

COMMISSION DECISION**of 30 October 2001****declaring a concentration to be incompatible with the common market and the EEA Agreement****(Case No COMP/M. 2416 — Tetra Laval/Sidel)***(notified under document number C(2001) 3345)***(Only the English text is authentic)****(Text with EEA relevance)**

(2004/124/EC)

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THE COMMISSION OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Community,

Having regard to the Agreement on the European Economic Area, and in particular Article 57(2)(a) thereof,

Having regard to Council Regulation (EEC) No 4064/89 of 21 December 1989 on the control of concentrations between undertakings ⁽¹⁾, as last amended by Regulation (EC) No 1310/97 ⁽²⁾, and in particular Article 8(3) thereof,

Having regard to the Commission's decision of 5 July 2001 to initiate proceedings in this case,

Having given the undertakings concerned the opportunity to make known their views on the objections raised by the Commission,

Having regard to the opinion of the Advisory Committee on Concentrations ⁽³⁾,

Having regard to the final report of the Hearing Officer ⁽⁴⁾ in this case,

Whereas:

- (1) On 18 May 2001, the Commission received a notification pursuant to Article 4 of Regulation (EEC) No 4064/89 (the Merger Regulation) of a proposed concentration whereby Tetra Laval SA, France, belonging to the group Tetra Laval BV (Tetra), the Netherlands, intends to acquire within the meaning of Article 3(1)(b) of the Merger Regulation control of the French company Sidel SA (Sidel) by way of a public bid announced on 27 March 2001.
- (2) After examination of the notification, the Commission concluded that the notified operation fell within the scope of Regulation (EEC) No 4064/89 and that it raised serious doubts as to its compatibility with the common market and the EEA Agreement. On 5 July 2001, the Commission decided in accordance with Article 6(1)(c) of the Merger Regulation to initiate proceedings in this case.
- (3) On 10 September 2001, the Commission adopted a decision pursuant to Article 11(5) of the Merger Regulation requiring Tetra to reply to a request for information relating to its competitive position on the markets for extrusion blow-moulding machines (EBM), high-density polyethylene (HDPE) aseptic filling machines, HDPE non-aseptic filling machines, aseptic HDPE bottles and non-aseptic HDPE bottles. Tetra supplied the requested information on 11 September 2001.

- (4) The Advisory Committee discussed the draft of this Decision on 19 October 2001.

I. THE PARTIES

- (5) Tetra, the notifying party, is a privately held group of companies, which is active in the design and manufacture of equipment, consumables and ancillary services for the processing, packaging and distribution of liquid-food (known as the Tetra Pak packaging business). Tetra's business includes traditional carton packaging, where it is the worldwide market leader, and more limited activities in the plastic packaging sector. Tetra is also engaged in the supply of equipment, systems, accessories and consumables to dairy farm production and animal husbandry (known as DeLaval).
- (6) Sidel is a company involved in the design and production of packaging equipment and systems, in particular, blow moulding machinery, barrier technology and filling machines for PET (polyethylene terephthalate) plastic bottles. Sidel is the worldwide leader for the production and supply of blow-moulding machines. The company also has activities in engineering, conveying, overwrapping and palletising, health and beauty.

II. THE OPERATION AND THE CONCENTRATION

- (7) On 27 March 2001, Tetra Laval SA announced a public bid for all outstanding shares in Sidel. Tetra Laval SA is a privately held company established under French law for the purpose of holding Sidel's shares acquired through the public bid. It is a wholly owned subsidiary of Tetra.
- (8) Tetra Laval SA's bid for Sidel was for cash at a price of EUR 50 per share. This represented a 32 % premium to the three-month average share price and a 52 % premium on the 21 March 2001 share price but was significantly lower than the average Sidel share price over a period of three years. The bid valued Sidel at approximately EUR 1,9 billion and was financed through the existing credit lines and internal resources of Tetra. The board of directors of Sidel unanimously recommended the acceptance of the bid.
- (9) In accordance with French law, the bid was unconditional. Pursuant to the bid, approximately 27,1 million shares, approximately 81,3 % of outstanding Sidel shares were tendered to Tetra Laval SA. In addition to those shares, Tetra Laval SA has also acquired approximately 3,5 million shares in Sidel either on the open market or in individual purchases from major shareholders. As a result Tetra currently holds 92 % of Sidel's shares.
- (10) The proposed acquisition, whereby Tetra acquires sole control over Sidel, constitutes a concentration within the meaning of Article 3(1)(b) of the Merger Regulation.

