This issue focuses on sustainability related aspects in EU merger control:

**EU Green Mergers & Acquisitions Deals – How Merger Control Contributes to a Sustainable Future**

This paper presents the European Commission’s approach to sustainability in EU merger control and explains how the current legal framework and case practice can and do support the European Green Deal.

**Norsk Hydro / Alumetal and KPS Capital Partners / Real Alloy: “Greening” Aluminium**

These transactions illustrate how “green” considerations are deeply changing the competitive dynamics in European industries. In these two cases, the Commission adapted its assessment, for example by devising new quantitative metrics to capture changing competitive dynamics.

**Sika / MBCC: Cementing Sustainability - Cutting Carbon through Chemistry**

This case is a good example of how the Commission takes R&D capabilities and sustainability considerations into account when assessing a merger, supporting a more competitive and eco-friendly business environment in the European Union and beyond.
EU Green Mergers & Acquisitions Deals – How Merger Control Contributes to a Sustainable Future

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1. Introduction

The transition towards a climate neutral and circular economy, with low-emission technologies and reduced waste, is one of the key challenges for today's society. With the European Green Deal, it has become a strategic priority of the EU, through ambitious plans and initiatives, to transform the EU into a modern, resource-efficient, and competitive economy, the so-called 'green transition'. The green transition involves a number of broader sustainability policies, which all form part of the overarching goal of reaching climate neutrality in Europe.

All EU bodies, including DG Competition, do their part to reach the goals of the European Green Deal. This is why, in September 2020, the Commission's Executive Vice President (‘EVP’) Margrethe Vestager launched a debate on how competition rules and sustainability policies can work together. In this context, the European Commission ('the Commission') published a call for contributions and received around 200 submissions from a broad range of stakeholders, all published on a dedicated webpage. Following the call for contributions, on 4 February 2021, EVP Vestager hosted a conference that looked at how EU competition rules can play their part to support environmental and climate policies. The Commission also published a competition policy brief titled “Competition Policy in Support of Europe’s Green Ambition” dedicated to sustainability in competition policy, in which it outlined how competition policy could support and complement the European Green Deal.

As regards merger control, a key take-away from the responses to the call for contributions and the conference is that the EU Merger Regulation ('EUMR') and the Commission’s case practice can and do already support the objectives of the European Green Deal. The question is how the existing toolkit can be applied to mergers in industries that are undergoing significant changes to further sustainability goals. The important issues which were identified for merger enforcement to enhance its contribution to the sustainability goals include: (i) the need to take into account consumer preferences e.g. for “green products” as a differentiating factor in general and in market definition in particular; (ii) the importance of enforcing and pursuing innovation theories of harm as a means of preventing the loss of “green innovation”; (iii) the importance of taking into account social and environmental benefits and thus accepting those efficiencies stemming from a merger; and (iv) the need to stay vigilant with regard to “green” killer acquisitions, especially given the fact that “green” innovation is often carried out by smaller players representing a threat for incumbent companies and that such concentrations may well fall below the notification thresholds at EU and national levels.

DG Competition’s case practice and policy already address some of these issues. While the Commission does not have a mandate to intervene in mergers for environmental reasons in the absence of harm to competition, in practice competitive markets often go

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6 See to this effect the reasoning included in M.8084 Bayer/Monsanto in Section XIV: Non-Competition Concerns. The EUMR does not empower...
hand-in-hand with efforts towards more sustainable market outcomes. Consequently, there is a clear trend towards the sustainability-related aspects of the Commission's merger review becoming increasingly important, as demonstrated by a number of recent merger investigations. Moreover, the EU's recently recalibrated approach to the Article 22 referral mechanism aims to address the potential enforcement gaps in relation to "green" killer acquisitions.

By drawing examples from recent case practice, the article outlines how the Commission takes into account sustainability considerations in its merger investigations when defining relevant markets (Section 2), assessing the competitive impact of a merger (Section 3), and the suitability of remedies to fix the anticompetitive harm (Section 4). This paper also explains how the Commission remains vigilant on "green" killer acquisitions (Section 5).

2. Market Definition

The starting point for the definition of relevant product markets is to assess demand-side substitutability, as demand substitution constitutes the most immediate and effective disciplinary force on the suppliers of a given product. When it comes to sustainability-related aspects in market definition, the Commission needs to take into account customers' preferences, including for sustainable products, services and/or technologies. Sustainability-driven customer preferences can determine the level of demand-side substitutability. Similarly, from a supply-side perspective, the ability of suppliers to produce green products may differ across market players.

In its case practice, the Commission took into account customers' preferences for sustainable products and sustainability-related targets to define separate markets or to take such elements into consideration as a differentiating factor when identifying potential market segments. By way of example, in DEMB/Mondelez/Charger Opco, the Commission considered a possible segmentation between non-conventional coffee (organic, fair trade) from conventional coffee as retailers indicated that some consumers perceive non-conventional coffee as fulfilling different consumer needs such as ensuring sustainable development. In Marine Harvest/Morpol, customer preferences for sustainably farmed salmon were one of several factors in the finding of separate product markets for farming and primary processing of Scottish salmon as opposed to Norwegian salmon. In GE/Alstom, the Commission looked into customers' preferences in the market for heavy-duty gas turbines and found that, from the demand perspective, environmental regulations played a role in the regional differentiation of the market. The Commission conducted an in-depth investigation into whether aluminium and steel for car body parts were part of the same market. The Commission concluded that this was not the case, particularly in view of CO₂ emission reduction targets that required fuel savings and that were driving "light weighting" of vehicles (lighter vehicle meaning reduced fuel consumption) and thus demand by car manufacturers of aluminium ABS (body sheets) of a high grade and performance. In the assessment, the increasing demand and limited available spare capacity was an important factor to conclude that aluminium and steel for car body parts were not part of the same market. It is then in this market that the Commission found competition concerns and obtained a structural remedy, i.e. the divestiture of a plant producing this high quality product. In Andel/Energi Danmark, the Commission considered a possible separate market for electricity produced from renewable sources ("green" energy), possibly limited to the supply of renewables-based electricity through power purchase agreements ("PPAs") due to certain limitations of supply-side substitutability for green electricity supplied via PPAs compared to other forms of supply.

