



EUROPEAN COMMISSION
DG Competition

Case M.10797 - PCG / PERSTORP

Only the English text is available and authentic.

**REGULATION (EC) No 139/2004
MERGER PROCEDURE**

Article 6(1)(b) NON-OPPOSITION
Date: 08/09/2022

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EUROPEAN COMMISSION

Brussels, 8.9.2022
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PUBLIC VERSION

In the published version of this decision, some information has been omitted pursuant to Article 17(2) of Council Regulation (EC) No 139/2004 concerning non-disclosure of business secrets and other confidential information. The omissions are shown thus [...]. Where possible the information omitted has been replaced by ranges of figures or a general description.

Petronas Chemicals Group Berhad
Tower 1, Petronas Twin Towers
Kuala Lumpur City Centre
50088 Kuala Lumpur
Malaysia

**Subject: Case M.10797 – PCG / PERSTORP
Commission decision pursuant to Article 6(1)(b) of Council Regulation
No 139/2004¹ and Article 57 of the Agreement on the European Economic
Area²**

Dear Sir or Madam,

- (1) On 3 August 2022, the European Commission received notification of a proposed concentration pursuant to Article 4 of the Merger Regulation, by which PETRONAS Chemicals Group Berhad (“PCG”, Malaysia) will acquire within the meaning of Article 3(1)(b) of the Merger Regulation sole control of PERSTORP HOLDING AB (publ.) (“Perstorp”, “Target”, Sweden), by way of purchase of

¹ OJ L 24, 29.1.2004, p. 1 (the ‘Merger Regulation’). With effect from 1 December 2009, the Treaty on the Functioning of the European Union (‘TFEU’) has introduced certain changes, such as the replacement of ‘Community’ by ‘Union’ and ‘common market’ by ‘internal market’. The terminology of the TFEU will be used throughout this decision.

² OJ L 1, 3.1.1994, p. 3 (the ‘EEA Agreement’).

shares (the “Transaction”).³ PCG is designated hereinafter as the “Notifying Party” and together with Perstorp as the “Parties”.

1. THE PARTIES

- (2) PCG is headquartered in Malaysia and is active primarily in manufacturing and selling a diversified range of petrochemical products such as olefins, polymers, fertilizers, methanol, and other basic chemicals and derivative products. PCG is solely controlled by Petroliam Nasional Berhad (“Petronas”), which is PCG’s major shareholder (64.35%).
- (3) PCG owns a shareholding of 40% in BASF PETRONAS Chemicals Sdn Bhd (“BPC”), a Malaysia-based joint venture. The majority shareholding of 60% is held by BASF. The Notifying Party argued that [...].⁴
- (4) However, the Commission concluded that PCG’s shareholding confers control to it over BPC, namely because, as also confirmed by the Notifying Party,⁵ [...].⁶ Therefore, for the purposes of the competitive assessment, the Commission considers that BPC is jointly controlled by PCG and BASF.
- (5) Perstorp is a company headquartered in Malmö (Sweden), which serves as the top holding company for the Perstorp group of companies. Perstorp is a chemical provider, with a focus on providing sustainable solutions for customers in the resins and coatings, engineered fluids and animal nutrition industries. Perstorp is globally present with seven production plants in Europe, North America and Asia.

2. THE CONCENTRATION

- (6) The Target is currently solely controlled by Financière Forêt S.à.r.l. (“Financière”), a company ultimately controlled by PAI Partners SAS. Pursuant to a share purchase agreement, entered into force on 14 May 2022 between PCG and Financière, PCG will hold 100% of Perstorp’s shares and will solely control Perstorp within the meaning of Article 3(1)(b) of the Merger Regulation.

3. UNION DIMENSION

- (7) The undertakings concerned have a 2021 combined aggregate worldwide turnover of more than EUR 5 000 million (PCG: EUR 50 609 million; Perstorp: EUR 1 334 million; combined: EUR 51 943 million). PCG and Perstorp each have an EU-wide turnover in excess of EUR 250 million (PCG: EUR [over 3,000] million; Perstorp: EUR [over 550] million). Neither of the undertakings concerned achieves more than two-thirds of its aggregate Union-wide turnover in one and the same Member State. Therefore, the notified concentration has a Union dimension under Article 1(2) Merger Regulation.

³ Publication in the Official Journal of the European Union No C 305, 10.08.2022, p. 11.

⁴ Form CO, paragraphs 35-36.

⁵ Form CO, paragraph 38.

⁶ Commission’s Consolidated Jurisdictional Notice under Council Regulation (EC) No 139/2004 on the control of concentrations between undertakings, OJ C 95 of April 16, 2008, pp. 1-48 (“Jurisdictional Notice”), paragraph 67.

4. OVERVIEW OF THE RELEVANT PRODUCTS

- (8) The Transaction relates to the following products:
- a) Petrochemical feedstock: Propylene, Ethylene and Methanol
- (9) The Parties' activities do not horizontally overlap in the manufacture and supply of petrochemical feedstock, as only PCG is active in the manufacture and supply of these products.
- (10) The Parties' activities give rise to the following vertical links: (i) the manufacture and supply of propylene (upstream product manufactured by PCG) and I-BAL and N-BAL (downstream products manufactured by both Perstorp and PCG); (ii) the manufacture and supply of ethylene (upstream product manufactured by PCG) and PRAL (downstream product manufactured by Perstorp); and (iii) the manufacture and supply of methanol (upstream product manufactured by PCG) and FA (downstream product manufactured by Perstorp).
- (11) None of these vertical links give rise to vertically affected markets because the Parties' market shares remain below the 30% threshold,⁷ for each of the aforementioned products, under any plausible market definition.⁸ In particular, when it comes to the manufacture and supply of propylene, ethylene and methanol, PCG's market shares are below [5-10]% for each product at a global level, while Perstorp's market shares in the manufacture and supply of PRAL and FA are below [20-30]% (merchant sales) in relation to each of those products worldwide.⁹ The Parties' market shares also remain below [20-30]% in the global market for the manufacture and supply of N-BAL and I-BAL.
- (12) N-BAL and I-BAL will be discussed in further detail in Section 5.
- (13) At EEA level, PCG does not manufacture and supply ethylene and methanol, and its market share in the manufacture and supply of propylene is below [0-5]% (merchant sales). There is therefore no relevant vertical relationship between the Parties in the EEA.
- b) Oxo-Chemicals: VAL, N-BAL, I-BAL, and PRAL

⁷ Guidelines on the assessment of non-horizontal mergers under the Council Regulation on the control of concentrations between undertakings ("Non-Horizontal Merger Guidelines"), OJ C 265, 18.10.2008, p. 6, paragraph 25.

