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Geopolitical Risks and Prudential Merger Control

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Geopolitical risks and prudential merger control¹

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Abstract:

With the increased risks of international trade frictions and geopolitical disruptions merger control that does not account for such risks may be too lenient. This article provides a proposal on how competition authorities should systematically assess mergers based on a risk assessment and how they should adjust their market share and UPP analysis. The authors also argue that the approach fits well into recent developments of merger analyses in the European Union.

Keywords: Merger control, market shares, UPP, resilience, geopolitical risks

JEL-Classification: K21, L40, L13

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I. Introduction

Tensions in international trade partly motivate the current call for the creation of ‘national’ or European champions.² The (implicit or explicit) rationale behind it may be summarized as follows: Because of economies of scale, lower costs of input factors (labour,³ energy, raw materials, trade costs), stricter environmental regulation at home, and increased productivity abroad, manufacturing imports have dramatically increased over time. As a result, while European consumers (and some industrial buyers in the value chain) may have benefitted, Europe has partly lost its industrial base and has become unable to provide autonomously for the inputs and final products it needs. Europe increased its dependence on manufacturing in foreign countries (such as China) and has become vulnerable to import shocks (as the Covid-19 crisis and, to a smaller extent, the 2021 Suez Canal obstruction, have shown). To enable EU firms to compete at a global stage with industrial giants in particular from the U.S. and China, Europe has to enable its firms to become larger and more productive.

The conclusion that the EU needs larger firms can be heard from industrialists and politicians of various colours. Implicitly or explicitly, there appears to be a call for a more active industrial policy and a more lenient merger policy that facilitates the formation of larger firms in the EU.

For instance, in his speech on 25 April 2024 at Sorbonne, the French president Emmanuel Macron said that ‘we [...] need to take responsibility for the evolution of our competition policy, to help European champions emerge’.⁴ The recently published Letta Report, commissioned by the European Council,⁵ states that ‘it is crucial to support large EU companies in becoming bigger and competing in the global stage’ (p.8). Its main recipe is to foster the EU Single Market to increase the scale of EU companies, but – while it does not call for a relaxation of competition rules – it also advocates policies that promote an increase in the size of companies, especially in some sectors: ‘The scale of investments necessary in new technologies (for example edge/cloud, 6G, AI) implies that **due consideration should be given to the necessity of some level of consolidation within national markets** or strategic alliances between market players including pro-competitive sharing of investments in key network elements.’ (pp. 55-56; emphasis added). Likewise, Mario Draghi – in a recent speech which arguably anticipates the conclusions of his long-awaited report on how to enhance EU productivity, commissioned by the European Commission – also stresses the difficulties

² Being fully aware that the EU is not identical to Europe, we nevertheless use the two words interchangeably for the EU.

³ Differences in labour costs may partly be due to different standards on workers’ rights.

⁴ This is the translation of the original quote in French: ‘Il nous faut ... assumer l’évolution de notre politique de concurrence pour faire émerger les champions européens ...’

⁵ Enrico Letta, ‘Much More Than a Market – Speed, Security, Solidarity: Empowering the Single Market to Deliver a Sustainable Future and Prosperity for all EU Citizens’ (April 2024), available at <https://www.consilium.europa.eu/media/ny3j24sm/much-more-than-a-market-report-by-enrico-letta.pdf>, last accessed 8 June 2024.

arising from fragmented national markets and the need for bigger scale of EU firms. For instance, referring to the telecommunications industry, he said: **‘To produce more investment, we need to streamline and further harmonise telecoms regulations across Member States and support, not hamper, consolidation.’**⁶ (Our emphasis) It reflects a resurgent interest in industrial policy.⁷

The reasoning is not new and, for example, resonated with policymakers in France and Germany during the investigation of the *Siemens/Alstom* merger that was eventually blocked by the European Commission.⁸

New to the debate, however, is the concern that imports may suddenly disappear (e.g., because of trade sanctions, disruptions of transport routes, or direct policy interventions in response to war). In other words, in a world facing geopolitical risks, imports may suddenly dry up. Countries from which imports are at risk may be considered risky countries from an EU perspective, and we argue that competition authorities may want to discount competitive restraints stemming from the firms of these risky countries.

The upshot is that foreign firms may suddenly ‘disappear’ – completely or partially – from the relevant antitrust market (which may be a national market or the whole internal market). In the face of such geopolitical risks, the call to remove barriers within the EU and enable firms to serve consumers in the whole EU appears appropriate. By contrast, indiscriminately calling for larger firms carries the risk of being understood as calling for more permissive merger control and thus an increase in market concentration.⁹ In this article, we explain why merger control that incorporates geopolitical risks in its assessment must become stricter rather than more lenient.¹⁰

⁶ Mario Draghi, ‘Radical Change – Is What Is Needed’ (High-level Conference on the European Pillar of Social Rights, Brussels, 16 April 16, 2024), available at <https://geopolitique.eu/en/2024/04/16/radical-change-is-what-is-needed/>, last accessed 8 June 2024.

⁷ These considerations may justify selective subsidies as formally analysed by Massimo Motta and Michele Polo, ‘Supply Chain Disruption and Precautionary Industrial Policy’ (2024), on file with the authors.