(1) OJ L 395, 30.12.1989, p. 1; corrected version in OJ L 257, 21.9.1990, p. 13.

(2) OJ L 180, 9.7.1997, p. 1.

(3) OJ C 39, 13.2.2004.

(4) OJ C 39, 13.2.2004.

III. COMMUNITY DIMENSION

(11) The undertakings concerned have a combined aggregate worldwide turnover of more than EUR 5 billion ⁽⁵⁾ (Tetra EUR [...] ^(*) and Sidel EUR [...] ^(*) in 2000). Both Tetra and Sidel have a Community-wide turnover in excess of EUR 250 million (Tetra EUR [...] ^(*) and Sidel EUR [...] ^(*) in 2000), and they do not achieve more than two thirds of their aggregate Community-wide turnover within one and the same Member State. The notified operation therefore has a Community dimension within the meaning of Article 1(2) of the Merger Regulation.

IV. COMPATIBILITY WITH THE COMMON MARKET

A. GENERAL DESCRIPTION OF THE LIQUID-FOOD PACKAGING INDUSTRY

1. INTRODUCTION

(12) The competitive impact of this operation will be primarily in the liquid-food packaging industry. This is the

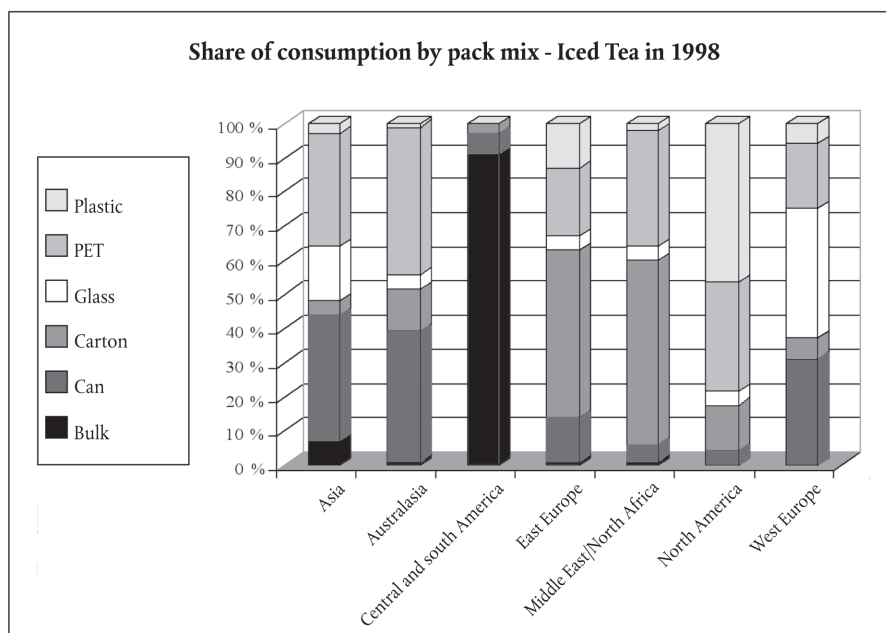
^(*) Parts of this text have been edited to ensure that confidential information is not disclosed; those parts are enclosed in square brackets and marked with an asterisk.