⁸ With regard to propylene, and ethylene, the Commission has left the exact scope of the product market definition open. In relation to the geographic market definition, it left open whether the market should be EEA-wide or worldwide. COMP/M.9410 – *Saudi Aramco / Sabic*, paragraphs 117-129 (propylene) and paragraphs 329-338 (ethylene). With regard to methanol, the Commission considered that Methanol is a separate product market and that the EEA-level is the narrowest area where conditions of competition are homogenous. COMP/M.1813 – *Industri Kapital (Nordkem) / Dyno*, paragraphs 35-37 and 79-81.

⁹ COMP/M.9238 - *Ineos Enterprises Holdings Limited / Ashland's Global Compound Resin business and manufacturing facility in Marl*, paragraphs 22-25 and 69-78. In relation to FA, the Commission considered a separate product market for FA and assessed that the geographic market may be regional in scope but left the precise scope of the market definition open. PRAL has not been addressed in past Commission precedents.

- (14) Oxo chemicals are a broad product portfolio deriving from hydroformulation of olefins (notably, propylene, ethylene and butene) with subsequent hydrogenation or oxidation. There are several alternative routes to produce oxo chemicals which, in turn, result in four main product trees, notably: (i) VAL and its downstream derivatives; (ii) N-BAL and its downstream derivatives; (iii) I-BAL and its downstream derivatives; and (iv) PRAL and its downstream derivatives.
- (15) The Parties' activities do not overlap in the manufacture and supply of VAL¹⁰ and PRAL, because PCG does not produce any of those products. As explained in paragraphs (9)-(11) above, the vertical link between the manufacture and supply of Ethylene (upstream product manufactured by PCG) and PRAL (downstream product manufactured by Perstorp) does not give rise to any vertically affected markets under any plausible market definition.
- (16) N-BAL and I-BAL will be discussed in further detail in Section 5.
- c) FA (formaldehyde)
- (17) FA is a colourless gaseous compound, which is manufactured from methanol and air. It is used as an input product for various applications in the manufacture of industrial chemicals, resins, plastics or adhesive for the wood industry.
- (18) There is no horizontal overlap between the Parties' activities in the manufacture and supply of FA, because PCG is not active as regards FA. As explained in paragraphs (9)-(11), the vertical link between the manufacture and supply of Methanol (upstream product manufactured by PCG) and FA (downstream product manufactured by Perstorp) does not give rise to any vertically affected markets under any plausible market definition.
- d) Chemical Building Blocks: 2-PH, 2-EH, Carboxylic acids (N-valeric acid, 2-EHA, Propionic acid, N-butyric acid, Formic acid), Polyhydric alcohols (TMP, NEO, Penta, DMPA, Di-TMP, Di-Penta, Micronized Penta); Formates (CaFo, SoFo, PoFo)
- (19) This category encompasses products that consist of basic chemical building blocks that give physical and chemical properties to the products in which they are used.
- (20) The Parties' activities do not horizontally overlap in relation to the manufacture and supply of any chemical building blocks, as only Perstorp is active in the manufacture and supply of those products, with the exception of 2-EHA, which is manufactured and supplied by both Parties.
- (21) 2-EHA will be discussed in further detail in Section 5.
- (22) The Parties' activities give rise to vertical links with regard to: (i) the manufacture and supply of N-BAL (upstream product manufactured by both PCG and Perstorp) and 2-EH (downstream product manufactured by Perstorp); 2-EHA (downstream product manufactured by both PCG and Perstorp); butyric acid (downstream product manufactured by Perstorp) and TMP (downstream product manufactured by Perstorp); (ii) the manufacture and supply of I-BAL (upstream product

¹⁰ VAL has not been addressed in past Commission precedents.

manufactured by both PCG and Perstorp) and NEO (downstream product manufactured by Perstorp); and (iii) 2-EHA (upstream product manufactured by both PCG and Perstorp) and PVC plasticizers (downstream product manufactured by Perstorp).

- (23) With the exception of the vertical links between N-BAL (upstream) and 2-EHA and TMP (downstream), which will be discussed in further detail below, the Transaction does not give rise to any vertically affected markets, because the Parties' market shares are below the 30% threshold in each of the relevant markets. In particular, Perstorp has a market share of below [10-20]% worldwide in the manufacture and supply of each of the downstream products of 2-EH,¹¹ butyric acid¹² and NEO¹³ and the Parties' combined global market shares in the manufacture and supply of each of N-BAL and I-BAL (upstream) also remain below [20-30]%. In addition, PCG does not sell N-BAL and I-BAL in the EEA, and there is therefore no vertical relationship between the Parties in the EEA.
- (24) The vertical link between 2-EHA (upstream) and PVC plasticizers (downstream) does not give rise to any vertically affected markets because PCG does not sell 2-EHA in the EEA, while the market for PVC plasticizers has been considered as EEA-wide in scope¹⁴ and Perstorp is only active in the manufacture and supply of one of the PVC plasticizers (3GO) with a market share of below [0-5]% (merchant sales) in the EEA in 2021.

e) PVC Plasticizers:¹⁵ DPHP, PETV, 3GO.

- (25) The Parties' activities do not horizontally overlap as regards PVC plasticizers, because only Perstorp is active in the manufacture and supply of those products. There are also no further vertical links between the Parties' activities in respect of PVC plasticizers.

Conclusion

- (26) The Commission's analysis will focus on the following products in relation to which it has identified the existence of affected markets.
- a) The manufacture and supply of 2-Ethylhexanoic Acid ("2-EHA");
- b) The manufacture and supply of iso-butyric aldehyde ("I-BAL");

¹¹ COMP/M.3056 – *Celanese / Degussa / JV (European Oxo Chemicals)*, paragraph 118-126. The Commission considered a distinct product market for 2-EH with an EEA-wide geographic scope.

¹² COMP/M.3056 – *Celanese / Degussa / JV (European Oxo Chemicals)*, paragraphs 166-170. The Commission considered an overall market for carbon acids, including butyric acid, which is EEA-wide in scope.