⁸ *Siemens/Alstom* (Case M.8677) Commission Decision of 6 February 2019. In the aftermath, the Federal German Ministry of Economic Affairs and Energy and the French Ministry of Economics and Finance jointly published ‘A Franco-German Manifesto for a European Industrial Policy Fit for the 21st Century’ (19 February 2019), available at https://www.bmwk.de/Redaktion/DE/Downloads/F/franco-german-manifesto-for-a-european-industrial-policy.pdf%3F__blob=publicationFile&v=2, last accessed 8 June 2024. A critical assessment is provided by Massimo Motta and Martin Peitz, ‘Competition policy and European firms’ competitiveness’ *VOXEU Blog* (Brussels, 20 February 2019), available at <https://cepr.org/voxeu/blogs-and-reviews/competition-policy-and-european-firms-competitiveness>, last accessed 8 June 2024.

⁹ Merger control is not necessarily an obstacle to the creation of bigger firms, provided that the merger between two rival firms generates sufficient efficiency gains to offset the market power effect resulting from the weakening of competition. Such efficiency gains should not simply be assumed: a bigger firm is not necessarily a more productive one.

¹⁰ In earlier work, Motta and Peitz already proposed a stricter merger policy in special cases involving non-EU acquirers, but did not address the consequences of geopolitical risks on merger control more broadly: ‘we would find it sensible to introduce in the Merger Regulation a clause whereby in exceptional and well-

We see such an update in merger control as part of an overall strategy to make the EU Single Market more resilient to external shocks, which is one of the objectives of the EU. As the Commission stated, ‘EU competition policy has a key role to play in maintaining a level playing field and it is one of our biggest assets in ensuring a Single Market that supports companies to innovate and grow. Preserving competition in the Single Market contributes to the resilience and competitiveness of our companies on the global markets.’¹¹ Within this context, our proposal can be seen as a concrete step of how to update merger control.

For mergers in markets with significant imports from risky countries (or with sizeable production by companies headquartered in risky countries), prudential merger control should anticipate the potential disappearance (or diminished reach) of actual competitors. This would weaken market competition. The degree to which the weakening of competition would happen depends on several features that can be assessed in each specific case. More importantly, the less competitive the market is, the more likely is a merger’s harm to consumers.¹²

We recommend that, for significant risks, prudential merger control should treat the scenario in which these competitors from risky countries are reduced in size or completely disappear from the market as the relevant scenario for the merger assessment.

The paper proceeds as follows. Section II discusses how merger control should deal with the horizontal effects of geopolitical risks. Market share assessments have to be adjusted for those risks and so does upward pricing pressure (UPP). Section III deals with vertical effects: following trade disruption, inputs may become more costly, which in turn may increase market concentration by magnifying pre-existing market share differences reflecting underlying efficiency differences and by inducing exit of domestic firms. Section IV observes that there has been a recent but steady change in attitudes by antitrust authorities: they have become more inclined to incorporate dynamic aspects and uncertainties in merger control. For instance, innovation, potential competition, and dynamic competition are considered in recent guidelines and practice by the EC, CMA, and US agencies. Hence, including geopolitical risks in merger assessments would be in

defined cases a merger which would otherwise pass muster on competition grounds may be prohibited due to defence, strategic and security of supply considerations.’ Massimo Motta and Martin Peitz, ‘Challenges for EU Merger Control’ (2019) 2-2019 Concurrences 44, 44.

¹¹ Commission Communication, ‘Updating the 2020 New Industrial Strategy: Building a stronger Single Market for Europe’s recovery’ COM(2021) 350final (Brussels, 5 May 2021), p. 10.

¹² For research that corroborates this view, see Volker Nocke and Michael Whinston, ‘Dynamic Merger Review’ (2010) 118 *Journal of Political Economy* 1200 and Volker Nocke and Nicolas Schutz, ‘An Aggregative Games Approach to Merger Analysis in Multiproduct-Firm Oligopoly’ (forthcoming) *RAND Journal of Economics*. These articles show that the merger-induced synergies necessary for the merger not to harm consumers are larger, the less competitive is the market. The first paper derives this result in the homogeneous-goods Cournot model, the second in a model of price competition with differentiated products.

line with this development and there are several ways in which the authority can obtain information on relevant risks. Section V concludes.

II. Horizontal Effects and Prudential Merger Control

A. Analysis of horizontal effects

When foreign competitors disappear or competitive constraints are relaxed because of import restrictions, overall competition is likely to suffer with prices rising and sales volumes declining. This implies that the pre-merger performance of the market moves further away from the competitive benchmark, and so does the post-merger performance. Prudential merger policy then takes the less competitive scenario after a geopolitical risk has manifested itself into account by adjusting its pre-merger assessment and modifying the post-merger counterfactual.¹³ The disappearance or diminishment of existing competitors implies that market shares of the remaining, not directly affected firms increase. Prices and markups go up and so does UPP.

B. Risk-adjusted market shares

As John Vickers wrote in 2006, ‘what has changed relatively little [...] is the primacy that courts continue to place on market definition and market shares in the assessment of market power’.¹⁴ In merger cases in the EU, competition authorities and courts continue to rely on market shares as indicators of market power.¹⁵ Another indicator often used in merger cases is upward pricing pressure (UPP), which does not require the definition of the relevant market. While the limitations of these indicators are widely known, they nevertheless constitute the starting point of a quantitative assessment in merger control.

A flexible approach to assessing market shares is to start with the market definition based on actual competition and develop a counterfactual scenario in which certain firms do not sell in the EU or sell a limited amount only. The cumulative market share of what is currently sold but at the risk of no longer being sold then has to be reassigned to existing firms.

One possibility is to preserve the relative market shares of those firms that are still present. This implies that counterfactual market shares are obtained by multiplying the current market share with 1 over the cumulative market share of those firms remaining active in the counterfactual scenario. Doing so leads to the same market shares that are

¹³ For a discussion on how to deal with probabilistic events such as a geopolitical shock, see Section IV.

