative research efforts, facilitating knowledge transfer, or improving the commercialization of innovations (Denicolò & Polo 2018). Consequently, innovation-related theories of harm provide analytical frameworks for evaluating how a transaction affects firms' incentives to innovate (Valletti 2025) – with the logical possibility that the analysis yields a harmful deterioration of innovation incentives or an increase in innovation incentives. In the absence of merger-specific synergies or positive innovation spillovers (that will actually be realized post-merger with sufficient probability against the notorious resistances; see section II.A), however, mergers between firms that compete both in innovation and in downstream product markets are more likely to reduce consumer welfare by weakening competitive pressure to innovate (Valletti 2025).

Innovation competition has long been a weak spot in merger assessment (Kerber 2018, 2023). The Dow/DuPont (2017) decision marked a milestone, recognizing that mergers between major R&D players could reduce innovation competition even absent direct product overlaps (Kerber & Vezzoso 2019). The Commission required extensive divestitures to preserve parallel research trajectories and long-term innovation incentives. The reasoning in Dow/DuPont reflects a dynamic understanding of competition that requires broader market definition both in product as well as in temporal scope: harm may arise from the narrowing of future technological paths rather than immediate output restrictions (Farrell 2006).

As these developments show, even in horizontal settings the static and short-term analysis of mergers is already being increasingly complemented by an analysis of dynamic incentives. This direction should be further strengthened. Competitive harm materializes not only through immediate price effects, but also through weaker innovation incentives and reduced quality improvements (Valletti 2025). In digital markets, horizontal acquisitions may involve the absorption of nascent or potential competitors whose competitive significance lies in their disruptive potential rather than their current market share. The elimination of a potential entrant may foreclose alternative innovation paths and entrench incumbent ecosystems before rivalry fully materializes (Federico et al. 2020; Motta & Peitz 2021; Valletti 2025).

The Draft Guidelines represent a notable step towards a more dynamic understanding of competition and therefore move EU merger control closer to the concerns raised in this section. By explicitly recognizing innovation, investment, expansion, resilience, privacy and other non-price dimensions of competition (para. 20), and by repeatedly emphasizing a forward-looking assessment of competitive conditions (paras. 10, 53), the Commission acknowledges that competitive harm may arise through weakened incentives to innovate long before it materializes in observable price effects. The dedicated treatment of innovation competition, including the loss of specific innovation competition (Section II.B.4.1), the loss of general innovation competition (Section II.B.4.2), and the concept of an innovation shield (Section II.B.4.3), further demonstrates a growing willingness to incorporate dynamic theories of harm into merger analysis. Equally important is the increased attention paid to investment and expansion competition (Section II.B.3) as well as potential competition (Section II.B.5), reflecting the insight that firms may compete for future markets even where current overlaps are limited.

At the same time, the Draft Guidelines stop short of fully embracing the implications of innovation-based competition theory. Innovation concerns are largely integrated as additional theories of harm rather than as a more fundamental reorientation of merger assessment. While the Draft recognizes that mergers may eliminate future sources of competitive pressure and affect firms' incentives and capabilities to innovate, it remains cautious in challenging traditional indicators and analytical frameworks that are primarily geared towards existing market structures. In particular, the continued emphasis on balancing potential harms against efficiencies and other merger-related benefits (paras. 13-17), suggests that dynamic innovation concerns remain embedded within the conventional effects-based framework rather than constituting and independent organizing principle of merger assessment. Consequently, although the Draft Guidelines mark significant progress compared to previous EU guidance, they only partially realize the broader shift towards protecting innovation competition, experimentation, and technological diversity advocated by recent scholarship and by the arguments developed in this section.

B. Non-Horizontal Mergers: Integration of Ecosystem Competition

The need for recalibration is even more important with respect to non-horizontal mergers. The traditional presumption of benignity attached to vertical and conglomerate transactions rests on the belief that such mergers do not eliminate direct competitors and often generate efficiencies (Williamson 1971; Bork 1978; Perry 1989). However, this view has long been challenged by economic theory. A substantial body of literature demonstrates that vertical integration may

facilitate foreclosure, raise rivals' costs, deter market entry, and soften competition by restricting access to critical inputs or customers. More generally, potential efficiency gains must be balanced against strategic incentives to exclude rivals and reinforce market power, casting doubt on the assumption that non-horizontal mergers are inherently less problematic than horizontal ones (Krattenmaker & Salop 1986; Rey & Tirole 1986; Salinger 1988; Hart & Tirole 1990; Ordover et al. 1990; Rey & Stiglitz 1995; Riordan & Salop 1995; Riordan 1998).