⁽⁵⁾ Turnover calculated in accordance with Article 5(1) of the Merger Regulation and the Commission notice on the calculation of turnover (OJ C 66, 2.3.1998, p. 25). To the extent that figures include turnover for the period before 1 January 1999, they are calculated on the basis of average ecu exchange rates and translated into EUR on a one-for-one basis.

industry sector where the parties focus their activities. The parties are mainly active in two segments of the liquid-food packaging sector: plastic, in particular PET packaging, and carton packaging. The discussion of the industry will therefore focus on these two sectors. A detailed analysis of the relevant product markets is set out in Section IV.B.

(13) Liquid-food packaging is a complex industry which includes a number of different technologies and equipment. Liquid foods (water, dairy products, juices, carbonated soft drinks, etc.) can be packaged in different packages. There are four major packaging materials used for liquid-food packaging: carton, plastic (including PET and HDPE), cans and glass.

(14) Increasingly, beverage companies use a mix of different materials to package their products, for example, Coca Cola can be found in glass, PET and aluminium cans. To a large extent, the technology and kind of package that can be used for the packaging of a given liquid is determined by the liquid's characteristics. In addition, in some cases consumer preferences and tradition dictate the choice of material, for example almost exclusively glass for wine and champagne. Price is also a relevant factor. The graph set out below shows the diversity of packages used by beverage companies across the world to package the same liquid, iced tea.



Source: Canadean Iced tea Report 2000

2. IN-HOUSE PACKAGING AND PACKAGING BY CONVERTERS

- (15) Liquids are packaged in two main ways: in-house by the liquid producers themselves and by 'bottle converters'. In-house packaging requires the purchase of packaging equipment and installation of packaging lines at the premises of the beverage company. By contrast, converters produce empty packages, which are then either filled by filling companies or sold to beverage companies for filling in-house. A mid-way system is the 'hole-through-the-wall' arrangement whereby a converter will install machinery next to the premises of the beverage company and will produce bottles, which are literally conveyed through a hole in the wall to the beverage company for filling. Converters include companies like Schmalbach-Lubeca, Pechiney and Crown Cork & Seal.
- (16) There are differences in the mix of in-house or converter activity across the four major packaging materials. Carton packaging mainly takes place in-house in a single stage, which combines creation of the package and filling. PET is mainly blown and filled in-house in two different steps but PET bottles are also produced in large numbers by converters. Virtually all glass and cans are manufactured by converters.
- (17) In order to package a liquid there is a need for a number of specific pieces of equipment and inputs, from the raw material (plastic resin preform, aluminium, carton, glass) to the machine which creates the empty package to a filling machine that fills and seals the liquid including conveying machines, closure applicators and other secondary equipment. Equipment suppliers sell their machinery to beverage companies for in-house production and to independent converters.
- (18) Sales of equipment are usually in the form of individual bids. This may be on invitation for tender or following a direct approach for a quotation. The final price will be determined in negotiations with customers and will depend on factors such as type of machine, capacity, customer specifications, servicing and consumables and negotiating power.
- (19) The parties have activities in the carton packaging sector and the plastic (PET and HDPE) packaging sector. It is therefore useful to present the different stages and equipment necessary for carton and plastic packaging of liquids.

3. PET PACKAGING

- (20) PET is a resin material. PET bottles are transparent bottles familiar to consumers mainly as bottles used for mineral water and carbonated soft drinks (CSDs). Packaging of liquid-food in PET bottles requires a combination of distinct machinery and, if required, a barrier technology. There are three distinct stages in the packaging process: (a) production of plastic preforms, the preproduction tubes used to make PET bottles; (b) production of empty PET bottles using the plastic preforms in specialised stretch blow-moulding machines and (c) filling of the finished PET bottles with the liquid using a dedicated filling machine. Beverage companies usually produce and fill PET bottles in-house. Beverage companies also buy empty PET bottles from converters.

- (21) A typical PET packaging line includes the following machinery:

Injection machines: Preforms are produced from resin in injection machines⁽⁶⁾. Special machines are used to make preforms with enhanced barrier properties. Preforms are usually produced by converters and are sold as a commodity to beverage companies. The price of standard (non-barrier) preforms depends heavily on the price of resin on the open market. Preforms with barrier properties are not commodity products.