The most recent case practice of the last three years shows that the Commission takes non-price parameters of competition such as sustainability increasingly into account when defining relevant markets, which reflects the stronger demand by individuals, companies, and society as a whole for more sustainable products, services, and technology. This trend may already be observed in several sectors and markets that are central to the green transition. For instance, among the merger investigations concluded in 2023 to date, in Norsk Hydro/Alumetal, the Commission looked at the impact of the merger on the market for solid advanced aluminium foundry alloys in the EEA, and considered whether, on the basis of customer preferences, low carbon solid advanced aluminium foundry alloys could constitute a separate product market from non-low carbon ones. While the Commission ultimately left the issue open, it found that low carbon is at least an element of differentiation that plays a role at product and geographic level when it comes to solid advanced aluminium foundry alloys. Among the merger investigations concluded in 2022, in KPS Capital Partners/Real Alloy Europe, a case highly relevant for the circular economy, which involved recycled aluminium products and recycling services, the Commission considered zero-waste technology of production as a differentiating factor relevant for the product market definition.

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8 See for instance case M.9730 FCA/PSA, paragraphs 34, 156, 215; M.8829 Total Produce/Dole Food Company, paragraphs 34-37; M.7220 Chiquita Brands International/Fyffes, paragraphs 66-73; M.7510 Olam/ADM Cocoa Business, paragraphs 15-19.
9 M.7292 DEMB/Mondelez/Charger Opco, paragraphs 57-59.
10 M.6850 Marine Harvest/Morpol, paragraph 42.
11 M.7278 GE/Alstom, paragraphs 199, 202-203.
12 M.9076 Novelis/Aleris, Section 6.2.2.3.
13 M.10212 Andel/Energi Danmark, paragraphs 16-20. Further regarding renewable-based generation, see also M.8871 RWE/E.ON Assets, paragraphs 14-16.
assessments regarding salt slag (a by-product of aluminium production) recycling.\textsuperscript{15} While the Commission ultimately defined the relevant market as an overall market for salt slag recycling, there were strong indications that the market is differentiated based on the technology used, namely zero-waste and non-zero-waste recycling technology. Therefore, in the competitive assessment, the Commission assessed the parties’ position in both the overall salt slag recycling market and in the narrower market for salt slag recycling through zero-waste technology only. Recycled aluminium is important to achieve the objectives of the green transition, in particular when it is used by producers of aluminium flat rolled products, necessary for the production of beverage cans. While the Commission did not consider recycled aluminium as a separate market, it focused on recycled aluminium at competitive assessment level as this was the main area of overlap and the main input used downstream for cans. The Commission also found that industrial shift made recycled aluminium, as opposed to primary aluminium, an indispensable input in certain production processes already. In Hyundai Heavy Industries/Daewoo Shipbuilding & Marine Engineering, a transaction which was prohibited in 2022, the Commission examined the impact of the merger in the worldwide market for large LNG vessels. Innovative vessel technologies including those allowing for lower fuel consumption and lower emissions were considered as an element of product differentiation.\textsuperscript{16} Among the merger investigations concluded in 2021, in Schwarz/Suez, environmental costs were a relevant parameter for the assessment of geographic market definition for sorting of lightweight packaging in the Netherlands. More specifically, customers in the Netherlands try to avoid transporting lightweight packaging for sorting over long distances in order to minimise the associated CO\textsubscript{2} emissions. The environmental cost of transport was also a factor taken into account in the customers’ calls for tenders and tender specifications, which sometimes resulted in more distant lightweight packaging sorting plants being penalized in tenders due to the increased CO\textsubscript{2} emissions associated with longer transport.\textsuperscript{17} Ultimately, the relevant geographic market was defined as national, i.e., the Netherlands.

In this context, the ongoing review of the Market Definition Notice\textsuperscript{18} also reflects the need to take sustainability into account when defining markets. The draft of the revised Market Definition Notice\textsuperscript{19} lists sustainability specifically as one of the non-price parameters of competition that the Commission takes into account when defining a relevant product and geographic market, if relevant for the case at hand.\textsuperscript{20} The relevance of sustainability as one of the non-price parameters of competition when defining markets has also been flagged by various stakeholders that replied to the Commission’s public consultation on the draft revised Market Definition Notice.\textsuperscript{21}

3. Competitive Assessment

Closeness of competition

During the competitive assessment, sustainability can play a prominent role as a parameter of differentiation when assessing closeness between the merging parties and their competitors.\textsuperscript{22}

By way of example, in GE/Alstom, the Commission concluded that the merger would have eliminated a significant and close competitor of GE in the overall market for 50Hz heavy-duty gas turbines, given that GE and Siemens had developed machines which are relatively close to Alstom’s machines in terms of emissions. As such, Alstom, GE and Siemens were found to be largely targeting the same profile of customers.\textsuperscript{23} Recently, in Sika/MBCC, the Commission found that innovation efforts and R&D capabilities to develop new polymers and bring more sustainable chemical admixture formulations to the market played a key role in the concrete/cement industry. Sika and MBCC were both strong innovators, including on green R&D, which was seen as important to meet sustainability challenges and which was one of the main factors taken into account when assessing the closeness of competition between them and vis-à-vis other players.\textsuperscript{24} In KPS Capital Partners/Real Alloy Europe, the Commission assessed the importance of recycled wrought aluminium for the downstream production of can ends and can bodies in view of the green transition and the increased use of recycled content in order to lower the carbon footprint of the final products, i.e., cans. Considering these factors, the Commission found that the merged entity would have the ability to foreclose input, i.e., recycled wrought aluminium for can ends and can bodies, to downstream rivals.\textsuperscript{25} In Hyundai Heavy Industries/Daewoo Shipbuilding & Marine Engineering, the Commission found that the parties were each other’s close competitors on a number of key parameters for competition such as innovation and that both parties were important innovators in vessel technologies including those technologies allowing for

\textsuperscript{16} M.9343 Hyundai Heavy Industries/Daewoo Shipbuilding & Marine Engineering, paragraphs 101-104.
\textsuperscript{17} M.10047 Schwarz Group/Suez Waste Management Companies, paragraphs 44, 56-58.
\textsuperscript{19} At the time of drafting of this brief, the adoption of the new Market Definition Notice by the Commission was planned for Q4 2023.
\textsuperscript{22} See, for example, M.8829 Total Produce/Dole Food Company, paragraph 81, 91.
\textsuperscript{23} M.7278 GE/Alstom, paragraphs 511 and ff.
lower fuel consumption and lower emissions.\textsuperscript{26} Moreover, in \textit{Schwarz/Suez}, customers’ preferences in terms of environmental costs were a relevant parameter showing that the merging parties were close competitors, whereas more environmentally costly alternatives constituted more distant competitive constraints.\textsuperscript{27}

**Innovation theories of harm**

Innovation can bring green(er) technologies, products, or services to the market. Such technologies may involve new recycling technologies, which will be needed for a more circular economy. For this reason, the competitive assessment should ensure that anticompetitive mergers do not significantly impede (green) innovation. In this context, there is broad consensus that the Commission should enforce and pursue innovation theories of harm in merger cases.