Building on these approaches, there have been more recent efforts to revive the skepticism toward vertical mergers, discussing potential harms such as the foreclosure of input and customers, the raising of rivals' costs, coordinated effects, as well as the evasion of regulation, access discrimination, and elimination of potential competition. Particularly important in this context is the insight that partial foreclosure can already be enough to lessen competition substantially (Salop & Culley 2014). This renewed focus on possible harms from vertical mergers strongly influenced subsequent debates, for instance around the 2020 US Vertical Merger Guidelines (Salop & Culley 2016).

The emergence of platform and ecosystem competition has further weakened the traditional presumption that non-horizontal mergers deserve systematically more favorable treatment. Vertical and conglomerate integration may create incentives for foreclosure, strategic discrimination, reduced innovation, and platform gatekeeping, particularly where firms control critical interfaces between different user groups or markets (Baker et al. 2019; Athey & Scott Morton 2022). Closely related is the concept of envelopment, whereby a platform or ecosystem leverages its position in a core market to enter and dominate adjacent markets through bundling, tying, or the integration of complementary functionalities (Eisenmann et al. 2011). Rather than eliminating direct competitors, envelopment relies on ecosystem-level advantages such as access to a large installed user base, superior data resources, network effects, control over defaults, or interoperability decisions. Consequently, competition may be weakened across multiple interconnected markets even in the absence of substantial horizontal overlaps, suggesting that the competitive risks associated with non-horizontal mergers are often underestimated by traditional merger analysis (Eisenmann et al. 2011; Heidhues et al. 2024).

In the context of merger control, acquisitions of complementary services can serve as a particularly effective vehicle for envelopment, as they allow dominant platforms to internalize adjacent functionalities and accelerate ecosystem expansion in a way that rivals cannot easily replicate. As a result, mergers that are formally non-horizontal may nonetheless reinforce or entrench market power in ways functionally equivalent to horizontal consolidation (Salop 2018;

Robertson 2022): the merged firm harms rivals downstream or upstream whereby the rivals become weaker, competition softens, and prices rise. This mechanism is the consequence of input or customer foreclosure, raising rivals' costs, degraded access, or strategic discrimination, which overall constitutes the internalization of gains from disadvantaging rivals by the vertically integrated firm (Salop 2018). A rather prominent example of the disadvantaging of rivals is, for instance, the practice of self-preferencing by vertically integrated firms (Hagiu & Jullien 2014; de Cornière & Taylor 2019; Hagiu et al. 2022). Ecosystem competition implies that firms may constrain each other not through direct product substitutability, but through their ability to attract users, data, developers, or business partners across multiple markets. Integration across complementary services can therefore weaken competitive constraints, reduce multi-homing, and increase user lock-in. From this perspective, a non-horizontal merger may eliminate an important competitive threat or reinforce gatekeeping power even in the absence of a traditional market overlap (Heidhues et al. 2024). Altogether, while foreclosure remains the most prominent theory of harm in non-horizontal mergers, it is not the only relevant concern. Non-horizontal integration may also strengthen ecosystem dependencies, increase user lock-in, facilitate data accumulation, reshape market boundaries, reduce interoperability, and suppress independent innovation trajectories. These effects may arise even where conventional foreclosure theories are difficult to establish.

The Commission's assessment in Google/Fitbit (2020), together with later cases such as Apple/Shazam (2018) and Meta/Giphy (2022), illustrate both the growing relevance and the analytical difficulty of addressing ecosystem-based theories of harm in digital merger control. Although these transactions involved little or no direct horizontal overlap, each raised concerns that the acquiring platform could strengthen its broader ecosystem position by combining datasets, reinforcing user lock-in, and limiting rivals' ability to compete across adjacent markets. Furthermore, these cases demonstrate an increasing recognition among competition authorities that digital mergers can produce exclusionary effects not adequately captured by conventional merger analysis, particularly where ecosystem expansion, data aggregation, and user lock-in reinforce systemic market power across interconnected markets.