¹⁴ John Vickers, ‘Market Power in Competition Cases’ (2006) 2:sup1 European Competition Journal 3, 7.

¹⁵ In its revised notice on the definition of the relevant market, the European Commission states that ‘market definition makes it possible to calculate market shares, which the Commission may use, among other elements, to assess an undertaking’s competitive strength for the purposes of the competitive assessment.’ (Commission Notice on the definition of the relevant market for the purposes of Union competition law [2024] OJ C1645, at p.5)

observed under the more narrowly defined market in which foreign firms that are at risk are simply not included in the relevant market. For example, suppose there are two EU firms and a non-EU firm at risk of trade disruption, with shares X, Y, and Z, respectively. The counterfactual shares of the two EU firms would then be $X/(X+Y)$ and $Y/(X+Y)$. We note that such a proportional adjustment is equivalent to calculating market shares in a more narrowly defined market from which foreign competitors are excluded.

The question then is under which industry structures such a proportional reassignment of sales is the (approximately) correct risk-adjusted pre-merger scenario or can serve as a lower bound. The key feature of a proportional reassignment is that relative market shares between two firms are invariant to the removal of a competitor. For given prices, this invariance of relative market shares is satisfied by two important and empirically relevant demand systems: logit demand and CES demand.¹⁶

In making proportional risk adjustments, practitioners only need to know actual market shares and the fraction of trade that is subject to geopolitical risks. The numerical example reported in Table 1 illustrates this. Here we are postulating that four firms are operating and that imports constitute 20% of consumption in the relevant market. The risk adjustment is carried out under the assumption that all these imports are subject to geopolitical risks.

Table 1: Market shares before and after proportional risk adjustment in a numerical example¹⁷

	MARKET SHARES		RISK-ADJUSTED MARKET SHARES	
	pre-merger	post-merger	pre-merger	post-merger
Firm 1 (acquirer)	32%	44%	40%	55%
Firm 2	24%	24%	30%	30%
Firm 3	12%	12%	15%	15%
Firm 4 (target)	12%	-	15%	-
Imports (at risk)	20%	20%	-	-

The example is constructed such that the combined market share of the merging firms increases from below to above 50% after the risk adjustment.

¹⁶ Both demand systems satisfy the IIA property, where IIA stands for the independence of irrelevant alternatives. This property implies that diversion ratios are proportional to market shares. A detailed analysis of logit and CES demand systems in oligopoly markets is provided by Simon Anderson, André de Palma, and Jacques Thisse, *Discrete Choice Models of Product Differentiation* (MIT Press 1992).

¹⁷ This is a hypothetical example. The numbers in the first column would be those observed by the competition authority. Post-merger market shares are “naively” computed as the sum of pre-merger market shares for the merged firm and unchanged market shares for non-merging firms. The construction of risk-adjusted market shares is discussed in the text.

However, after the geopolitical risk has materialized, firms will respond to a change in market structure and adjust their prices. Market shares will respond to these price adjustments. This holds not only for changes in the market structure due to geopolitical risks. An adjustment of prices can also be expected to be the result of a merger. Thus, using the pre-merger market shares of the merging parties to calculate the joint market share after a merger is conceptually subject to the same criticism as using the proposed risk adjustment to calculate market shares after a geopolitical risk has materialized: the firms will respond to the changes in the market environment. Therefore, it is a matter of convenience to use proportional risk adjustment to calculate risk-adjusted market shares, while acknowledging that firms will adjust prices or quantities (and possibly other variables) in the risk scenario. More precisely, the proportional rule is not the correct counterfactual based on the following argument. Removing some suppliers makes the market less competitive. Consider two firms, one with a larger market share prior to the trade disruption (the ‘large’ firm) than the other (the ‘small’ firm). After the trade disruption, both firms’ market share will increase. However, the market share of the small firm may well increase relatively more than the one of the large firm.¹⁸ When evaluating the joint market share of the two merging firms, this suggests that the proportional rule assigns a too large cumulative market share compared to the correct counterfactual if both of the two merging firms are relatively large compared to their competitors.

The following two-step procedure accounts for the above argument. In the first step, hold prices fixed and readjust demand according to the diversion ratios of the firm(s) at risk. The proportional adjustment then obtains with demand that has the feature that relative market shares remain unchanged, as diversion ratios are proportional to market shares.¹⁹ In the second step, let the remaining competitors adjust their prices. Because the removal of the foreign firm(s) has made the market less competitive, all remaining firms will increase their prices. Under the demand systems with a CES/logit structure, the ratio of the market share of a large firm to the one of a small firm goes down.²⁰ If the merger involves larger firms, the proportional adjustment undertaken in step 1 overestimates market shares of large firms because of price adjustments made by the

¹⁸ This is made more precise in the next paragraph.

¹⁹ This also affects HHI and Δ HHI (the merger-induced change in the HHI). While typically not used by the European Commission, authorities in the U.S. have relied on HHI and Δ HHI for screening purposes. Note, however, that the EC notice on a simplified treatment refers to a Δ HHI of less than 150 as one of the criteria to be eligible for simplified treatment (2023/C 160/01, OJ C, 5.5.2023, at pp. 3-4). Prudential merger control would then use the HHI calculated based on the counterfactual pre-merger market shares.