As mentioned by EVP Vestager on 10 September 2021\textsuperscript{28}, the Commission has already pursued and enforced innovation theories of harm across different sectors, from basic industries to pharma and high technology markets, from more energy-efficient turbines to less toxic pesticides.\textsuperscript{29} Looking into broader innovation spaces or the overall level of innovation as, for example, in Dow/DuPont\textsuperscript{30}, can help to protect innovation benefiting the environment on a much broader level. Such an approach could be taken in particular in industries with long innovation cycles. This framework is very much suited to address competition concerns that may result in innovation efforts in environmental technologies. For instance, this framework could be used to preserve innovation efforts on environmentally friendly technologies or capabilities when there is a risk of discontinuation of overlapping lines of research, or when there is a risk of a reduction of incentives and ability to achieve the same level or type of innovation. In this context, the Commission intends to continue to defend (green) innovation vigorously.

**Other considerations related to the competitive assessment**

Recent case practice shows that sustainability-related aspects can play additional roles in the competitive assessment of a merger case. In \textit{Norsk Hydro/Alumetal}, the Commission assessed whether Alumetal was an important competitive force within the meaning of paragraphs 37 and 3B of the Horizontal Merger Guidelines in the EEA market for solid advanced aluminium foundry alloys or on the potential EEA market for low carbon steels. The Commission concluded that, on balance, this was not the case given that Alumetal’s capabilities to bring cheaper and advanced recycled aluminium foundry alloys to the market were found not to be unique. In \textit{Hyundai Heavy Industries/Daewoo Shipbuilding & Marine Engineering}, the Commission assessed how certain innovative vessel technologies including those allowing for lower fuel consumption and lower emissions could represent barriers to entry or expansion. In \textit{Tata Steel/thyssenkrupp/JV}, a 2019 prohibition, the Commission found that the transaction would have reduced competition and likely have increased prices in different types of steel. In this context, the Commission found that final consumers’ preferences for sustainable products would limit the ability of some customers to switch to materials alternative to the merging parties’ products.\textsuperscript{32}

**Efficiencies**

Sustainability-related aspects may also play a role in the assessment of merger cases when it comes to efficiency considerations. The existing legal framework allows the Commission to take efficiencies submitted and substantiated by the merging parties into account. Indeed, a merger may bring about improved quality products, for instance, by decreasing the level of toxicity of a product or reducing cost as a result, for instance, of generating less waste or requiring the use of less raw materials. Efficiencies can also result in the development of newer technologies, new “green” products, and more generally “green” innovations.

If these types of positive effects result from the merger, the Commission will assess whether they can compensate the anticompetitive harm. For this purpose, “the efficiencies have to be merger-specific and be verifiable.”\textsuperscript{33} Under the Horizontal Merger Guidelines, efficiencies should, in principle occur within the markets where competition concerns are found. In \textit{Aurubis/Metalla}, a case that concerned access to copper scrap in the EEA, the Commission looked at two sets of alleged efficiencies advanced by the merging parties.\textsuperscript{34} The first set of alleged efficiencies concerned better valorisation of copper scrap through the combination of the parties’ complementary know-how and technologies, while the second set concerned possible additional metal recovery and other environmental benefits. On the first one, while having initial doubts as to the verifiability, transaction-specificity and timeliness of the efficiencies, the Commission concluded that the evidence provided by the parties suggested that there was at least a possibility that such efficiencies would materialise. If that was the case, i.e., if such efficiencies were to materialise to a significant extent, the Commission further concluded that they would at least partly be passed-on to customers, thus potentially partly offsetting any

\textsuperscript{26} M.9343 \textit{Hyundai Heavy Industries/Daewoo Shipbuilding & Marine Engineering}, paragraphs 400 and ff, 491 and ff.

\textsuperscript{27} M.10047 \textit{Schwarz Group/Suez Waste Management Companies}, paragraph 118.

\textsuperscript{28} https://ec.europa.eu/competition/press/pressreleases/2021/spi_21_7754

\textsuperscript{29} Some examples of cases where the Commission raised innovation theories of harm include M.8401 J&D/Actelion, M.7278 General Electric/Alstom, M.7932 Dow/DuPont, M.8084 Bayer/Monsanto, M.6166 DB/BNYSE/Euronext, M.7275 Novartis/GlaxoSmithKline’s oncology business, M.7559 Pfizer/Hospira, M.7326 Medtronic/Covidien.

\textsuperscript{30} M.7932 Dow/DuPont, section V.B.

\textsuperscript{31} M.9343 \textit{Hyundai Heavy Industries/Daewoo Shipbuilding & Marine Engineering}, paragraphs 1052 and ff.

\textsuperscript{32} M.8715 \textit{Tata Steel/thyssenkrupp/JV}, paragraphs 1381–1382.

\textsuperscript{33} Guidelines on the assessment of horizontal mergers under the Council Regulation on the control of concentrations between undertakings, paragraph 78.

\textsuperscript{34} M.9409 \textit{Aurubis/Metalla}, paragraphs 831 and ff.
adverse price effect stemming from the Transaction. In any event, a mere possibility of efficiencies materialising is not sufficient to meet the legal standard for assessing and accepting efficiencies. On the second one, the Commission found that the parties’ claim was not substantiated enough to the requisite standard. The case was cleared unconditionally following a Phase II investigation.

In this context, there is demand from some stakeholders for the Commission to consider a longer time horizon and overall benefits to society when looking at whether the conditions for efficiencies are met. So far, there have been no cases in which the Commission has accepted this type of out-of-market efficiencies. In accordance with the Mastercard case law, when efficiencies do not arise in the affected market, the Commission may take them into account only if the benefits cover substantially the same customers otherwise harmed by the merger.