In such contexts, the possible harm is not necessarily immediate price increases but the suppression of alternative innovation paths and business models (Farrell 2006; Kerber 2011; Heidhues et al. 2024). Conglomerate expansion allows incumbents to internalize potential threats from competitors and redirect innovation within the boundaries of their ecosystems, thus narrowing technological diversity in the market (Motta & Peitz 2021). In digital markets, the restriction of inputs by an integrated firm, as described by foreclosure theories, often take the

form of data or APIs rather than tangible goods. In Google/DoubleClick (2008), the Commission focused narrowly on online advertising intermediation and concluded that data accumulation did not raise immediate foreclosure risks (Bergqvist 2025). Yet subsequent developments, Google's integration of ad-tech services and data pools, demonstrated how such vertical integration entrenched dominance through the ad-tech supply chain. The case illustrates the limits of static foreclosure analysis in market where competitive advantages compound over time through data-driven learning effects.

Recent merger practice demonstrates an increasing willingness to engage with dynamic and innovation-based theories of harm in non-horizontal mergers. Cases such as Microsoft/LinkedIn (2016), Illumina/Grail (2022), and Microsoft/ActivisionBlizzard (2023) illustrate a shift away from reliance on static indicators and traditional market-share analysis toward a more forward-looking assessment of ecosystem strategies, potential foreclosure, and innovation effects. Together, these developments suggest that merger control is becoming more receptive to interventions where competitive harm is plausible despite limited market overlaps or the absence of conventional structural evidence.

The Draft Guidelines take a step in the right direction by addressing horizontal and non-horizontal mergers in the same guiding document. This may reflect the view that many modern markets, particularly digital ecosystems and innovation-driven sectors with interconnected supply chains, cannot easily be analyzed based on a strict distinction between horizontal and non-horizontal mergers. Rather than organizing the substantive assessment according to formal transaction categories, the draft focuses on the different ways in which a merger may lead to a "significant impediment to effective competition" (SIEC) (para. 52). The Draft Guidelines therefore analyze a broad range of possible theories of harm within one unified structure, including loss of head-to-head competition, foreclosure, entrenchment, coordination, loss of innovation competition and ecosystem-related effects. At the same time, the Draft does not eliminate the distinction entirely; rather, it appears to relativize its importance.

Although the Draft Guidelines clearly modernize the relationship between horizontal and non-horizontal mergers, some important debates from recent scholarship remain only partially addressed. In particular, while the Draft recognizes ecosystems, interconnected markets and a broad range of theories of harm, including foreclosure, entrenchment and portfolio effects (Sections II.B.6–9), it does not fully engage with the argument that the traditional distinction between horizontal and non-horizontal mergers may itself be losing analytical relevance in digital ecosystems, where firms compete simultaneously across multiple layers of

infrastructure, data and services. Similarly, the Draft approaches vertical and conglomerate concerns largely through relatively classical foreclosure theories, without fully theorizing newer concepts such as systemic market power, platform governance, dependency creation or cumulative ecosystem expansion. Finally, although the Draft subjects non-horizontal mergers to more intensive scrutiny than earlier EU guidance, it still largely preserves the traditional assumption that complementary mergers are often efficiency-enhancing and beneficial for innovation, resilience and scale (paras. 13–17), while stopping short of directly confronting the claim that digital platform markets may require abandoning the historically more permissive treatment of non-horizontal mergers altogether.

V. Strengthening Rebuttable Presumptions

A. The Case for Rebuttable Presumptions in Merger Review Guidelines

Above we have already elaborated on the underenforcement of merger review globally and in the EU. We have also highlighted why we believe merger review to be a crucial tool for competition and why it should be enforced far more rigorously in future. As the EUMR's substantive test (Article 2(3) of the EUMR) is broad in nature and does not require reform, much of the discretion in this regard falls to the European Commission. Given the complexity of many merger review proceedings and the Commission's limited resources when exercising this discretion, Merger Guidelines are an ideal way for the Commission to set priorities while offering legal certainty. Indeed, if the future Guidelines are to offer more than a restatement of the Commission's methodology combined with reflections on past case law and new policy aims, instruments such as structural presumptions are of great importance and should be considered key features of this kind of commitment and communication.