¹³ COMP/M.4957 – *Perstorp Holding / Solvay Interlox (caprolactones business)*, paragraphs 16 and 26. The Commission considered an overall market for polyhydric alcohols including NEO but left the exact scope of the product market definition open. It was left open whether the market for polyhydric alcohols should be considered as EEA-wide or worldwide in scope.

¹⁴ COMP/M. – *Celanese / Degussa / JV (European Oxo Chemicals)*, paragraphs 125-142.

¹⁵ Plasticizers are organic esters (liquid, mainly colorless and odorless) added to polymers to help with processing and/or increase flexibility and toughness of the final product. Flexible PVC accounts for 80-90% of global plasticizer consumption. Flexible PVC, and thus plasticizers, is found in the following applications: construction (flooring, wall coverings), electrical (wire and cable jacketing), consumer goods (toys, footwear, etc.), packaging, transportation (inside and outside of vehicles), furnishings, and medical uses (tubing, blood bags).

- c) The manufacture and supply of n-butyric aldehyde (“N-BAL”) and;
- d) The manufacture and supply of trimethylolpropane (“TMP”).

5. MARKET DEFINITIONS

5.1. 2-EHA

a) Product market definition

- (27) 2-EHA is a colourless liquid acrylate belonging to the wider chemical group of carboxylic acids. 2-EHA is widely used in esters for polyvinyl butyral (“PVB”) film plasticizers, in synthetic lubricants (e.g., for refrigerators and air conditioners), in production of metal salts (e.g., to accelerate paints and inks drying process), in automotive coolants and polyvinyl chloride (“PVC”) stabilizers. Other application areas include wood preservatives, catalyst for polyurethane and for pharmaceuticals.
- (28) According to the Notifying Party, the largest overall application for 2-EHA is PVB resins, which is used as an adhesive interlayer in the manufacturing of laminated safety glass. The Notifying Party submits that in most of its applications, 2-EHA can be substituted with other carboxylic acids, such as for instance heptanoic acid, trimethylhexane acid and valeric acid.¹⁶
- (29) The Commission has considered the market for 2-EHA in previous decisions but has left open the exact scope of the product market.¹⁷ The Notifying Party argues that 2-EHA should be considered as part of the wider market comprising all carboxylic acids,¹⁸ due to the high level of substitutability between 2-EHA and other carboxylic acids, from both a demand and a supply point of view.¹⁹
- (30) Respondents to the market investigation observed that 2-EHA is not easily substitutable with other carboxylic acids.²⁰ This would therefore rather point to a distinct market for 2-EHA.
- (31) For the present case, the definition of the exact product market can be left open, as no competition concerns would arise under any plausible product market definition.

b) Geographic market definition

- (32) In previous decisions, the Commission has left open whether the geographic scope of the market for 2-EHA should be considered as EEA or global.²¹ Respondents to the market investigation suggested that 2-EHA is transported across regions and that there are no significant transport costs, thus pointing to a global market.²²

¹⁶ Form CO, paragraphs 162-163.

¹⁷ COMP/M.6542 - *Eastman Chemical Company/Solutia*, paragraph 12; COMP/M.3056, *Celanese/Degussa/JV (European Oxo Chemicals)*, paragraph 169.

¹⁸ There are over 1500 carbon acids (including butyric acid trimethylhexane) which are produced at multi-purpose facilities, such that a single plant can be used to produce different carbon acids, depending on the aldehyde available.

¹⁹ Form CO, paragraphs 223-226.

²⁰ Responses to question 3 from 2-EHA suppliers received on 10, 11 and 16 August 2022.

²¹ COMP/M.6542 - *Eastman Chemical Company/Solutia*, paragraph 15.

²² Responses to questions 2 and 10 from 2-EHA suppliers received on 10, 11 and 16 August 2022.

- (33) For the present decision, the definition of the exact geographic market can be left open, as no competition concerns would arise under any plausible definition.

5.2. I-BAL

a) Product market definition

- (34) Butyric aldehyde is the first chemical step in the oxo-C3 chemistry. It is produced from propylene through a reaction with a synthesis gas (syngas). This reaction leads to the production of two isomers of butyric aldehyde: I-BAL and N-BAL in a ratio of 10 to 12 tonnes of N-BAL for 1 tonne of I-BAL.²³
- (35) I-BAL is an isomer produced from propylene and belonging to the group of oxo chemicals²⁴ and is used as intermediate for the production of alcohols and other acids.
- (36) The Commission has previously considered that I-BAL and N-BAL constitute distinct product markets.²⁵ The Notifying Party agrees that I-BAL and N-BAL may constitute distinct product markets²⁶ and the results of the market investigation also suggest that there are two separate markets for I-BAL and N-BAL.²⁷
- (37) For the purposes of the present decision, the definition of the exact product market can be left open, as no competition concerns would arise under any plausible product market definition.

b) Geographic market definition

- (38) In previous decisions, the Commission has considered that the market for I-BAL is at most EEA-wide in scope.²⁸ The Notifying Party agrees with this geographic market definition.²⁹ The results of the market investigation point towards a narrower than global geographic market definition for I-BAL, mainly due to high transport costs and the potential deterioration of I-BAL during transport. There are, however, some I-BAL suppliers transporting this product across geographic regions (e.g., from Europe to Asia).³⁰
- (39) For the present decision, the definition of the exact geographic market can be left open, as no competition concerns would arise under any plausible definition.

²³ COMP/M.3056, *Celanese/Degussa/JV (European Oxo Chemicals)*, paragraph 20.

²⁴ Oxo chemicals are a broad product portfolio deriving from hydroformulation of olefins (notably, propylene, ethylene and butene) with subsequent hydrogenation or oxidation.

²⁵ COMP/M.3056, *Celanese/Degussa/JV (European Oxo Chemicals)*, paragraphs 22-27.

²⁶ Form CO, paragraph 120.

²⁷ Responses to question 3 from I-BAL customers received on 8 and 15 August 2022.

²⁸ COMP/M.3056, *Celanese/Degussa/JV (European Oxo Chemicals)*, paragraphs 28-30.

²⁹ Form CO, paragraph 123.