²⁰ Recent advances in game theory and oligopoly theory on aggregative games enable us to prove this statement. Using the terminology of this literature, the result follows from the fact that the elasticity of the market-share fitting-in function (which depends on the ratio of the firm’s type and the industry-level aggregator) is decreasing, as shown in Lemma XXV in the online appendix to Volker Nocke and Nicolas Schutz, ‘Multiproduct-Firm Oligopoly: An Aggregative Games Approach’ (2018) 86 *Econometrica* 532. The full argument is fully developed in Volker Nocke, Martin Peitz, and Nicolas Schutz (2024) ‘Supply Conditions and Market Power Indicators in Merger Control’ (2024), on file with the authors.

firms.²¹ However, the change in market concentration resulting from a strategic change in prices will be dwarfed by the increase in market concentration based on the proportional adjustment after the exit of a firm at risk.

To summarize our analysis on market shares, ‘risk-adjusted’ market shares go up if exit happens. The proportional assignment is an easy rule of thumb on how to do this in practice, which is similar in spirit to summing up pre-merger market shares for the merged entity, as both abstract from price effects.

C. Risk-adjusted UPP

A similar reasoning to the above two-step procedure on how to adjust market shares shows that the merger’s UPP increases after the exit of a competitor at risk. Again, the total effect can be decomposed into two steps. In the first step, holding all prices fixed, the diversion ratio from one merger partner (say, firm 1) to the other (say, firm 2) increases: prior to the exit of the foreign firms (say, firm 3), an increase in the price of firm 1 would have some consumers switch from firm 1 to firm 3. After the exit of firm 3, some of these consumers would therefore switch to firm 2. In the important case of logit or CES demand, the diversion ratios between any two remaining firms would increase proportionally – and diversion ratios would therefore adjust in exactly the same way as market shares (holding prices fixed). In the second step, let prices adjust in response to the exit of firm 3. As the exit makes the market less competitive, all firms would increase their prices, resulting in larger profit margins. As the UPP from firm 1 to firm 2 is the product of the respective diversion ratio and profit margin, at this second step the UPP would increase further.

III. Vertical Effects and Prudential Merger Control

A. Vertical effects analysis

In addition to their horizontal competitive effects on mergers, geopolitical risks may also manifest themselves through vertical effects: inputs may become more costly, which in turn may negatively affect competition, for instance, through the exit of domestic firms.

Suppose that the materialization of a geopolitical risk implies the disappearance of a cheap and efficient source of supply. To the extent that the same input might be sourced domestically or from another country with which trade still takes place, this will result in a higher market price of the input and thus an increase in the marginal costs of production. Even if such a negative cost shock does not induce exit of firms in the relevant market, market shares are likely to be affected. This holds trivially if some firms are affected more than others (e.g., because different firms may source different inputs). But it extends to the case in which all firms are affected symmetrically by the input price shock.

²¹ Another example is the homogeneous-goods Cournot oligopoly: the market shares of a small firm relative to a large firm increases as the industry becomes less competitive and the equilibrium price increases (e.g., due to the exit of some other firm). See Nocke, Peitz, and Schutz (n 20).

This can most easily be seen in the homogeneous-goods Cournot model. Consider a common absolute increase in each firm's marginal cost. While such a common cost shock induces total production to decrease and thus the common market price to increase, each firm's price-cost margin will decline by the same absolute amount.²² In turn, this implies that the price-cost margin of smaller firms (who face higher marginal costs) will decrease relatively more than that of larger, more efficient firms. As each firm's equilibrium output and sales is proportional to its price-cost margin according to the Cournot model, this implies that market share differences will be magnified; that is, industry concentration will increase.

Does the above argument extend to the case where the common cost shock increases each firm's marginal cost not by the same absolute amount but by the same percentage? The answer is yes: a common percentage increase in marginal cost induces a smaller absolute increase in the marginal cost of more efficient, larger firms, implying that market share differences will be magnified even more.

It can also be shown that the same prediction – that a common negative cost shock (i.e. higher input costs) increases industry concentration – extends to the empirically relevant case of price competition with differentiated products under CES or logit demand.²³ This means that even if the input price shock does not affect the number of active firms, adjusted market shares of larger firms increase, and adjusted market shares of smaller firms decrease. The combined market share of two large merging firms would therefore need an upward adjustment.

The increase in costs of production might well reduce the number of active firms in the market. This can happen through two channels. The first is that the increase in marginal cost is such that one or several firms would be unable to sell its product even when offered at marginal cost. For instance, in the Cournot model, a firm does not sell anything if its marginal cost is above the market price. The second channel relies on the existence of fixed costs. As the cost shock decreases the resulting price-cost margin and, thus, the gross profit of each firm, less efficient firms may no longer be able to cover their fixed costs. Whenever such exit occurs, a merger between sellers would take place in a more concentrated industry, and *ceteris paribus* its effects will tend to be more adverse to consumer (and total) welfare.

²² This prediction is based on a standard assumption in the Cournot model. The technical condition is that the demand curvature is less than one so that quantities are strategic substitutes and comparative statics well behaved.

²³ Specifically, suppose that each firm's marginal cost increases by the same absolute amount (under logit demand) or that each firm's marginal cost increases by the same relative amount (under CES demand). Such a common cost shock is equivalent to a proportional decrease in all firms' 'types', as defined in Nocke and Schutz (n 20 and n 12). This proportional decrease in firms' types then induces an increase of the industry's price index. Assuming that consumers have the possibility not to buy in the market, observed markups will decline, which magnifies differences in market shares. Using the terminology of aggregative games (e.g. Nocke and Schutz, n 20), this result obtains because the elasticity of the market-share fitting-in function is decreasing. See Nocke, Peitz, and Schutz (n 20).

B. Market share adjustment in case of vertical effects

As in the analysis with horizontal effects, when making proportional adjustments, practitioners only need to know actual market shares and the firms at risk.