4. Remedies

In the context of the 2020 public consultation, some stakeholders argued that sustainability-related aspects should be included in the remedy design and that the Commission should accept the greenest remedy or even impose remedies to deal with any possible environmental harm that does not translate into harm to competition.

To begin with, it is worth recalling that under the current legal framework the Commission cannot unilaterally impose remedies but only accept them on the basis of the merging parties’ commitments. The Commission can accept commitments that are offered by the parties if it deems them capable of rendering the concentration compatible with the internal market by preventing a significant impediment to effective competition. These commitments must also eliminate the competition concerns in their entirety and have to be comprehensive and effective from all points of view, besides being capable of effective implementation within a short period of time.

This means that the Commission has no power to unilaterally impose or choose the ‘greenest’ remedy among several alternatives. Moreover, as the Commission does not have any mandate to intervene in merger cases in the absence of harm to competition, it would not have the power to accept or impose remedies that solely address possible environmental harm that does not also translate into competitive harm. However, this does not mean that merger remedies cannot have positive effects on the environment. For instance, in GE/Alstom, the remedy taker successfully finalised the development of Alstom’s energy-efficient gas turbines and even went beyond Alstom’s initial plans by rendering the turbines hydrogen-ready.

In addition, where environmental aspects are considered an important parameter of competition to assess, for example, how closely two merging companies compete in the relevant market, or where the Commission has concerns about innovation competition, this may have to be reflected in the design of remedies. More recently, in Sika/MBCC, the Commission’s investigation suggested that the transaction would have led to reduced competition in chemical admixtures and concrete admixtures in the EEA, and thus higher prices and less innovation. The parties’ innovation capabilities at global scale were a key part of their market-leading positions and competitive strength, together with the advantages brought about by vertical integration. Reducing CO₂ and meeting sustainability targets by developing new formulations is an important part of the ongoing innovation in the chemical admixtures industry. Therefore, while the geographic scope of the chemical admixtures markets was national, in order for the remedies to fully address the Commission’s serious doubts, the divestment of MBCC’s chemical admixtures business needed to include all global R&D assets, sites, personnel, IP and other relevant assets. Only with those large-scale innovation capabilities could the divestment business compete effectively with the merged entity. In KPS Capital Partners/Real Alloy Europe, as mentioned above, the Commission found that following the transaction, the merged entity could have restricted access to recycled aluminium as well as dross and salt slag recycling services to producers of aluminium flat rolled products. The Commission found that the recycling of these products, which allows extracting their aluminium content and other components, is critical for the production of recycled aluminium and for the production of daily products such as beverage cans. At the same time, hazardous waste needs to be recycled as it is subject to stringent regulations in relation to storage and recycling requirements. To address the Commission’s concerns, which were of a vertical nature, and to secure a phase I conditional clearance, KPS offered to divest Real Alloy’s aluminium and dross recycling facility in the UK as well as Real Alloy’s salt slag recycling plant in France. In Schwarz/Suez, to address the Commission’s concerns in the market for the sorting of lightweight packaging in the Netherlands, the parties offered to divest the entirety of Suez’s lightweight packaging sorting.

59 In M.7278 GE/Alstom, after an in-depth review, the Commission raised competition concerns for heavy-duty gas turbines. The Commission specifically flagged that the merger would have risked eliminating an important innovator as Alstom’s newly developed and highly efficient GT 36 turbine brought important environmental benefits and would not have been commercialised by GE. Ansaldo, the remedy taker, successfully finalised the development of the GT 36 turbine and won bids against Siemens and GE. In addition, Ansaldo continued innovating in this field by using hydrogen as a fuel for the GT 36 turbine, which can significantly decrease CO₂ emissions. In this example, merger control played a key role in ensuring continued innovation in energy efficient electricity generation.

40 For instance, where the concerns relate to innovation, the appropriate remedy may require the divestment of significant parts of the R&D departments.

55 T-111/08, Mastercard v Commission, paragraph 228.
56 Commission’s Notice on remedies acceptable under Council Regulation EC No. 139/2004 (the ‘Remedies Notice’), paragraph 6.
57 The Remedies Notice, paragraph 9.
58 See to this effect the reasoning included in M.8084 Boyen/Monsanto in Section XIV: Non-Competition Concerns.
business in the country, thus preserving the pre-merger degree of competition between the closest and most sustainable alternatives to Dutch customers.\textsuperscript{41}

Moreover, if environmentally friendly products or innovation in this field are important for the competitiveness of the divestment business, specific purchaser criteria may also be necessary to ensure that the purchaser will continue to be able to successfully produce and market such products and continue to innovate in this field. In Sika/MBCC, the global scale of the R&D assets and respective innovation capabilities of the divestment business were a key factor in assessing the suitability of the proposed remedy. Given that it was important for the effectiveness of the remedy that the purchaser would have the incentives to continue investing in the R&D activities of the divestment business, a specific purchaser criterion was included in the commitments in that respect.

5. (Green) Killer Acquisitions and Article 22 EUMR

Killer acquisitions are of concern as some small players are particularly relevant for the development of “green” innovation. As these small players’ turnover may be low or even nil, their acquisition by bigger and incumbent companies may escape the usual EU and sometimes even national turnover notification thresholds. In this respect, the Commission’s “recalibrated” approach to Article 22 EUMR\textsuperscript{42} allows, if the legal criteria of Article 22 EUMR are met\textsuperscript{43}, to close the potential enforcement gap for acquisitions involving a “green” innovator with low or no turnover, when this is not reflective of its significant competitive potential. In assessing whether the case is a good candidate for a referral, the Commission may take into account additional factors, such as the fact that the target company is a start-up, a recent entrant with significant competitive potential, an important innovator or conducting potentially important research.\textsuperscript{44}

\textsuperscript{41} M.10047 Schwarz Group/Suez Waste Management Companies, paragraphs 214 and ff.
\textsuperscript{42} Commission Guidance on the application of the referral mechanism set out in Article 22 of the Merger Regulation to certain categories of cases. Available at https://ec.europa.eu/competition/consultations/2021_merger_control/guidance_article_22_referrals.pdf. In July 2022, the General Court confirmed the Commission’s view that Article 22 EUMR gives EU Member States the right of referral over a concentration irrespective of whether national thresholds are met (see https://curia.europa.eu/juris/document/document.jsf?text=&docid=262846&pageIndex=0&doclang=en&mode=lst&dir=&occ=first&part=1&cid=402803). An appeal of the General Court’s judgment by Illumina is currently pending before the European Court of Justice.
\textsuperscript{43} The transaction has to both affect trade between member states and threaten to significantly impede competition in the member state(s) making the request.
\textsuperscript{44} Commission Guidance on the application of the referral mechanism set out in Article 22 of the Merger Regulation to certain categories of cases, paragraphs 19-22. Available at https://ec.europa.eu/competition/consultations/2021_merger_control/guidance_article_22_referrals.pdf. See also the Commission’s FAQ.