³⁰ Responses to questions 9-10 from I-BAL customers received on 8 and 15 August 2022. Responses to questions 2 and 4 from I-BAL/N-BAL suppliers received on 10 and 11 August 2022.

5.3. N-BAL

a) Product market definition

- (40) As noted above in paragraphs (34)-(35), N-BAL is an isomer produced from propylene, and belong to the group of oxo chemicals and it is used as intermediate for the production of alcohols and other acids.
- (41) The Commission has previously considered that N-BAL and I-BAL constitute distinct product markets.³¹ The Notifying Party agrees that N-BAL and I-BAL may constitute distinct product markets³² and the results of the market investigation also suggest that there are two separate markets for N-BAL and I-BAL.³³
- (42) For the purposes of the present decision, the definition of the exact product market can be left open, as no competition concerns would arise under any plausible product market definition.

b) Geographic market definition

- (43) In previous decisions, the Commission has considered that the market for N-BAL is at most EEA-wide and further considered two distinct geographic markets: Northern Europe (including Belgium and Germany) and Southern Europe (Italy).³⁴ On the one hand, the market investigation suggests there is a tendency to limit the supply of N-BAL within the same geographic region (or even country). On the other hand, there are also instances of exports to different geographic regions (e.g., from Europe to Asia).³⁵
- (44) The Notifying Party submits that the N-BAL market (like I-BAL) should be regarded as EEA-wide because: (a) most manufacturers supply N-BAL across the EEA as a whole; (b) N-BAL is a commodity product traded across the EEA with EEA customers having largely identical requirements; (c) N-BAL production is not subject to any specific regulatory requirements and/or authorizations throughout the EEA; (d) there are similar conditions in terms of specifications and competitive prices throughout the EEA and (e) Perstorp produces N-BAL in Sweden and sells it in [certain EU Member States].³⁶
- (45) For the present decision, the definition of the exact geographic market can be left open, as no competition concerns would arise under any plausible definition.

5.4. TMP

a) Product market definition

- (46) TMP is a polyhydric alcohol belonging to the group of triols and used in saturated polyesters for coil coatings, alkyds for paints, polyurethanes for coatings and elastomers, acrylic acid esters for radiation curing, esters for synthetic lubricants, and rosin esters for surface treatment of pigments.

³¹ COMP/M.3056, *Celanese/Degussa/JV (European Oxo Chemicals)*, paragraphs 22-27.

³² Form CO, paragraph 120.

³³ Responses to question 3 from I-BAL customers received on 8 and 15 August 2022

³⁴ COMP/M.3056, *Celanese/Degussa/JV (European Oxo Chemicals)*, paragraphs 28-30 and 39.

³⁵ Responses to questions 9 from I-BAL/N-BAL suppliers received on 10 and 11 August 2022.

³⁶ Form CO, paragraph 123.

- (47) The Commission has previously considered the market for polyhydric alcohols,³⁷ which includes TMP, but has left the precise product market open.³⁸ In a previous decision, the Commission's market investigation provided evidence that not all polyhydric alcohols form a single relevant product market due to differing chemical structure and properties that result from the use of diols, triols and tetrols.³⁹ The Notifying Party submits that for the purpose of the assessment of the Transaction, it is not necessary to reach a definitive conclusion regarding the product market scope of polyhydric alcohols, including TMP.⁴⁰
- (48) For the purposes of the present decision, the definition of the exact product market can be left open, as no competition concerns would arise under any plausible product market definition.
- b) Geographic market definition
- (49) The Commission has previously considered that the relevant geographic market for all polyhydric alcohols may be at least EEA-wide and possibly global but has left the exact geographic market definition open.⁴¹
- (50) For the purposes of the present decision, the exact geographic market definition may be left open, as no competition concerns would arise under any plausible definition.

6. COMPETITIVE ASSESSMENT

- (51) In light of the market definitions of the relevant products, the Transaction leads to the following affected markets:
- a) A horizontally affected market at a global level for the manufacture and supply of 2-EHA;
- b) A horizontally affected market at a global level for the manufacture and supply of I-BAL; and
- c) Vertically affected markets at a global level for the manufacture and supply of N-BAL (upstream product manufactured by both Perstorp and PCG) and TMP (downstream product manufactured only by Perstorp).
- (52) The vertical relationship between N-BAL (upstream) and 2-EHA (downstream), does not give rise to a vertically affected market when considering the Parties' combined market shares on the upstream market for the worldwide manufacture and supply of 2-EHA in 2021, where they have a combined market share of [20-30]% (merchant sales). This vertical relationship would only give rise to an affected market if when considering the Parties' combined market shares in terms

³⁷ Polyhydric alcohols are basic chemical building blocks that give physical and chemical properties to the products in which they are used. Polyhydric alcohols are classified according to the number of hydroxyl groups they contain: a polyhydric alcohol containing two hydroxyl groups in its molecule is known as a "diol", one with three hydroxyl groups as a "triol" and one with four hydroxyl groups as a "tetrol".

³⁸ COMP/M.4957 – *Perstorp Holding/Solvay Interlox (caprolactones business)*, paragraph 16.

³⁹ COMP/M.4957 – *Perstorp Holding/Solvay Interlox (caprolactones business)*, paragraph 15.

⁴⁰ Form CO, paragraph 188.

⁴¹ COMP/M.4957 – *Perstorp Holding/Solvay Interlox (caprolactones business)*, paragraph 26.

of capacity on the global market for the manufacture and supply of 2-EHA, which are slightly above [30-40]%.