The numerical example reported in Table 2 illustrates this. Here we are postulating that six firms are operating in the EU and that the two smallest firms with 10% market share each would exit if the geopolitical risk manifests itself.

Table 2: Market shares with exit risk due to an input price shock²⁴

	MARKET SHARES		RISK-ADJUSTED MARKET SHARES	
	pre-merger	post-merger	pre-merger	post-merger
Firm 1 (acquirer)	25%	45%	31%	56%
Firm 2	20%	20%	25%	25%
Firm 3 (target)	20%	-	25%	-
Firm 4	15%	15%	19%	19%
Firm 5	10%	10%	-	-
Firm 6	10%	10%	-	-

According to Figure 2, if in case of trade disruptions of inputs, some domestic firms are no longer viable, the market shares of the surviving domestic firms increase significantly, suggesting higher anti-competitive risks post-merger.

C. Vertical effects: further discussion

To study vertical effects, it may be useful to consider markets for critical inputs. If the EU is a net importer of critical inputs, the above analysis applies. If instead the EU is a net exporter (vis-a-vis risky countries), then the opposite may hold: if the critical input can no longer be sold to China, the domestic price of the input may decrease, thereby reducing the cost of European producers. (This should give the competition authority some guidance on whether vertical effects are likely to be harmful.)

As pointed out above, the impact of a disruption of critical inputs may affect different firms differently. For example, some firms may be vertically integrated or source the input domestically while others may source it from risky countries. To the extent that the merger partners have a more secure input supply than their competitors, the merged firm may have additional market power in the event of a negative shock on input supply.

²⁴ This is a hypothetical example. The numbers in the first column would be the numbers observed by the competition authority. Post-merger market shares are “naively” computed as the sum of pre-merger market shares for the merged firm and unchanged market shares for non-merging firms. The construction of risk-adjusted market shares is discussed in the text. Numbers are rounded.

So far, we have considered that trade disruption will result in higher input costs which may or may not induce exit of firms in the relevant market. Something we have not considered is the possibility that the geopolitical risk may also consist in a reduction in demand for exports. To the extent that profits from exporting contribute to covering fixed costs, a long-lasting disruption in some export markets might lead to the exit of firms in the relevant market, thereby increasing market concentration. This mirrors the above-discussed effects of increases in input costs.

IV. Coherence and Implementation

A. Coherence

Incorporating factors such as geopolitical risks in the assessment of mergers is coherent with current practice of competition agencies in general²⁵ and the European Commission in particular. Indeed, forward-looking analysis and the inclusion of uncertainty are increasingly present in the EC's decisions in merger control.

The EC already incorporates foreseeable future developments in its assessment. For instance, new imports may become available in the future unconditional on whether the notified merger is approved. The EC wrote: 'Even if the constraint posed by imports may not be strong at present, it would be possible that it will increase in the future. The Commission has therefore assessed whether there are sufficient elements to reasonably assume that competition from imports will increase within a timeframe relevant for the merger assessment.'²⁶ For example, in *Outokumpu/INOXUM*²⁷ the EC took into account that imports of stainless-steel flat products from Turkey would become available in the future.²⁸

The EC seems to have taken a more forward-looking approach than in the past also in some recent potential competition cases, as witnessed for instance by its objections to

²⁵ For instance, in Competition and Markets Authority, *Merger Assessment Guidelines*, 18 March 2021, at para. 2.10, the UK's CMA states: 'While all merger assessments are prospective, there can be a higher degree of uncertainty in some markets, such as those characterised by potentially significant changes in competitive conditions. [...] The fact that there may be some uncertainty in how the market is likely to develop in future is a relevant consideration, but may not be determinative. It does not, by itself, reduce the likelihood that a merger could give rise to competition concerns, and the presence of some uncertainty therefore does not in itself preclude the CMA from finding competition concerns on the basis of all the available evidence where the CMA is satisfied that the relevant standard of proof is met.' Its recent practice is witness of this approach. For instance, in *Facebook/Giphy*, upheld on substantive grounds by the CAT, it prohibited the transaction despite, *inter alia*, the uncertainty surrounding the possibility that Giphy might have competed with Facebook in the online advertising market.

²⁶ *Outokumpu/INOXUM* (Case COMP/M.6471) Commission Decision of 7 November 2012, para 586.

²⁷ *Outokumpu/INOXUM* (n 26).

²⁸ For instance, the EC concluded that the new POSCO plant in Turkey was unlikely to significantly affect the EEA market. At the time of the investigation, it was expected that the plant would start operating the year after. The EC even considered the likely impact of regulation in Indonesia, which provides Nickel ore, a key input for producers in China who may export to the EEA market. Overall, the EC concluded that 'the competitive pressure coming from imports in the future is not likely to increase and may even decrease' (*Outokumpu/INOXUM* (n 26) para 602).

the *Adobe/Figma* merger,²⁹ which was eventually called off by the two companies after the doubts raised by the EC, the CMA, and the FTC.

Uncertain market developments might be taken into account not only as possible obstacles to a merger but also as reasons to approve the merger. The role of entry is a case in point: merger guidelines issued by leading competition authorities state that timely, likely, and sufficient entry might eliminate or reduce the anti-competitive effects of a merger.³⁰

In several past decisions, the EC (as well as other competition authorities) found that entry would sufficiently discipline the merging parties to allow their transactions. It should be stressed though that such merger-induced entry is a highly uncertain event. A recent ex-post study commissioned by the CMA, for instance, found that entry often failed to materialise when instead its expectation had been crucial for the clearance of a merger.³¹ Recent academic work supports a sceptical view about post-merger entry. Caradonna, Miller, and Sheu combine theory and calibrated simulations and show that entry that is sufficient to restore pre-merger consumer surplus renders the merger unprofitable.³² Hence, if a merger takes place, the merging parties must have anticipated high barriers to entry, which makes it difficult to believe that entry will materialise.