6. Conclusion

The EUMR provides the Commission with flexible tools to take into account sustainability-related aspects where relevant for a given transaction. This may be as a factor important for customers which affects their product preferences and purchasing decisions, a parameter of competition between the merging parties and their competitors, as an element of assessing whether a proposed remedy addresses the identified competition concerns or as a positive effect of a merger. The Commission’s case practice further demonstrates how merger control in the EU supports the EU Green Deal. By preventing anti-competitive mergers, the Commission ensures that there is vibrant competition on the markets, stimulating companies to develop new green technologies and business models.

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Norsk Hydro/Alumetal and KPS Capital Partners/Real Alloy: “Greening” Aluminium

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1. Introduction: aluminium as a lever for decarbonization

The Green Deal and accompanying industrial policy actions are driving major changes in Europe’s traditional industries. Those changes were recently exemplified in a series of aluminium mergers, marked by the pursuit of greener production.

Indeed, decarbonising aluminium production is a crucial part of the green transition, given that primary (i.e., non-recycled) aluminium production is very energy intensive, to the point of constituting one of the main sources of CO₂ emissions in the EU and globally. More stringent carbon-footprint standards resulting from Green Deal legislation are therefore pushing players, such as the automotive sectors, to source “green(er)” aluminium, with a low carbon footprint. The production of “low-carbon” aluminium can be achieved by using renewable energy when smelting (primary) aluminium from alumina and/or by recycling (i.e. remelting) aluminium scrap. Aluminium producers are responding to this change in demand, and this has had consequences for the aluminium M&A landscape.

Furthermore, aluminium is a significant lever for certain European industrial sectors to reduce their carbon emissions, due to some of its specific properties. First of all, it is a lighter material than, for example, steel. With regard to the automotive industry, for example, replacing steel by aluminium leads to higher fuel efficiency. Second of all, aluminium is relatively easy to recycle. Indeed, for end-uses which require less stringent technical performance, aluminium can be recycled at a rate of almost 100%. For more stringent applications, such as automotive wheels, the main aluminium producers are investing in increasing the recycled aluminium content in their production.

“Green” considerations were therefore key for the Commission’s investigation in recent merger cases related to the aluminium sector. The Commission has recently assessed a series of cases in the aluminium industry where the sustainability angle of the Transaction was apparent. While each case had its own specifics, it remains true that they provide a topical illustration of how these non-price sustainability-related considerations are factored into the Commission’s assessment of merger cases.

2. M.10658 – Norsk Hydro /Alumetal

This case concerned the acquisition of sole control of Alumetal S.A. by Norsk Hydro ASA (‘Hydro’ or ‘Notifying Party’, Norway) by way of a public bid.

Hydro and Alumetal are both producers of aluminium foundry alloys (‘AFAs’), semi-finished aluminium products in liquid or ingot form, which customers (mainly automotive players) use to cast parts.

Both Norsk Hydro and Alumetal are major European producers of aluminium foundry alloys, a semi-finished aluminium product used mainly by the automotive industry to cast auto parts. Alumetal makes these from recycled material, while Norsk Hydro uses non-recycled material and relies on renewable energy for its production. Alumetal also produces aluminium master alloys used to produce casthouse products such as aluminium foundry alloys. Therefore, the two companies produced low-carbon aluminium foundry alloys. The merger review thus led to important findings impacting (i) the definition of the relevant market and (ii) the

In a nutshell

Norsk Hydro/Alumetal and KPS Capital Partners/Real Alloy were two transactions in the sector of aluminium recycling.

These transactions illustrate how “green” considerations are deeply changing the competitive dynamics in European industries. In these two cases, the Commission adapted its assessment, for example by devising new quantitative metrics to capture changing competitive dynamics.

By preserving competition and avoiding price increases, the Commission contributes to creating a market setting for “green” products to develop.

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1. https://www.carbonchain.com/blog/understand-your-aluminum-emissions

2. Case M.10658 – Norsk Hydro / Alumetal, 04/05/2023.

The content of this article does not necessarily reflect the official position of the European Commission. Responsibility for the information and views expressed lies entirely with the authors.
assessment of closeness of competition within low carbon aluminium production.

First, with respect to market definition, the Commission found that alloys produced from recycled aluminium are beginning to compete with alloys produced from primary aluminium, which was not necessarily the case in the past, due to the increasing demand for the more sustainable recycled production. The Commission also found that the low-carbon dimension of aluminium alloys is at least an element of differentiation that plays a role at product market definition level, since it is part of a growing trend in customers’ preferences.

Second, the Commission carried out a specific assessment seeking to analyse whether, post Transaction, there would remain sufficient low-carbon producers, besides the Parties.

Indeed, there is no industry-wide definition of low-carbon suppliers. Therefore, in order to identify low-carbon suppliers of aluminium foundry alloys, the Commission relied on the following production factors from the Parties and their competitors: (i) the CO₂ emissions per ton of aluminium produced, (ii) the tonnes produced and (iii) the combination of tonnes and emissions, to reach the total CO₂ emissions linked to individual aluminium foundry alloy production.

Based on the above, the Commission compiled saved emission shares representing how many emissions a supplier has saved by producing aluminium foundry alloys with a carbon footprint lower than the EEA average. These calculations allowed the Commission to quantitatively analyze the CO₂ impact of aluminium foundry alloy production in the EEA.

The Commission found that, while Hydro was a significant “green” producer in the market, due to its reliance on renewable electricity, there would be sufficient alternatives to the Parties, even in a narrow low-carbon alloys segment. The Commission also found that, while there are producers capable of producing primary aluminium with a low carbon footprint, due to their reliance on renewable electricity, it is aluminium recyclers who achieve the lowest carbon footprint on their production.