6.1. Horizontally affected markets

6.1.1. Framework for the competitive assessment

- (53) The Commission Guidelines on the assessment of horizontal mergers under the Merger Regulation (the “Horizontal Merger Guidelines”) distinguish two main ways in which concentrations between actual or potential competitors on the same relevant market may significantly impede effective competition, namely non-coordinated effects and coordinated effects.⁴²
- (54) A concentration giving rise to non-coordinated effects may significantly impede effective competition by eliminating the competitive constraint imposed by one merging party on the other, as a result of which the merged entity would have increased market power without resorting to coordinated behaviour. This may be the case, in particular, if the concentration creates or strengthens a dominant position. According to recital 25 of the preamble of the Merger Regulation, a significant impediment to effective competition can also result from a concentration that eliminates important competitive constraints even if the merged entity would not have a dominant position on the market concerned. In this regard, the Horizontal Merger Guidelines consider not only the direct loss of competition between the merging firms, but also the reduction in competitive pressure on non-merging firms in the same market that could be brought about by the concentration.⁴³
- (55) The Horizontal Merger Guidelines list a number of factors which may influence whether or not significant non-coordinated effects are likely to result from a merger, such as the large market shares of the merging firms, the fact that the merging firms are close competitors, the limited possibilities for customers to switch suppliers, or the fact that the merger would eliminate an important competitive force. Not all of these factors need to be present for significant non-coordinated effects to be likely. The list of factors, each of which is not necessarily decisive in its own right, is also not an exhaustive list.⁴⁴
- (56) The Horizontal Merger Guidelines also describe a number of factors that could counteract any harmful effects of the merger on competition, including the likelihood of buyer power, entry and efficiencies.⁴⁵

6.1.2. 2-EHA

- (57) Both Parties are active in the supply of 2-EHA. Perstorp produces 2-EHA, partially for internal consumption with operations mainly in the EEA. PCG manufactures 2-EHA in Malaysia through BPC, with commercial operations in the Asia-Pacific region. PCG does not currently manufacture nor does it engage in merchant sales in the EEA.

⁴² OJ C 31, 05.02.2004, p. 5. The remainder of this decision focuses on non-coordinated effects.

⁴³ Horizontal Merger Guidelines, paragraphs 24-38.

⁴⁴ Horizontal Merger Guidelines, paragraphs 24-38.

⁴⁵ Horizontal Merger Guidelines, paragraphs 64-88.

- (58) The Parties' activities in the manufacture and supply of 2-EHA do not overlap in the EEA, because PCG does not manufacture nor supply 2-EHA in the EEA. The Transaction only gives rise to a horizontally affected market when assuming a global market for the manufacture and supply of 2-EHA.

6.1.2.1. The Notifying Party's view

- (59) The Notifying Party considers that the Transaction would not raise any competition concerns as a result of the horizontal relationship between the Parties because:
- a) The increment brought by the Transaction is not very significant, as it remains below 10%.
 - b) At a global level, there are a number of credible competitors. These competitors will continue to exercise strong competitive pressure on the Parties post-Transaction. These players are well-established chemical companies, and, they account for a significant portion of 2-EHA's production capacity (in 2021, approximately two times the one of the Parties).
 - c) Suppliers have the ability to expand capacity and can adapt their production to contingent market circumstances. 2-EHA is manufactured in multi-purpose facilities, allowing competitors to swiftly adapt their production and seize new profit opportunities, *e.g.*, in case of a price increase or additional demand from the market. More specifically, the Notifying Party submits that this is the case for Chinese competitors, which continue to increase their capacity, with an increase of approximately 20 Kt expected by 2024 in China.
 - d) 2-EHA customers possess significant buyer power, as they are large companies active in PVB film plasticizers, such as [...].
 - e) The Parties cannot be considered as close competitors because 2-EHA is a commoditized and standardized product (with no breakthrough innovation expected) and, there are other players active in the same market providing the same type of product. Moreover, when selecting a supplier, customers do not perceive Perstorp's and PCG's 2-EHA as closely competing, especially considering that PCG does not supply 2-EHA in the EEA merchant market.
 - f) Considering a hypothetical EEA-wide geographic scope for this market, there would be no horizontal overlap, since PCG does not serve the EEA market.

6.1.2.2. The Commission's Assessment

- (60) The combined market shares of the Parties in terms of volumes sold in the worldwide market for the manufacture and supply of 2-EHA amounted to [20-30]% in 2021, with an increment of [5-10]% brought by PCG (through BPC). In terms of production capacity, the combined market share of the Parties amounted to slightly above [30-40]% with an increment of [5-10]% brought by PCG.

- (61) Several elements suggest that the Transaction will not raise competition concerns.
- (62) First, as submitted by the Notifying Party, and as confirmed by the market investigation,⁴⁶ there are several established large competitors as well as a multitude of smaller players that will continue to exert significant competitive pressure on the merged entity.
- (63) Second, as confirmed by the market investigation,⁴⁷ the Parties are not perceived as close competitors, especially because they are active in different geographic areas, with PCG having a presence in Asia and Perstorp in Europe and the US.
- (64) Third, in terms of impact, the competitors responding to the market investigation have largely confirmed that they expect no impact on the market for 2-EHA at a global level and expect the market for the supply of 2-EHA to remain competitive post Transaction.⁴⁸ As indicated in Table 1 below, there are various global players that will continue to exercise strong competitive pressure on the Parties post-Transaction.

Table 1: 2021 Worldwide 2-EHA Market (by capacity)

	Estimated Production Capacity (Kilotons “Kt”)	Estimated Market Share (%)
Perstorp	[...]	[20-30]%
BPC	[...]	[5-10]%
<i>Combined</i>	<i>[...]</i>	<i>[30-40]%</i>
OQ Chemicals	[...]	[10-20]%
KH NeoChem	[...]	[10-20]%
Eastman	[...]	[10-20]%
BASF (excl.BPC)	[...]	[5-10]%
Schenyang CN	[...]	[5-10]%
Others	[...]	[10-20]%
Total	[350-400]	100%

Source: Form CO, paragraph 230

- (65) Fourth, no customers of the Parties expressed concern in relation to the Transaction.
- (66) In light of all the evidence available, the Commission considers that the Transaction does not raise serious doubts as to its compatibility with the internal

⁴⁶ Responses to question 8 from 2-EHA suppliers received on 11 and 16 August 2022.

⁴⁷ Responses to question 9 from 2-EHA suppliers received on 11 and 16 August 2022.

⁴⁸ Responses to question 12 from 2-EHA suppliers received on 11 and 16 August 2022.

market or the functioning of the EEA Agreement as a result of the horizontal overlap between the Parties in the manufacture and supply of 2-EHA.

6.1.3. I-BAL

- (67) The Parties both manufacture and supply I-BAL. Perstorp mainly produces I-BAL for captive use, with more than [90-100]% of its production used internally. It has a market share of [0-5]% globally on the merchant market.
- (68) PCG has a global market share of [10-20]% in the manufacture and supply of I-BAL. Without considering BPC, PCG only produces I-BAL for its own captive use. Through BPC, PCG produces I-BAL in Malaysia, also mainly for captive use, but it achieves some merchant sales of I-BAL [...] to customers located in the Asia-Pacific region. BPC does not achieve any merchant sales of I-BAL in the EEA market.
- (69) The Parties' activities in the manufacture and supply of I-BAL do not overlap in the EEA, because PCG does not manufacture nor supply I-BAL in the EEA. The Transaction only gives rise to a horizontally affected market when assuming a global market for the manufacture and supply of I-BAL.