Stretch blow-moulding machines (SBM machines): SBM machines are complex pieces of equipment that produce finished PET bottles by stretching and blowing the PET preforms in a mould which gives the bottle its shape (stretch blow-moulding).

Filling machines: The PET bottle is filled either aseptically⁽⁷⁾ or non-aseptically by dedicated filling machines. Non-aseptic PET filling machines are generally used for carbonated drinks, mineral water, edible oils and fresh milk. Aseptic PET filling machines are used for ambient juices, fruit or flavoured still drinks, ready-to-drink tea and coffee drinks and liquid dairy products. In case of aseptic filling, the bottles are sterilised and closed with pre-sterilised caps.

⁽⁶⁾ The polyester resin that is required to make preforms is sourced from large chemical companies such as DuPont, Dow Chemical, Eastman Chemical, ICI Chemicals & Polymers and Shell Chemical.

⁽⁷⁾ Aseptic bottle filling is a process whereby pre-sterilised treated products are filled into bottles that are sterile on the inside and are then sealed with closures that have also been sterilised. The filling process takes place in a sterile chamber within the filling machine.

Secondary line equipment: After being filled, PET bottles are capped, labelled and packaged onto pallets with the appropriate overwrapping. Cap applicator: In direct connection to the filling machine, the closure applicator applies the closure to the bottle. Depending on closures and models of filling machines, this can also be done within the filling machine. Labeller: After filling and capping, the bottles are labelled with the individual product label (paper or plastic). Shrinkwrapper: For the purposes of facilitating further transport, storage and display of the bottles, they are in some cases wrapped together (for example, in packs of six bottles) in plastic film. These machines are called shrinkwrappers, sometimes also film wrappers or film applicators. Card-board packer: Again, for the purpose of facilitating further transport and storage, the bottles are then, in some lines, packed into cardboard or plastic trays in a cardboard packer. These machines are sometimes called case packers or wrap-around packers. Palletiser: Finally, the end of the line is the palletising, by which the bottles in multipacks, cases, trays or crates are loaded for transport. The pallet is wrapped with a stretchable plastic film that binds the pallet together for protection during transportation.

Between the SBM machine and the filling machine the bottles are transported on air conveyors, i.e. transport chains gripping the bottles by their neck ring and transporting them by air blown under the neck. Between the other machinery the bottles are transported on slat-chain or standard belt conveyors.

Barrier

- (22) For oxygen sensitive products (such as juices or beer), the gas barrier properties of a PET bottle need to be enhanced. One of the basic technical differences between PET and other materials used for liquid-food and beverage packaging is the fact that PET is gas-permeable⁽⁸⁾.
- (23) To enhance the barrier properties of PET, a barrier technology is applied onto the standard PET bottle. Different barrier technologies have been developed. Barrier technology is not specific to any particular kind of SBM machine. Barrier technology is either embedded in the material used for the preform, added to the

preforms or applied on the finished bottle once the SBM machine process has finished. In all cases, standard SBM machines are used. However, in cases where the barrier is not contained in the preforms themselves but is simply added onto the finished PET bottle, a separate dedicated barrier coating machine is required.

- (24) For light-sensitive products such as UHT white milk a light barrier needs to be added. Light barrier technology involves using pigmented PET or a sleeve covering the PET bottle.

4. HDPE PACKAGING

- (25) HDPE is a high-density polyethylene plastic material. Unlike PET, HDPE does not have a completely transparent glass-like appearance but is rather 'cloudy'. HDPE is familiar to consumers as a packaging material for mainly UHT milk, especially in the United Kingdom.

- (26) HDPE is produced in a similar way to PET but using different machinery. HDPE bottles are produced by EBM machines. HDPE bottles are filled by dedicated aseptic and non-aseptic HDPE filling machines.

5. CARTON PACKAGING

- (27) Carton packaging consists of introducing pre-manufactured but not yet folded (flat) carton material into a single carton filling machine in which it is both folded and filled.