The Commission also found that the Parties are not close competitors with regard to a hypothetical low-carbon alloys segment. Indeed, at the moment, while renewables-based primary aluminium producers such as Hydro have a lower carbon footprint than other primary producers, their carbon footprint is still higher than that of recyclers.

Therefore, based on the above, the Commission found that the parties’ combined market shares in the EEA market for solid advanced aluminium foundry alloys are moderate and there are a number of sizeable alternative suppliers, including green players. Moreover, the Commission concluded that the parties are not close competitors in the market for solid advanced aluminium foundry alloys.

In sum, “green” considerations, which were a determinative aspect of the transaction rationale,³ were key to the Commission’s assessment in this case, both for the purposes of defining the relevant market, and as a factor to assess closeness of competition between the Parties. Similar considerations were central to the Commission’s assessment in a parallel aluminium case.

3. M.10702 – KPS Capital Partners/Real Alloy Europe⁴

The KPS Capital Partners/Real Alloy Europe case concerned specific types of secondary wrought aluminium, as well as some by-products resulting from the recycling process: dross, a by-product which itself contains aluminium and can be sold or further processed, and salt slag, a hazardous by-product that only Real Alloy and few other companies in Europe are able to safely process. The demand for recycled aluminium and the by-products of aluminium recycling has been increasing and is expected to further increase as downstream industries employing aluminium are shifting to secondary/recycled aluminium. Against these industry backgrounds, Real Alloy established itself as a leading supplier of recycled aluminium for, among other products, beverage cans, and as a provider of recycling services that are instrumental in the manufacturing of this product.

Dross recycling is a key input for recycled wrought aluminium producers who either toll dross or sell it on the merchant market. Real Alloy was active on both and was the largest European player with capabilities of extracting high percentages of aluminium which could not be matched by competitors in a market characterised by very limited spare capacities.

Similarly, salt slag recycling service is a critical input for the production of recycled aluminium, as salt slag is a hazardous waste and in case salt slag cannot be recycled, aluminium recyclers would have to downsize or stop production. In addition, salt slag recycling capacity is very tight at EEA-level and very few companies – including Real Alloy – are capable of offering a “zero” waste recycling technology.

The Commission’s investigation showed that the merged entity could engage in input foreclosure, as Real Alloy Europe has a significant market position upstream with specific capabilities and there are few alternative suppliers for dross recycling and salt slag recycling.

Following the transaction, the parties would have had the incentive and ability to restrict the access of downstream competitors for flat rolled products to necessary products and services in the recycling chain. Restricting access to recycling services, particularly in the context of aluminium and aluminium by-products recycling, presents a unique set of challenges that

could also apply to other basic industries. The impact of such restrictions can extend beyond simple price increases and may involve complex repercussions, including competitors getting lower value for recycled materials or forcing competitors to rely on suboptimal methods, leading to higher refining charges and lower yields. In turn, this would likely lead to higher prices for flat rolled aluminium-based products used to produce beverage cans.

The Commission also further assessed the importance of recycled wrought aluminium for the downstream production of can ends and can bodies. In this respect, the Commission specifically examined the existing vertical relationship between Real Alloy’s production of recycled wrought aluminium for can ends (upstream) and the Parties’ production of flat rolled products (downstream). The Commission’s investigation showed that customers preferred recycled aluminium for the production of aluminium cans, given (i) their lower carbon footprint and (ii) their lower cost. On this basis, the Commission defined separate product markets for recycled and non-recycled wrought aluminium for can ends. The Commission further found that the merged entity would have the ability to foreclose the input (i.e. recycled wrought aluminium for can ends and can bodies) to downstream rivals. In turn, this could lead to higher prices for aluminium flat rolled products used to manufacture beverage cans.

To address the Commission’s concerns, and in order to obtain a Phase 1 clearance, KPS offered to divest Real Alloy’s recycled aluminium production and dross recycling facility in Swansea (United Kingdom) as well as Real Alloy’s salt slag recycling plant (France). Implementing a structural commitment to remedy vertical effects preserved competition in the market for recycling services and ensured that competitors continue to have access to those services at competitive prices. In addition, recycling aluminium and aluminium by-products is an important environmentally sustainable practice that reduces waste and conserves resources. Limiting access to recycling services could hinder competitors’ ability to engage in responsible waste management, potentially leading to negative environmental impacts. A structural remedy in such cases is thus the most suited solution to maintain a healthy competitive environment and protect consumers’ interests in a situation where a merged company would otherwise gain control over essential inputs.

4. Conclusion

As can be seen from the two examples above, the new challenges posed by the greening of the economy, which are transformative for many industries, already affect forward looking merger reviews. The Commission’s assessment takes place within the existing legal framework and must be informed by the Commission’s investigation and market feedback. Therefore, the way the Commission takes into account those new market realities stemming from the green transition follows a case-by-case approach.

As was seen from the Norsk Hydro/Alumetal case, for example, while the production of low-carbon alloys is an element of closeness of competition, it does not constitute a separate product market. Furthermore, the Commission designed quantitative metrics that were adapted to the particulars of the case, namely, the decarbonisation of aluminium production and the stated transaction rationale. In the case of KPS Capital Partners/Real Alloy, alternatively, the production of recycled wrought alloys for can ends was considered distinct from non-recycled wrought alloys for can ends. This analysis was based on the specificities of the market(s) in question. The Commission also adapted its framework of analysis to the particular competitive dynamics of the recycling industries, where, for example, in the upstream primary market, higher recycling prices effectively mean a higher production cost. Finally, the Commission adopted a rigorous approach to remedies, in order to ensure that the market power of the merging firms does not affect the accelerating decarbonisation trends observed in the market.

In addition, for an increasing number of transactions, sustainability goals are explicitly factored into the deal’s rationale. For other transactions, while ‘green’ considerations were not at the heart of the reasons for the transaction, they shaped the industrial landscape the Parties operated in, and therefore formed determinative parts of the Commission’s competitive assessment. As a result, by preserving competition and avoiding price increases, the merger control process can help protect market conditions in which “green” products can develop.
**Sika/MBCC: Cementing Sustainability – Cutting Carbon through Chemistry**

Marianne Auffret, Felix Herrmann, Johan Jonckheere, Terézia Kianičková, Céline Rizzoli

1. Introduction

On 8 February 2023, the European Commission (the “Commission”) cleared the acquisition of MBCC (Germany) by Sika (Switzerland) (the “Transaction”) subject to the divestiture of MBCC’s global chemical admixture business.