6.1.3.1. The Notifying Party's view

- (70) The Notifying Party argues that the Transaction does not raise competition concerns as a result of the horizontal relationship between the Parties in the manufacture and supply of I-BAL considering that:
- a) Their market share remains in any event below 25%, i.e., the threshold below which horizontal concentrations are presumed to be compatible with the internal market.⁴⁹
 - b) The increment brought by the Transaction is *de minimis* as Perstorp would add only [5-10] Kt of merchant sales volumes corresponding to a market share of [0-5]% (merchant sales).
 - c) When also considering volumes sold internally, the market shares of the Parties would be significantly reduced with a combined market share of [5-10]% and an increment of [0-5]%. The Notifying Party specifically argues that it would be more appropriate to assess the Parties' positioning on a market comprising both merchant sales and internal consumption because merchant sales represent a small portion of the overall production of I-BAL (approximately [...] Kt, corresponding to [10-20]% of the total output).

6.1.3.2. The Commission's assessment

- (71) The Parties' combined market share in terms of volumes sold in the global market for the manufacture and supply of I-BAL amounted to [20-30]% (merchant sales) in 2021, with an increment of [0-5]% brought by Perstorp.
- (72) The Commission notes that there are several elements that suggest that the Transaction does not raise serious doubts as to its compatibility with the internal

⁴⁹ Horizontal Merger Guidelines, paragraph 18.

market or the functioning of the EEA Agreement as regards the market for the manufacture and supply of I-BAL. In addition, the Notifying Party's views were largely confirmed by the market investigation.

- (73) First, the Transaction only gives rise to a horizontally affected market when considering a global market for the manufacture and supply of I-BAL, while the results of the market investigation point towards a narrower than global geographic market definition for the market of I-BAL, mainly due to high transport costs and the potential deterioration of I-BAL during transport.⁵⁰
- (74) Second, the Parties' global combined market share remains modest at [20-30]% and the increment brought as a result of the Transaction will be very small, at [0-5]% (in terms of volumes sold).
- (75) Third, as it has been indicated by respondents to the market investigation and submitted by the Notifying Party, the Parties are mainly using I-BAL for captive use. In that respect, the combined global market share on the market including captive sales of [5-10]% provides a more appropriate representation of the Parties' actual market position.⁵¹
- (76) Fourth, as confirmed by the market investigation, there is a multitude of suppliers of I-BAL that are considered stronger than the Parties globally, such as Eastman, BASF and OQ as well as other smaller players such as PetroChina and Dow.⁵²
- (77) Fifth, as confirmed by the market investigation, the Parties are not close competitors, because PCG's operations of I-BAL are in Malaysia, while Perstorp's operations are in Europe and only BPC is active in the merchant market with sales only in the Asia Pacific region. As it has been specifically indicated by a respondent to the market investigation "*Both, Perstorp and PCG are assumed to be acting in their geographic home region of I-BAL production, consuming I-BAL mostly internally. A direct competition between Perstorp and PCG is not assumed*".⁵³
- (78) Sixth, in terms of impact, the respondents to the market investigation unanimously confirmed that they expect no impact on the market for the supply of I-BAL and expect the market for the supply of I-BAL to remain competitive post Transaction.⁵⁴
- (79) In light of the evidence available, the Commission considers that the Transaction does not raise serious doubts as to its compatibility with the internal market or the functioning of the EEA Agreement as a result of the horizontal relationship between the Parties in the production and supply of I-BAL.

⁵⁰ Responses to questions 9-10 from I-BAL customers received on 8 and 15 August 2022

⁵¹ Responses to questions 7-8 from I-BAL/N-BAL suppliers received on 10 and 11 August 2022.

⁵² Responses to question 5 from I-BAL/N-BAL suppliers received on 10 and 11 August 2022.

⁵³ Responses to question 6 from I-BAL/N-BAL suppliers received on 10 and 11 August 2022.

⁵⁴ Responses to questions 7-8 from I-BAL/N-BAL suppliers received on 10 and 11 August 2022.

6.2. Vertically affected markets

6.2.1. Framework for the competitive assessment

- (80) Input foreclosure arises where, post-merger, the new entity would be likely to restrict access to the products or services that it would have otherwise supplied, absent the merger, thereby raising its downstream rivals' costs by making it harder for them to obtain supplies of the input under similar prices and conditions as absent the merger. This may lead the merged entity to profitably increase the price charged to consumers, resulting in a significant impediment to effective competition.⁵⁵ In assessing the likelihood of an anticompetitive input foreclosure scenario, the Commission examines, first, whether the merged entity would have, post-merger, the ability to substantially foreclose access to inputs, second, whether it would have the incentive to do so, and third, whether a foreclosure strategy would have a significant detrimental effect on competition downstream.⁵⁶
- (81) Customer foreclosure may occur when a supplier integrates with an important customer in the downstream market. Because of this integration, the merged entity may foreclose access to a sufficient customer base to its actual or potential rivals in the upstream market and reduce their ability or incentive to compete. In turn, this may raise downstream rivals' costs by making it harder for them to obtain supplies of the input under similar prices and conditions as absent the merger. This may allow the merged entity profitably to establish higher prices on the downstream market.⁵⁷ In assessing the likelihood of an anticompetitive customer foreclosure scenario, the Commission examines, first, whether the merged entity would have the ability to foreclose access to downstream markets by reducing its purchases from its upstream rivals, second, whether it would have the incentive to reduce its purchases upstream, and third, whether a foreclosure strategy would have a significant detrimental effect on consumers in the downstream market.⁵⁸

6.2.2. N-BAL (upstream) – TMP (downstream)

- (82) Perstorp produces N-BAL mainly for captive use, with more than [80-90]% of its production used internally. On the merchant market, Perstorp had a global market share of [5-10]% in 2021. As noted, Perstorp is also active in the manufacture and supply of TMP, with a global market share of [30-40]% (merchant sales).
- (83) PCG (without considering BPC) only produces N-BAL for captive use and only in Malaysia. Through BPC, PCG produces N-BAL in Malaysia mainly for captive use but also has sales on the merchant market [...] to customers located in the Asia Pacific region. PCG achieved a global merchant market share of [10-20]% in 2021. PCG is not active in polyhydric alcohols and is therefore not active in the manufacture and supply of TMP.
- (84) The combined market shares of the Parties on the upstream global market for N-BAL amounted to [10-20]% (merchant sales) in 2021, while Perstorp's market share in the downstream market for TMP amounted to [30-40]% (merchant sales).