- (28) It is important to note that carton packaging follows a supply route, which is different to that for PET packaging. Unlike PET with its distinct stages of production (preforms, empty bottles, filling), the liquid-food carton business is one of integrated pack construction, filling and sealing often referred to as form-fill-seal. All these operations are done on one carton packaging machine within the beverage company's factory. The carton machine supplier, for example, Tetra, in general provides the machinery as well as the blank cartons (flat carton or carton reels that will be shaped by the machine in the form of the final package). There are distinct aseptic and non-aseptic carton machines and the distinction between aseptic and non-aseptic carton packaging runs throughout the packaging process from the creation of the flat carton to its folding and filling.

⁽⁸⁾ In particular, gas permeability concerns are magnified with respect to beer, the taste of which is rapidly affected by the loss of CO₂ and the intrusion of oxygen. Until very recently, these problems have thus prevented PET bottles from penetrating the beer market at all.

- (29) A typical carton packaging line includes the following major pieces of machinery:

Carton filling machine: The filling machine both folds and fills the cartons, which are either pre-manufactured flat, 'blanks', or, for Tetra's aseptic machines, are supplied in reels. When carton packages are designed to have plastic caps, these are in some cases entirely or partly applied in the filling machine but in most cases are applied by a cap applicator.

Cap applicator: The cap applicator applies plastic openings to cartons that are designed to have such caps (mainly the 'gable-top' cartons). Shrinkwrapper: For the purposes of facilitating transport, storage and display of the cartons, they are in some cases packed together in plastic film by a shrinkwrapper, are also called a film wrapper or film applicator. Tray packer: For the purpose of facilitating further transport and storage, the cartons are then packed into cardboard or plastic trays in a tray packer. These machines are sometimes called case packers or cardboard packers. Palletiser: The end of the line is often the palletising stage, where the cartons are loaded on pallets for the final distribution.

Each machine is linked to the next by a conveyor. In carton packaging lines these are mainly flat-type conveyors, where the cartons 'stand' on a moving belt.

B. RELEVANT PRODUCT MARKETS

1. INTRODUCTION

- (30) Tetra took the view in the notification that the present transaction concerns the sector of manufacture and supply of equipment used for packaging liquid-food in PET bottles because this is the sector in which there are horizontal overlaps in the parties' activities with regard to specific pieces of equipment. Tetra has thus identified three horizontally affected markets within the PET packaging equipment sector: low-capacity SBM machines, barrier technologies and aseptic PET filling machines. Tetra considers that the relevant product markets for analysing the transaction are no wider than those three markets. Tetra maintained this view in the reply to the Commission's statement of objections dated 21 September 2001 (the reply) and at the oral hearing on 26 September 2001 (the oral hearing). Tetra further argued that PET packaging systems and equipment and carton systems are not closely related markets and that a variety of packaging materials are used to market and

package liquid foods: carton, PET, HDPE, glass and cans. Tetra argued that each of these packaging materials forms a distinct product market.

- (31) The Commission notes that the activities of Tetra and Sidel cover a very wide area of the liquid-food packaging equipment sector and both parties describe themselves in terms of their overall presence in the liquid-food packaging sector. Both parties are active in SBM machinery, barrier technologies, aseptic PET filling machines and secondary PET equipment (conveyors, etc.).

- (32) In addition, Sidel also manufactures moulds (a shaped piece of equipment in the blow moulder in which the hot preform is stretched and blown to form the final PET container), non-aseptic PET filling machines, PET hot-filling machines, EBM machines (which produce HDPE bottles), aseptic and non-aseptic HDPE filling machines⁽⁹⁾, secondary line equipment and distribution packaging equipment.