Sika and MBCC (formally BASF Construction Chemicals) (the “Parties”) are prominent global leaders and key innovators in the development and supply of chemical admixtures and other construction chemicals. Chemical admixtures play a crucial role in enhancing the properties and performance of cement and concrete in the construction industry. Since the latter is an important contributor to global greenhouse gas emissions, by reducing the amount of cement or concrete needed, chemical admixtures can help addressing environmental challenges.

The Commission’s investigation revealed that the Transaction would have significantly reduced competition and led to higher prices and decreased innovation in the chemical and concrete admixtures markets across the EEA. The companies’ strong market positions and global presence, coupled with their in-house production of polymers (raw materials to chemical admixtures) and robust research and development (R&D) capabilities, provided them with substantial economies of scale and scope, making them strong and important competitors to each other.

Of particular concern was the Transaction’s impact on sustainability and efforts to reduce the carbon footprint of concrete. Chemical admixtures, through the development of new polymers and formulations, play a pivotal role in achieving low-carbon emission goals, a vital aspect of the European Green Deal. Both companies were at the forefront of R&D efforts in this regard, making their innovative products essential in reducing cement consumption and overall carbon emissions in the concrete industry.

To address these concerns, Sika proposed an extensive global divestiture of MBCC’s chemical admixture business and its R&D facilities to a single purchaser.

2. Chemical admixtures – Improving the properties of concrete locally, based on innovations developed globally

Chemical admixtures are not homogeneous products as their formulations are developed and adapted depending on the desired functions or properties to be improved in the cement, concrete or mortar. Their formulations also depend on the specific local atmospheric conditions (e.g. temperature, humidity) and the specific local composition of the raw materials, such as gravel, sand and water. In addition to standards, admixtures such as water-reducing, waterproofing, accelerating, air-entraining or retarding admixtures, certain applications also require specialty admixtures developed using a tailor-made specification by the customer. Being able to adapt to local conditions and offer a broad range of specialty admixtures, as well as having the testing and R&D capabilities for that, is an important differentiating factor between chemical admixtures producers.

The Commission’s investigation showed that the chemical admixtures markets in the EEA are characterised by significant local specificities, where factors such as the distance between the supplier’s and the customer’s plant or the familiarity of the supplier’s staff with local specificities were important parameters of competition. Customers also tend to procure chemical...
admixtures at local level. The Commission therefore considered potential catchment areas. However, in the absence of a clear appropriate radius and other limitations, the Commission concluded that the markets for admixtures were likely national in scope. At the same time, the main suppliers are active at a global scale and certain aspects of their business models, in particular R&D efforts and in-house production of raw materials such as polymers, had an international, if not a global dimension. This was an important element in the Commission’s assessment of the market positions of Sika and MBCC, and the suitability of the proposed remedy.

In this case, the Commission carried out a competitive assessment of the Transaction both on the overall market of chemical admixtures, as well as the narrower market of concrete admixtures, on national basis in the EEA.

3. Ensuring that the European construction sector, including many SMEs, can continue using competitively priced and innovative admixtures

Following the Commission’s Phase I investigation, the Commission had serious doubts that the Transaction would have substantially reduced competition in the markets for chemical and concrete admixtures in 22 EEA Member States.

Assessing the validity of market share estimates through a market reconstruction exercise at national level

The Commission carried out a market reconstruction exercise to verify the market shares estimates provided by the Parties. As they did not have visibility on the sales of their competitors, the Parties tried to estimate the overall market size relying on industry reports and a number of assumptions which were not fully corroborated. Moreover, the results of these estimates were not in line with those mentioned in the Parties’ internal documents prepared in the normal course of business.

In order to reconstruct the market, the Commission reached out to the Parties’ competitors to collect their sales data from each EEA country in which they were active in the last three years. The Commission achieved a good overall coverage as all major competitors identified by the Parties provided their sales data to the Commission and several additional smaller competitors whose sales were not reported by the Parties in certain countries also provided their sales data. When competitors failed to provide their sales data, the Commission supplemented the missing information with the Parties’ estimates.

These sales estimates were then aggregated to reconstruct the market size in each EEA country. Using the Parties’ own sales and the newly reconstructed market size, the Commission was able to calculate the Parties’ adjusted combined market shares. The market reconstruction exercise suggested that, for a large number of countries, the Parties’ actual market shares were higher than the estimates they initially provided.

Close competition between two global, R&D-driven and vertically integrated industry leaders

The Commission’s investigation showed that Sika and MBCC compete closely in the supply of chemical admixtures. Both companies are leading players operating globally. In the EEA, they are the two main suppliers according to the Commission’s market reconstruction. They are also the only players with a geographic footprint extending to most of the EEA, each having chemical admixture plants in around 15 Member States. Very few admixture suppliers apart from Sika and MBCC are active at global level, while some other players operate only at regional or national levels. Thanks to their wide geographic presence and their large product portfolios, both companies benefit from significant economies of scale and scope, including in the sourcing of raw materials.

In addition, the Commission’s investigation showed that both Sika and MBCC had strong R&D capabilities by industry standards. They are among very few admixture suppliers whose R&D is underpinned by the captive production of polymers, a key component of chemical admixtures. This provided them with a competitive advantage over chemical admixture suppliers sourcing polymers on the market. The Commission’s investigation revealed that their in-house production of polymers allows Sika and MBCC to reduce their production costs, develop more innovative chemical admixtures and better customise their products to meet the requirements of customers.

The investigation indeed showed that both Sika and MBCC have great capabilities in customising admixtures, ahead of other competitors. Large customers in particular look for suppliers that can offer them added value and develop tailor-made products. Sika and MBCC both provide bespoke solutions, particularly for complex infrastructure projects, such as tunnelling and mining. Both companies have cooperation agreements with customers to create new types of concrete, which may involve the development of new polymers or specific formulations for targeted projects.