Decisions to approve a merger subject to remedies constitute another example where the EC expects entry to take place despite high uncertainty of what will happen with the remedies in place.³³ And given that uncertainty, it should not surprise that the remedy might sometimes fail altogether. For instance, in airline mergers approved subject to slot divestments, entry failed to materialise in several of the problematic routes identified in the merger investigations.³⁴ Similarly, in *Hutchison 3G/Orange*³⁵, this Austrian mobile merger was authorized under the condition of selling spectrum so as to allow for new

²⁹ Commission, 'Commission sends Adobe Statement of Objections over proposed acquisition of Figma' IP/23/5778 (Brussels, 17 November 2023).

³⁰ See, e.g., Guidelines on the assessment of horizontal mergers under the Council Regulation on the control of concentrations between undertakings [2004] OJ C31/5, at para. 68, and more generally in Section VI (paras.68-75).

³¹ KPMG, 'Entry and expansion in UK merger cases. An ex-post evaluation' (April 2017).

³² Peter Caradonna, Nathan Miller, and Gloria Sheu, 'Mergers, Entry, and Consumer Welfare' (2024). Georgetown McDonough School of Business Research Paper No. 3537135, available at <https://ssrn.com/abstract=3537135>. See also David Spector, 'Horizontal Mergers, Entry, and Efficiency Defences' (2003) 21 International Journal of Industrial Organization 1591.

³³ Staying in line with our topic, we address entry, which is about future change in market participants, but a different, general issue is the extent to which merger remedies will be able to prevent anticompetitive effects from occurring.

³⁴ For instance, in *Air France/KLM* (Case COMP/M.3280) Commission Decision of 11 February 2004, only in two routes out of nine did entry by a newcomer take place, and in *Lufthansa/SN Airholding* (Case COMP/M.5335) Commission Decision of 22 June 2009, there was no entry in any of the four problematic routes. See Table 3 in Frank Fichert 'Remedies in Airline Merger Control. The European Experience' (2011) Transport Dynamics Proceedings of the 16th International Conference of Hong Kong Society for Transportation Studies, Hong Kong.

³⁵ *Hutchison 3G/Orange* (Case COMP/M.6497) Commission Decision of 12 December 2012.

entry (and hence a competitive constraint);³⁶ but no firm showed interest and the merged entity kept the spectrum.

Although more rarely, the EC might accept a Failing Firm Defence (FFD), that is, it might approve a merger considering that if it were not allowed, the acquired firm would go bankrupt. Although the conditions for accepting a FFD appear quite stringent,³⁷ a high degree of uncertainty is typically involved in such cases. For instance, the FFD was accepted by the EC in *Aegean/Olympic*,³⁸ only two years after the FFD for the very same transaction had been rejected.³⁹

We now turn to the EC's approach towards the effects of mergers upon innovation. Whereas traditionally the EC was limiting its attention to innovation which were already in the pipeline, in the last decade the EC has moved its analysis to more "upstream" and uncertain phases.

First, in *Novartis/GSK Oncology*,⁴⁰ the Commission has started to consider the merger impact on drugs which were at the early stages of development (whereas in previous pharma decisions, it had limited its concerns to drugs that were much advanced in the regulatory process of drug approval) and would have reached the market, if at all, several years later.

Then, in *Dow/Dupont*⁴¹ and *Bayer/Monsanto*⁴² the EC investigated the merger effects on the innovation markets. In other words, it moved its investigation to a stage where innovation has not taken place yet, but firms compete in R&D for the discovery of the active ingredients which will one day be developed into a formulated product (in this case, pesticides).

Another remarkable case in this line of decisions which deal with highly uncertain environments is *Illumina/Grail*,⁴³ where the EC has blocked a merger in order to protect future innovation in a nascent market.⁴⁴

³⁶ Commission, 'Mergers: Commission clears acquisition of Austrian mobile phone operator Orange by H3G, subject to conditions' IP/12/1361 (Brussels, 12 December 2012).

³⁷ Typically, competition authorities require three cumulative conditions to accept a Failing Firm Defence: (a) absent the merger, the failing firm would exit the market in the near future as a result of its financial difficulties. (b) There is no feasible alternative transaction or reorganisation that is less anticompetitive than the proposed merger. (c) Absent the merger, the assets of the failing firm would inevitably exit the market.

³⁸ *Aegean Airlines/Olympic Air II* (Case COMP/M.6796) Commission Decision of 9 October 2013

³⁹ *Aegean Airlines/Olympic Air I* (Case COMP/M.5830) Commission Decision of 26 January 2011.

⁴⁰ *Novartis/GlaxoSmithKline Oncology Business* (Case M.7275) Commission Decision of 28 January 2015, C(2015) 538 final.

⁴¹ *Dow/DuPont* (Case M.7932) Commission Decision of 27 March 2017, C(2017) 1946 final.

⁴² *Bayer/Monsanto* (Case M.8084) Commission Decision of 21 March 2018, C(2018) 1709 final.

⁴³ *Illumina/Grail* (Case M.10188) Commission Decision of 6 September 2022 (unpublished).

⁴⁴ To be precise, Illumina had to divest Grail. See Commission 'Commission Approves Illumina's Plan to Unwind its Completed Acquisition of GRAIL' IP/24/1964 (Brussels, 12 April 2024).