Merger control, though nominally preventive, often suffers from structural underenforcement. The burden of proof lies with the competition authority, which must demonstrate "a high degree of probability" that a transaction would lead to a significant impediment to effective competition. This threshold, while justified in principle by due-process considerations, proves not to be very well suited to fast-moving, data-intensive markets where harm manifests dynamically and evidence is scarce (Motta & Peitz 2021). Authorities must typically gather extensive evidence, e.g., market shares, diversion ratios, internal documents, econometric simulation etc., before prohibiting a transaction. By contrast, notifying firms can rely on information advantages and procedural asymmetry: they possess superior access to data and can design transactions below notification thresholds or framed around non-horizontal (and therefore apparently less harmful) rationales (Petit & Teece 2020). The result is an enforcement

bias toward clearing harmful mergers for want of conclusive evidence (D'Amico 2024). While extensive evidence of such underenforcement has existed for a long time (see section II C.), this asymmetry is further exacerbated in digital markets (Lancieri & Valletti 2024; Kwoka & Valletti 2026): The lack of sufficient information about data usage, algorithms, and future business models as well as insights into larger business strategies (Google/Sanofi; Microsoft/LinkedIn) impede reliable predictions of competitive effects. In addition, and as the European Commission acknowledged in Google/Fitbit (2020), the dynamic and data-driven nature of the sector makes precise quantification of effects difficult (paras. 805 ff.). Consequently, merger control risks being reactive rather than preventive.

To the extent that underenforcement is a symptom of the legal design (burden of proof) rather than of true knowledge problems, competition authorities should consider revising and strengthening their proof-related presumptions in order make merger review more effective. As a general principle, the burden of proof is a question of procedural fairness in law and often used to protect the weaker party, minimize costs, or help with due process. In merger review, it should be used to help achieve the goals of this competition law instrument. As such, the burden of proof should generally not have to prove the usual merger effects (as derived from economic theory). Instead, the unusual exception from the normal should bear the burden of evidence (Breyer 2009). The literature highlighting severe underenforcement shows that this is not currently the case.

B. Structural Presumptions Beyond Traditional Dominance

In merger control, so-called 'structural' presumptions have traditionally been primarily related to the identification of a dominant position and the assumption of harm resulting from its creation or reinforcement. This approach is both legally and economically sound. Following the introduction of the SIEC-test to replace the previous 'dominance test', dominance may be considered indicative of an SIEC (see Art. 2(3) EUMR) and thus serves as a legal presumption that can be rebutted where the harm caused by dominance is outweighed by potential efficiency gains (see Recital 29 of the EUMR). Furthermore, there is extensive documentation supporting the view that economic theory endorses structural presumptions where dominance stems from a horizontal merger (i.e., a merger involving competitors; see, for example, Baker & Shapiro 2008; Budzinski & Ruhmer 2010; Farrell & Shapiro 2010 and Lancieri & Valletti 2024). However, the preceding sections (particularly sections III and IV) emphasize that current competitive and concentration issues extend far beyond traditional market dominance.

For future merger reviews to be progressive and effective, they must, therefore, move beyond the harms caused by traditional horizontal mergers and consider dynamic competition and systemic market power. We thus advocate not only for presumptions in principle, as many authors have done, but also for additional, more contemporary presumptions. These must, of course, be based on case law and economic evidence gathered over the past decades. However, it is important to highlight that, as an ex ante instrument, merger control is concerned with potential future competitive effects and constraints. As future effects and developments are inherently uncertain, they cannot adhere to the same standards of forensic evidence as those relating to past conduct. Instead, merger control and its priorities should be based on probabilities and plausibility. In other words, incentives for profitable yet harmful conduct will sooner or later be exploited. The core idea of a rebuttable presumption is that the normal effect, according to economic theory, should not require a high standard of evidence and can be accepted as the expected outcome (Breyer 2009). It can therefore be assumed, but may be disproven. Quite by contrast, those arguing for an exception from the theory-driven standard to-be-expected effects should bear the burden of proof.