Reducing the carbon footprint and enhancing the circularity of concrete production through innovative chemical admixtures

The Parties’ green R&D was an important part of their leading innovation capabilities

The investigation showed that Sika and MBCC are global industry leaders in R&D on chemical admixtures in terms of spending, number and geographic scope of research sites, personnel, pipelines, patent protection and strategy.
Their ability to develop innovative products and solutions puts them ahead of their competitors, with many ongoing research projects, at both the polymer and the admixture formulation stages. MBCC in particular, through its historic link with BASF, has a strong reputation for product innovation. Both companies also derive some of their innovative strengths from their vertical integration into polymer production.

Innovation in chemical admixtures, through the development of either new polymers or new formulations, plays a key role in the concrete and cement industry. Admixture suppliers therefore need to have strong R&D and customisation capabilities in order to compete for large construction projects, while product competition among the leading admixture suppliers such as Sika and MBCC is driven and supported by R&D, including at global level. Product development often takes place at a centralised level, with national R&D centres adapting globally developed products to local markets.

Furthermore, the investigation revealed that product innovation in chemical admixtures has markedly grown in importance in recent years, now that the construction industry is transitioning to meet low-carbon emission goals. In particular in the EU, reducing carbon dioxide (CO₂) to meet sustainability targets is an important part of the European Green Deal.

Concrete admixtures can help a lot in bringing down the carbon footprint of the construction industry, especially by reducing the use of cement, which is a key component of concrete. Cement production is an energy-intensive process that emits large amounts of CO₂. Incorporating high-performance admixtures in the concrete mix can reduce cement consumption and improve concrete performance, thus cutting overall carbon emissions.

New types of admixtures are also helping to make the concrete production chain more circular. For instance, specific admixtures have been developed that enable recycled concrete to be used as an aggregate, which contributes to reducing dependency on finite natural resources such as gravel and sand, and to decarbonising the construction industry. Both Sika and MBCC have been developing competing solutions for recycled concrete as part of targeted R&D projects, working together with external research institutes.

**Patent analysis**

The protection of those R&D efforts through intellectual property rights seems to be a key strength for the main admixture suppliers. In order to map Sika’s and MBCC’s relative strength in patent protection of chemical admixtures, the Commission carried out a targeted analysis of both companies’ and their competitors’ patent portfolios.

This patent analysis revealed that Sika and MBCC are among few players that have significant active patent portfolios in chemical admixtures, at both the polymer and the formulated product levels. Among competing admixture suppliers in the EEA, Sika and MBCC were shown to have strong portfolios of patents in admixtures and polymers, in terms of both quantity and quality.

The Commission therefore concluded that the Transaction could have caused competitive harm by reducing incentives to innovate, especially on sustainability, and that any remedy package had to include global R&D, going beyond the geographic scope of competition concerns.

## 4. An extensive global divestiture with a swift purchaser approval

To address the Commission’s competition concerns, Sika ultimately offered to divest MBCC’s chemical admixture business in the EEA, Australia, Canada, New Zealand, Switzerland, the UK and US, including MBCC’s global research and development facilities, in a single package and to a single purchaser.

Not only did the divestiture remove the entire overlap created by the Transaction in relation to chemical admixtures, it also extended beyond MBCC’s European admixture business where the Commission had serious doubts. This is because MBCC was active globally and its operations were supported by central R&D assets.

Given that the Parties’ innovation capabilities at global scale, together with the advantages brought by vertical integration, were key to their market-leading positions and competitive strength in the EEA, only a divestiture of a standalone business including such large-scale business and innovation capabilities could fully address the Commission’s concerns in Phase I.

The proposed remedy was structured as a reverse carve-out,\(^1\) ensuring that the divestment business would include all necessary assets, personnel, IP, and R&D capabilities to be able to operate as a standalone business and to reach a large scale as an effective competitor of the merged entity. It also enabled the divestment business to potentially expand to other countries with similar brands and patents, which was crucial to ensure its viability and competitiveness.

In addition, to ensure that the remedy is effective, a suitable purchaser of the divestment business had to have certain characteristics. In particular, it was important that the purchaser had the necessary know-how and expertise in chemical admixtures, track-record of operating businesses viably and an incentive to continue investing in the R&D activities of the divestment business. At the same time, large cement/concrete manufacturers were excluded from the pool of suitable candidates in light of risks of vertical competition concerns, which were also flagged by market participants during the Commission’s market test of the proposed remedy. These specific

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\(^1\) This means that the business is divested as a whole to a purchaser but the merged entity may retain one or more assets that are not necessary for the viability and competitiveness of the carved-divestment business.
requirements were reflected in the commitments as additional purchaser criteria.

Sika proposed Cinven, a private investment firm, as the purchaser of the remedy package. The Commission was able to swiftly engage with the Parties and Cinven to assess its suitability as a purchaser, and approved the purchaser only two months following the adoption of the conditional clearance decision. In this specific case, a private equity purchaser was suitable as Cinven had prior experience in successfully operating chemical admixtures and construction businesses more widely including through significant investments.

5. Multi-jurisdictional cooperation among authorities

Throughout its investigation, the Commission was in regular contact with competition authorities in Australia, Canada, New Zealand, the UK and the USA. While the chemical admixtures markets have numerous local specificities, close cooperation among the regulators was particularly important in view of the role of the scale and geographic footprint of the Parties’ activities for their competitiveness and the global nature of their R&D activities. Given that the Parties’ R&D assets were located in just a few countries, but served their chemical admixtures business across jurisdictions, it was crucial to secure a single global remedy package that would address competition concerns in all relevant jurisdictions and that would be ultimately divested to a single purchaser.

The regular liaison among the authorities played a key role to achieve this goal. The Commission and its counterparts in Australia, Canada, New Zealand, the UK and the USA also engaged closely during the assessment of the suitability of the proposed purchaser for the divestment business, leading to the approval of Cinven by all authorities. Thus, this case serves a useful example of how international cooperation between competition regulators can contribute to finding a suitable solution to address concerns in merger investigations across jurisdictions to the benefit of competition enforcement and the companies involved.

6. Conclusion

The Commission’s decision highlights the importance of sustainability considerations in enforcing merger control, and how this can be achieved through international cooperation. The decision reflects the Commission’s commitment to promoting competition while advancing environmental objectives as and when it matters, supporting a more competitive and eco-friendly business environment in the European Union and beyond. Sustainability considerations, which are of growing concern for industries and customers, are an integral part to merger control evaluations.