We conclude that the EC frequently assesses future market developments, which are often highly uncertain (and which may be unconditional or conditional on the merger moving forward). Thus, adding geopolitical risks to the assessment is a natural addition to the analysis, and is consistent with current practice.

B. Standard of proof and implementation

In general, it is well accepted that merger control entails a high degree of uncertainty, and that the EC needs a certain degree of discretion. In *CK Telecoms*,⁴⁵ the Court of Justice states:

82 In the exercise of that ex ante review of concentrations, the Commission has a margin of discretion with regard to economic matters for the purpose of the application of the substantive rules of Regulation No 139/2004, in particular Article 2 (..), since it carries out prospective economic analyses seeking to determine the likelihood of certain developments in the relevant market within a foreseeable time frame.

83 Those prospective analyses, which, more often, are complex, are necessarily more uncertain than ex post analyses.

84 The prospective analysis called for in relation to the review of concentrations, which consists of an examination of how such a concentration might alter the parameters of competition on the affected markets in order to establish whether it would give rise to a significant impediment to effective competition, makes it necessary to envisage various chains of cause and effect with a view to ascertaining which of them are the most likely [...]. That prospective analysis falls within the margin of discretion with regard to economic matters which is available to the Commission for the purposes of applying the substantive rules of Regulation No 139/2004, in particular Article 2 thereof which justifies the review by the EU Courts of a Commission decision relating to concentrations being confined to ascertaining that the facts have been accurately stated and that there has been no manifest error of assessment [...].

85 It is true that such an analysis must be carried out with great care since it entails not the examination of past events – for which often many items of evidence are available which make it possible to understand the causes – or of current events, but rather a prediction of events which are more or less likely to occur in future if a decision prohibiting the planned concentration or laying down the conditions for it is not adopted [...].

86 However, the prospective nature of the economic analysis which the Commission must carry out precludes a requirement for that institution to meet a particularly high standard of proof in order to demonstrate that a concentration would or would not significantly impede effective competition. (references to cases omitted)

On the basis of this reasoning, the Court concludes that the standard of proof for the EC in merger cases is balance of probabilities, that is, it is sufficient for it to show that a significant impediment to effective competition is more likely than not:

87 In those circumstances, having regard, in particular, to the symmetrical structure of Article 2(2) and (3) of Regulation No 139/2004 and to the prospective nature of the Commission's economic analyses when conducting the review of concentrations, it must be held that, in order to declare

⁴⁵Case-376/20 P *CK Telecoms*, Judgment of the Court of Justice of 13 July 2023.

that a concentration is incompatible or compatible with the internal market, it is sufficient for the Commission to demonstrate, by means of a sufficiently cogent and consistent body of evidence, that it is more likely than not that the concentration concerned would or would not significantly impede effective competition in the internal market or in a substantial part of it.

In light of this standard of proof, it might appear difficult for the EC to prohibit transactions on the basis that foreign participants might disappear from the market (or, equivalently, that the future market is narrower) if such an event is thought to occur with less than 50% probability. Nevertheless, in its decisions where it has approved a merger on the basis of potential entry likely to discipline the merged entity, the EC has not been asked to quantify the probability of entry, which in many instances was highly speculative.

Furthermore, the EC might have a certain discretion in establishing whether there are sufficient competitive constraints in the market and provided that the possibility of trade disruption is not too far-fetched, a finding that the competitive constraints from certain countries might not be so strong in the future due to geopolitical risks.

Under EU case law, competition authorities follow a balance of probability standard of proof, as confirmed also by the above-cited *CK Telecoms* judgment. This means that, for instance, in potential competition cases, if the acquirer takes over a ‘potential entrant’, the judges are likely to consider the latter as such (i.e., a potential entrant) only if there is more than 50% probability that it will enter (this is what is called balance of probabilities). To an economist considering expected harm and benefits, this is not satisfactory and would instead suggest a balance-of-harm approach. Under such an approach, one looks at the outcome in expected terms. For instance, suppose that the potential entrant being acquired has a 30% probability of entering the market and that if this is the relevant counterfactual, the merger leads to a 20% loss of consumer welfare, whereas in the counterfactual of no entry, the merger leads to no change in consumer welfare. Under a balance of harms approach, the expected effect of the merger is a 6% loss in consumer welfare,⁴⁶ which would suggest a Significant Impediment to Effective Competition (SIEC) and hence a likely challenge by competition authorities. Instead, by using a balance of probabilities approach, an authority would conclude that entry is less likely than not and hence would not find an SIEC.

An alternative standard of proof, which is in line with the idea of prudential regulation, would be that there must be a **significant probability**, which may well be below 50%, that would trigger the risk adjustment.

We note that the EC and the OECD have been developing methods to identify the sectors in which there is a significant risk of supply chain disruption. Using objective quantitative criteria, these studies indicate a number of products which heavily depend

⁴⁶ This is the result of multiplying the (-10%) loss by the probability of 30% and summing it with the term resulting from multiplying the (0%) loss by the probability of 70%.

on non-EU imports.⁴⁷ Therefore, when assessing vertical effects, one possible option for a competition authority would be to rely on the classifications obtained with these methods. Suppose that a merger is proposed in one of the designated sectors. In that case, the competition authority might simply want to consider the vertical effects of such mergers as spelled out in Section III.

Depending on the concrete case, the situation may be such that the proposed risk adjustment is applicable even under the balance of probabilities approach. For example, after the Brexit referendum but before the actual Brexit, even under the balance of probabilities the relevant metrics would require risk adjustment because it was more likely than not that Brexit would actually happen.