Before discussing possible changes, it is important to consider a further aspect of having no or weak presumptions of harm in merger control practice. While very few mergers have been prohibited under the EUMR, it is incorrect to suggest that few mergers raised concerns and that the potential SIEC was impossible to establish. What seems more concerning, is that valid (potential) harms and impediments are often remedied through – extensive, complex, and often behavioral – commitments. The Google/Fitbit merger (Case M.9660), for example, raised concerns relating to competition in the sports watch market and consumer choice. These concerns were related to strong ecosystem integration and foreclosure, as well as to privacy and the use of sensitive data for personalized advertising. There were also concerns relating to data power, such as the potential for further data-related foreclosure effects. Google offered extensive commitment relating to Ads (no use of health and wellness data for Google Ads) and the technical separation of Fitbit data, API access and the Android API (interoperability). Even though the merger was merely deemed vertical or conglomerate in nature, and a case could be made for a more complex categorization as a merger leading to ecosystem or systemic market power, the clearance by means of these commitments came as a surprise to many (Bourreau et. al. 2020; Vande Walle 2020; Caffarra & Valletti 2020). And indeed, the clearance decision itself was perhaps not as surprising as the nature of the commitments. Many of these are long-term and behavioral in nature, which seems to be at odds with the nature of fast-moving digital markets (Vande Walle 2020; Bougette et al. 2025, 2026).

More importantly, however, the introduction of long-term behavioral remedies is at odds with the purpose and nature of merger control, which aims to protect the structure of markets, so that regulation is not necessary. In addition, several Art. 102 cases point to the ineffectiveness of such 'promises'. Given the sensitivity of some of the interests and rights at stake, and the scope of such mergers, it seems that extensive commitments are no longer in line with the precautionary nature of merger control. The Google/Fitbit merger is not an isolated case. Several mergers involving severe competition concerns have only been cleared through extensive remedies, leading to high levels of overall concentration, far-reaching competition issues and other regulatory problems (e.g., Facebook/WhatsApp). At times, these mergers have even had crippling effects on the companies involved (e.g., Bayer/Monsanto).

C. Novel Presumptions Designed for the Digital Economy

In EU merger control, the broad scope of Article 2(3)'s SIEC-test leaves room for presumptions based on experience. A procedural innovation adopting rebuttable presumptions would therefore not necessarily require legislative change but interpretative evolution through guidelines or decisional practice. A normative justification can beyond that be derived from the precautionary principle and changes that have taken place in many competitive landscapes since the enactment of the EUMR (Reg. 139/2004) and its previous guidelines: in concentrated environments characterized by high uncertainty and potentially irreversible harm, such as ecosystem tipping or innovation foreclosure, shifting the burden of proof promotes deterrence without compromising fairness (Lancieri & Valletti 2024). Additional rebuttable presumptions could be either quantitative or qualitative in nature: new thresholds based on different criteria could be introduced (1), or the Guidelines could establish a presumption based on the characteristics of certain types of merger or emerging cross-market structures (2).

(1) Since the economic power of firms with systemic market power does not always align with industry-level indicators and thresholds, such as market share and HHI levels, future rebuttable presumptions could be based on firm-level indicators, such as turnover, market capitalization, and the number of users, provided these indicators are durable.

(2) Rebuttable presumptions could also be applied to certain types of mergers or risk scenarios relating to structural market features or the nature of specific markets based on the following logic: high risk scenario (structural) + plausible case specific evidence or theory of harm (specific effects) = presumption of SIEC (no clearance).

These scenarios could include:

1. Mergers involving systemic firms (entities designated as gatekeepers under the DMA or possessing cross-market leverage equivalent to systemic market power).
2. Serial or cumulative acquisitions (where an incumbent has a history of acquiring nascent competitors within a specific technological or data domain (OECD 2022)).
3. In select cases: mergers involving important or essential innovative inputs/advancements or data-aggregation mergers involving non-replicable data.

Once these conditions are met, the default presumption would be that the merger risks creating or strengthening market power and should not be remedied through the use of commitments. The firms involved must then demonstrate, with evidence, that efficiencies are merger-specific and verifiable, that consumer welfare improvements outweigh potential harm, and that no less anti-competitive means exist to achieve those efficiencies. This reversal does not compromise rights of defense: firms retain full procedural guarantees and may submit economic evidence, expert testimony, and commitments.