⁵⁵ Non-Horizontal Merger Guidelines, paragraph 31.

⁵⁶ Non-Horizontal Merger Guidelines, paragraph 32.

⁵⁷ Non-Horizontal Merger Guidelines, paragraph 46.

⁵⁸ Non-Horizontal Merger Guidelines, paragraph 59.

There are no overlaps nor any vertical links at the EEA level, as PCG does not manufacture nor supply any N-BAL in the EEA.

- (85) The Transaction only gives rise to vertically affected markets between N-BAL (upstream) and TMP (downstream) when assuming a global dimension for the market for N-BAL, as PCG does not manufacture and supply TMP and only manufactures and supplies N-BAL outside the EEA. In addition, no vertically affected markets would arise if we were to consider an overall product market for all polyhydric alcohols (including TMP), in which Perstorp has a global market share of [10-20]% (merchant sales).

6.2.2.1. The Notifying Party's view

- (86) The Notifying Party submits that the Transaction will not raise any concerns regarding the vertical relationship between the Parties with respect to N-BAL (upstream) and TMP (downstream).⁵⁹
- (87) The Notifying Party notes that although N-BAL is a necessary input for the production of TMP and is thus not substitutable with alternative inputs, there are various circumstances that rule out any hypothetical risk of input foreclosure. More specifically, the Notifying Party argues that the market for N-BAL is stable, with no substantial evolution in terms of installed capacity, volume output and size of the market.
- (88) In addition, the Notifying Party considers that the merged entity will not be able to engage in any input foreclosure strategies because: (a) its combined market share in the upstream market for N-BAL will be below 30%, which leaves third parties requiring N-BAL in the manufacturing process with ample choice for alternative sources of supply (with competitors such as OQ Chemicals, Ineos, BASF, Grupa Azoty and Chimcomplex); and (b) the Parties will hold only [0-5]% of the total global production capacity of N-BAL post-Transaction. The Notifying Party specifically indicates in that regard that the Parties' total output of N-BAL accounted for approximately [...] Kt in 2021, against an overall market of approximately 10,005 Kt. As a result, third parties will post-Transaction hold more than [90-100]% of the global capacity.
- (89) In terms of customer foreclosure, the Notifying Party submits that no concerns arise because N-BAL's producers will continue to have many alternatives to sell to post-Transaction considering that TMP production represents only a small part of N-BAL consumption. In addition, the Parties argue that Perstorp faces competition from major chemical companies for the production of TMP (such as [...]) and these downstream players will most likely continue to multi-source their requirements of N-BAL from third party suppliers.

6.2.2.2. The Commission's assessment

Input foreclosure

- (90) First, for input foreclosure to be a concern, the vertically integrated entity resulting from the Transaction must have a significant degree of market power in the

⁵⁹ Form CO, paragraph 234-249.

upstream market. In this respect, the Parties' global combined market share will be below 20% (merchant sales) and below 5% (merchant sales and internal consumption) in the production and supply of N-BAL post-Transaction, which would normally suggest the absence of market power.⁶⁰ In addition, the Commission notes that there are several competing established suppliers of N-BAL in the global market, such as OQ Chemicals. Accordingly, the merged entity will not have the ability to foreclose access to N-BAL as an input.

- (91) Second, given that the merged entity would have no ability to foreclose, the Commission considers it unnecessary to assess whether the merged entity would have incentives to foreclose competitors on the TMP market from sufficient inputs. Furthermore, N-BAL is an accessible commodity and a standardized product⁶¹ used as an input for the manufacturing of a variety of downstream products (including plasticizers, alcohols, solvents and polymers etc.). The Commission thus considers that, were the Parties to restrict access to N-BAL, it is highly likely that the downstream demand for N-BAL would be diverted to competitors.
- (92) Third, in terms of impact, the respondents to the market investigation confirmed that they expect no or only a minimal impact on the market for N-BAL and expect the market for the supply of N-BAL to remain competitive post-Transaction.⁶²
- (93) On the basis of the above considerations, the Commission concludes that the Transaction does not raise serious doubts as to its compatibility with the internal market or the functioning of the EEA Agreement in relation to the vertical relationship between the supply of N-BAL (upstream) and the supply of TMP (downstream), as a result of input foreclosure.

Customer foreclosure

- (94) First, in relation to the merged entity's ability to foreclose access to downstream market, a merger may affect upstream competitors by increasing their cost to access downstream customers or by restricting access to a significant customer base.⁶³ There are several elements that suggest that the merged entity will not be able to engage in customer foreclosure.
- (95) The respondents to the market investigation indicated that TMP represents the main, but not the only, downstream application for N-BAL.⁶⁴ The customer base for N-BAL does not only comprise customers who manufacture and supply TMP but it encompasses different applications, such as n-butanol, n-butyric acid, PVB, methyl amyl ketone and also 2-EH.⁶⁵ In addition, as confirmed by the market investigation,⁶⁶ Perstorp faces competition from major chemical companies for the production of TMP, such as [...] who seem to multisource and which will continue to be able to source their requirements of N-BAL from third party suppliers. Therefore, the customer base is sufficiently large to exclude the merging entity's ability to foreclose upstream N-BAL competitors from a sufficient customer base.

⁶⁰ Non-Horizontal Merger Guidelines, paragraph 35.

⁶¹ COMP/M.3056 – *Celanese / Degussa / JV*, paragraph 42.

⁶² Responses to questions 14-15 from I-BAL/N-BAL suppliers received on 10 and 11 August 2022.

⁶³ Non-Horizontal Merger Guidelines, paragraph 60.

⁶⁴ Responses to question 11 from I-BAL/N-BAL suppliers received on 10 and 11 August 2022.