For prudential merger control, the competition authority would need to assess geopolitical risks and the risks of trade disruptions. A valid concern may be voiced as to whether competition authorities are in a good position to make such assessments. It is arguably not the job of the authority to speculate about foreign policy including trade policy developments and include them in their merger decisions. While such a concern suggests that some geopolitical risks may not be assessed, this does not imply that all such risks should be ignored. We see two ways in which the authority can obtain relevant information that enables it to perform a risk-adjusted merger analysis. First, in particular if the competition authority is not an independent authority it may rely on risk assessments from other parts of the executive. Second, during its analysis of the market the competition authority may become aware of geopolitical or trade risks. This may be the case when the authority learns that certain imports are difficult to insure. Such and other information indicating relevant risks in the market under consideration may come from interested parties such as firms further down the supply chain that would be negatively affected by a merger under more adverse conditions. To the extent that the merger partners have internal documents on possible scenarios involving supply disruptions, these scenarios deserve to be taken seriously.

The European Commission sometimes assesses geopolitical risks or can rely on risk assessments e.g. as revealed in the stock market. For example, at the latest with the massive Russian invasion of the Ukraine in 2022 it should have been clear that certain Russian imports were at risk. Clearly, some of the ‘risks’ materialize from decisions by the European institutions or national member states themselves, such as an increase of tariffs, limits to imports, or the prohibition of products by a certain company in all or parts of the internal market.

⁴⁷ See Román Arjona, William Connell, and Cristina Herghelegiu, ‘An Enhanced Methodology to Monitor the EU’s Strategic Dependencies and Vulnerabilities’ (2023) Single Market Economics Papers WP2023/14, and Cyrille Schweltnus, Anton Haramboure, Lea Samek, Ricardo Chiapin Pechansky, and Charles Cadestin, ‘Global value chain dependencies under the magnifying glass’ (2023) OECD Science, Technology and Industry Policy Papers, No. 142, at <https://doi.org/10.1787/b2489065-en>.

The relevant competition authority may want to take such policy developments in their own jurisdiction or neighbouring jurisdictions into account. We provide two examples for illustration. Since 2020 several European countries imposed restrictions on the use of 5G equipment.⁴⁸ Under prudential merger regulation, the EC or national competition authorities of member states in which such restrictions are not yet in place may therefore remove Huawei as a relevant competitive constraint or input supply when assessing a proposed merger in the affected industries. Similarly, the policy discussion about prohibiting the use of TikTok in the US and the EU⁴⁹ may justify not to consider TikTok as a competitive constraint in the market for social networks and related markets such as the one for social media advertising. To state the obvious, the competition authority does not need to form a view about the desirability of any such shock affecting market structure. It only must assess whether such a shock is sufficiently likely to merit consideration. For trade sanctions that have been announced but are not yet in place (and may be challenged in court), this should be rather obvious.

Other risks are more speculative and prudential merger control could arguably include such risks (e.g. the possibility that China invades Taiwan and the ensuing trade restrictions). However, we do not see that currently the Commission and the EU Courts would follow such a broader interpretation of prudential merger policy.

V. Conclusion

In the face of geopolitical risks leading to trade sanctions, disruptions of transport routes, or direct policy interventions in response to war, competition authorities have to decide on how to include those risks in their merger assessments.

Geopolitical risks can remove foreign firms from the relevant market, thereby relaxing competitive constraints. This calls for competition authorities to be less lenient in merger control. In the assessment of the potential competitive harm of a merger, pre-merger market shares must be appropriately adjusted to account for such geopolitical risks. Moreover, quantitative measures based on Upward Pricing Pressure (UPP) must also be corrected: if foreign firms were to exit the market fully or partially, both diversion ratios between merging parties and profit margins would likely rise, leading to a higher UPP, which indicates stronger anti-competitive effects.

In addition to their horizontal competitive effects on mergers, geopolitical risks may also manifest themselves through vertical effects: essential inputs may become more costly, which in turn may negatively affect competition, for instance, through the exit of domestic firms.

⁴⁸ See Reuters, 'European Countries who Put Curbs on Huawei 5G Equipment' (29 September 2023), at <https://www.reuters.com/technology/european-countries-who-put-curbs-huawei-5g-equipment-2023-09-28/>, last accessed 3 June 2024.

⁴⁹ See Pieter Haeck, 'TikTok Ban in EU is "Not Excluded", von der Leyen Says' *politico.eu* (Brussels, 29 April 2024), at <https://www.politico.eu/article/tiktok-ban-in-eu-is-not-excluded-von-der-leyen-says/>, last accessed 3 June 2024.

Current merger practice already assesses changes in market structure such as post-merger entry. Consistent with this practice, this article makes a proposal on how geopolitical risks can be accounted for in the conventional framework for merger control. This proposal is in line with recent trends of competition authorities incorporating uncertainty in their merger analysis, as reflected in recent cases in the EU and the UK, and in the 2023 US Merger Guidelines.⁵⁰

⁵⁰ The 2023 US Merger Guidelines (pp. 1-2) quote a Supreme Court judgment to stress that merger control is inherently uncertain: ‘To show that a merger is unlawful, a plaintiff need only prove that its effect “may be substantially to lessen competition” or to tend to create a monopoly. Accordingly, the Agencies do not attempt to predict the future or calculate precise effects of a merger with certainty. Rather, the Agencies examine the totality of the evidence available to assess the risk the merger presents.’ See also the discussion by Carl Shapiro, ‘Evolution of the Merger Guidelines: Is This Fox Too Clever by Half?’ (2024) Review of Industrial Organization, available at <https://doi.org/10.1007/s11151-024-09956-y>.