Several jurisdictions already experiment with mechanisms approximating rebuttable presumptions. In the United States, the 2023 Merger Guidelines state that where concentration exceeds 30% and HHI > 1.800, a presumption of illegality arises, shifting the burden to the parties. This reflects renewed confidence in structural presumptions for concentrated or innovation-sensitive markets. In the United Kingdom, the CMA's Merger Assessment Guidelines (2021) emphasize potential competition in this regard but are not embracing the idea of rebuttable presumptions, instead stating to assess all mergers 'on a case-to-case basis to the same evidential standard regardless of the theory of harm being considered' (para. 2.10). The suggested new approach would to some extent combine the valid arguments and contestations made by these approaches, as it wouldn't be purely structural in nature and would require evidence gathering on a case-by-case basis.

The benefits which could develop from the reliance on rebuttable presumptions are manifold. First, they would rebalance certain incentives: firms thinking about high-risk acquisitions would internalize potential regulatory costs, deterring strategic behavior such as "killer acquisitions" (Cunningham et al. 2021). Authorities, relieved from proving harm with near-certainty, could focus resources on assessing evidence rather than building exhaustive econometric models. Second, complex digital mergers often entail lengthy investigations, delaying outcomes and creating uncertainty. Rebuttable presumptions streamline procedures by defining clear default positions. Predictable triggers enhance transparency, so firms know ex-

ante when a transaction is presumptively problematic and can tailor their submissions accordingly. Third, given the global reach of digital markets, procedural convergence around rebuttable presumptions would improve coherence across jurisdictions. The OECD (2022) encourages coordinated presumptive frameworks for systemic firms to avoid regulatory arbitrage. A shared architecture would facilitate information exchange among agencies and harmonize standards for digital-market enforcement.

VI. Conclusion

In this paper, we built upon a considerable body of research in economics and legal sciences to derive proposals for the direction of merger control evolution. The current review of the EU Merger Guidelines is the specific context of our suggestions; however, they can be applied more broadly to other merger control regimes when being adjusted for the different institutional frameworks. We postulate four proposals designed to make merger enforcement more forward-looking, innovation-sensitive, and coherent:

1. Re-centering merger control as the principal ex-ante instrument of competition policy. Because structural prevention is more effective than ex-post intervention, merger control must again occupy a central position in the policy hierarchy. Historical under-enforcement demonstrates that failing to act early allows entrenchment that is nearly impossible to reverse.

2. Integrating the concept of systemic market power into market definition and merger assessment. Systemic power reflects cross-market leverage, data dominance, and intermediation control. Recognizing this concept within merger control would align ex-ante and ex-post enforcement, preventing structural entrenchment before it occurs.

3. Re-evaluating the hierarchy between horizontal and non-horizontal mergers. In an economy characterized by ecosystems, vertical and conglomerate integration can generate harm equivalent to horizontal consolidation.

4. Introducing rebuttable presumptions to correct procedural asymmetries. Shifting evidentiary burdens in well-defined high-risk scenarios would reduce chronic under-enforcement, accelerate proceedings, and align global practice with the precautionary principle.

Together, these proposals outline a coherent vision of merger control that reflects the realities of the digital age, requiring analytical innovation as well as institutional adaptation. The

emergence of generative AI and foundation-model ecosystems may further amplify concerns regarding systemic market power, cross-market leverage, and concentration. While AI markets remain highly dynamic and competitive at the time of writing, we should avoid repeating the mistake of waiting until relevant markets have tipped into hardly reversible market power. Therefore, effective merger control has an important role in preventing the emergence of all forms of market power including systemic market power. From both a welfare and competitiveness perspective, preserving contestability in AI ecosystems represents a particularly important application of the principles developed in this paper.

Ultimately, the central takeaway of this paper is that merger control must evolve towards a framework capable of addressing systemic market power, ecosystem expansion, and dynamic innovation harms. Steps into this direction have already been taken, for instance in case law, but also with the Draft Merger Guidelines. As competition today increasingly takes place across interconnected markets, effective merger control cannot remain reactive. It must act preventively, before market structures become irreversible and innovation paths are foreclosed. Strengthening merger control along the lines proposed in this paper would therefore improve the effectiveness of competition enforcement and help preserve open and contestable market structures as a precondition for innovation, economic resilience, and long-term social welfare.

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