⁶⁵ Form CO, paragraph 244.

⁶⁶ Responses to question 11 from I-BAL/N-BAL suppliers received on 10 and 11 August 2022.

- (96) Second, given that the merged entity would have no ability to foreclose, the Commission considers it unnecessary to assess whether the merged entity would have incentives to foreclose. Nevertheless, the Commission notes that the incentive to foreclose access to downstream markets would depend on the degree to which the trade-off between the possible costs associated with not procuring products from upstream rivals and the possible gains from doing so is profitable. Given the sufficient demand for N-BAL that would still be available on the market, as also confirmed by the respondents to the market investigation,⁶⁷ the Commission considers that it is very unlikely that a strategy of customer foreclosure could be profitable, as this strategy would not have any impact on costs and prices of competitors.
- (97) Third, in terms of impact of the Transaction on the market for the supply of N-BAL, the respondents to the market investigation confirmed that they would expect no such impact or only a minimal impact,⁶⁸ especially considering that both Parties' capacities are very low in relation to the global market consumption.
- (98) Based on the above considerations, the Commission concludes that the Transaction does not raise serious doubts as to its compatibility with the internal market or the functioning of the EEA Agreement in relation to the vertical relationship between the supply of N-BAL (upstream) and the supply of TMP (downstream) as a result of customer foreclosure.

6.2.3. *N-BAL (upstream) – 2-EHA (downstream)*

- (99) The vertical relationship between N-BAL (upstream product manufactured by both PCG and Perstorp) and 2-EHA (downstream product manufactured by both PCG and Perstorp) does not give rise to a vertically affected market when considering the Parties' combined market shares in the worldwide manufacture and supply of 2-EHA in 2021 of [20-30]% (merchant sales). This vertical relationship would only give rise to an affected market when considering the Parties' combined market shares in terms of capacity on the market for the manufacture and supply of 2-EHA, which are slightly above [30-40]%.
- (100) In addition, these markets would be considered as affected only when assuming that the markets for the supply and manufacture of 2-EHA and N-BAL are global in scope, because only Perstorp manufactures and supplies N-BAL in the EEA, while PCG uses most of its production of N-BAL captively and does not manufacture nor supply these products in the EEA.

6.2.3.1. **The Notifying Party's view**

- (101) The Notifying Party notes that the Transaction will not result in either input or customer foreclosure concerns in the EEA. The Notifying Party specifically notes that there is no vertical link between the Parties' activities in the manufacture and supply of N-BAL (upstream) and the manufacture and supply of 2-EHA (downstream), because PCG does not manufacture and supply N-BAL in the EEA.⁶⁹

⁶⁷ Responses to question 14 from I-BAL/N-BAL suppliers received on 10 and 11 August 2022.

⁶⁸ Responses to question 15 from I-BAL/N-BAL suppliers received on 10 and 11 August 2022.

⁶⁹ Form CO, paragraph 232.

6.2.3.2. The Commission's Assessment

- (102) First, as noted above, this vertical link would only give rise to affected markets under a global market definition for the manufacture and supply of N-BAL and 2-EHA, while the market investigation suggests that there is a tendency to limit the supply of N-BAL within the same geographic region (or even country).⁷⁰
- (103) Second, in terms of input foreclosure the Commission considers that the Transaction will not lead to any input foreclosure for the reasons laid out in paragraphs (90)-(93) above.
- (104) Third, in relation to customer foreclosure, there are several elements that suggest that the merged entity will not be able to engage in customer foreclosure.
- (105) The respondents to the market investigation did not identify 2-EHA as one of the main downstream applications for N-BAL.⁷¹ The customer base for N-BAL does not only comprise customers who manufacture and supply 2-EHA but it encompasses different applications, such as TMP, n-butanol, n-butyric acid, PVB, methyl amyl ketone and also 2-EH. In addition, as confirmed by the market investigation, there exist many other major chemical companies that manufacture 2-EHA, such as OQ Chemicals, KH NeoChem, Eastman, BASF, Shenyang CN and others, which will continue to be able to source their requirements of N-BAL from third party suppliers.⁷² Therefore, the customer base is sufficiently large to exclude the merging entity's ability to foreclose upstream N-BAL competitors from a sufficient customer base.
- (106) Considering that the merged entity would have no ability to foreclose, the Commission considers it unnecessary to assess whether the merged entity would have incentives to foreclose. Nevertheless, the Commission notes that the incentive to foreclose access to downstream markets would depend on the degree to which the trade-off between the possible costs associated with not procuring products from upstream rivals and the possible gains from doing so is profitable. Given the sufficient demand for N-BAL that would still be available on the market, as also confirmed by the respondents to the market investigation,⁷³ the Commission considers that it is very unlikely that a strategy of customer foreclosure could be profitable, as this strategy would not have any impact on costs and prices of competitors.
- (107) Finally, in terms of impact of the Transaction on the market for the supply of N-BAL and 2-EHA, the respondents to the market investigation confirmed that they would expect no such impact⁷⁴ or only a minimal impact.⁷⁵
- (108) Based on the above considerations, the Commission concludes that the Transaction does not raise serious doubts as to its compatibility with the internal market or the functioning of the EEA Agreement in relation to the vertical relationship between

⁷⁰ Responses to questions 9 from I-BAL/N-BAL suppliers received on 10 and 11 August 2022.

⁷¹ Responses to question 11 from I-BAL/N-BAL suppliers received on 10 and 11 August 2022.

⁷² Responses to question 8 from 2-EHA suppliers received on 11 and 16 August 2022.

⁷³ Responses to question 14 from I-BAL/N-BAL suppliers received on 10 and 11 August 2022.

⁷⁴ Responses to question 12 from 2-EHA suppliers received on 11 and 16 August 2022.

⁷⁵ Responses to question 15 from I-BAL/N-BAL suppliers received on 10 and 11 August 2022.

the supply of N-BAL (upstream) and the supply of 2-EHA (downstream) as a result of input or customer foreclosure.

7. CONCLUSION

- (109) For the above reasons, the European Commission has decided not to oppose the notified concentration and to declare it compatible with the internal market and with the EEA Agreement. This decision is adopted in application of Article 6(1)(b) of the Merger Regulation and Article 57 of the EEA Agreement.

For the Commission

(Signed)
Margrethe VESTAGER
Executive Vice-President