- (33) Tetra's main business focuses on carton packaging where it is by far the biggest player in aseptic carton packaging machines and aseptic cartons as well as non-aseptic carton packaging machines and non-aseptic cartons. Tetra is also active in the processing of liquid-food. In the plastic packaging sector, Tetra also produces PET preforms, HDPE bottles and plastic beverage bottle closures. Tetra is also active in the market for EBM machines through an [...] agreement with Graham Engineering Corporation (Graham), USA [...]*. Graham machines are fully adaptable for customised HDPE bottles for pasteurised, extended shelf-life and aseptic products. Tetra has also developed a linear aseptic EBM filling LFA-20, designed to package UHT milk and juice. The machine does not require a 'clean room' but incorporates a very small internal aseptic chamber reducing the customer's investment and operational costs.

- (34) The Commission considers that, whilst the direct horizontal overlaps of the parties' specific pieces of equipment may be a meaningful starting point in the analysis of the relevant market, it is important to place the analysis in the context of 'the general market in systems for packaging liquid-food products'⁽¹⁰⁾. This becomes

⁽⁹⁾ [...]*.

⁽¹⁰⁾ Case C-333/94 *TetraPak v Commission* [1996] ECR I-5951 (*Tetra Pak II (ECJ)*), paragraph 11. *Tetra Pak II (ECJ)* was an appeal of the Judgment of the Court of First Instance in Case T-83/91 *Tetra Pak v Commission* [1994] ECR II 755 (*Tetra Pak II (CFI)*), an action for annulment of Commission Decision 92/163/EEC in Case IV/31.043 (OJ L 72, 18.3.1992, p. 1) (*Tetra Pak II (Commission)*).

even more pertinent in this particular case given the parties' many and varied activities in the liquid-food packaging sector as a whole.

- (35) The Commission has considered the market for packaging of food and beverages in a number of previous decisions⁽¹¹⁾. In many of the previous decisions⁽¹²⁾ the Commission did not come to a definitive conclusion on the definition of the relevant product market but proceeded on the basis that the market should be divided according to packaging material and hence packaging equipment (separate market for glass packaging, for carton, etc.). However, in several decisions⁽¹³⁾ the Commission has also indicated that the liquid-food packaging market is complex and that end-use and other criteria may be relevant for market definition.
- (36) The Commission is bound to consider how the market is functioning and the appropriate definition of the relevant market based upon the past, current and likely future situation of the packaging industry. It is therefore

necessary to start the analysis of the relevant market by examining whether PET and other packaging systems compete with each other to the extent necessary for them to be placed in the same relevant product market.

- (37) In order to assess whether or not different packaging systems are substitutable, it is also relevant to examine the downstream market for the final packaged product at consumer level, that is to verify whether consumers regard the different packages as substitutable. Tetra has submitted that the lack of a clear distinction between the downstream packaged product market and upstream equipment market confuses the competitive assessment. The Commission agrees with the notifying party that the two markets are distinct. However, the Commission considers that demand for the equipment can only be derived from the demand for the final products which the equipment will pack. It is therefore necessary to examine the downstream market. The notifying party's economic consultants agree with this, stating 'the demand for carton machines is derived from the demand for products in cartons. Similarly, the demand for SBM machines is derived from the demand for products in PET bottles.'⁽¹⁴⁾ It is important to note, however, that a finding of demand substitution in the downstream market does not necessarily result in a finding of substitution in the upstream market as there may be a number of factors, for example, heavy switching costs, preventing intermediate customers, the beverage companies, from switching from one packaging system to another despite consumers' willingness to switch.

(11) See, *inter alia*, Commission decision of 6 June 1991 in Case IV/M.81 VIAG/Continental Can, paragraphs 10-14; Commission decision of 19 July 1991 in Case IV/M.68 Tetra Pak/Alfa-Laval, OJ L 290, 22.10.1991, p. 35 (Tetra Pak/Alfa Laval); Commission decision of 14 April 1993 in Case IV/M.322 Alcan/Inespal/Palco, paragraph 15; Commission decision of 14 November 1995 in Case IV/M.603 Crown Cork & Seal/CarnaudMetalbox, OJ L 75, 23.3.1996, p. 38; Commission decision of 21 April 1998 in Case IV/M.1109 Owens-Illinois/BTR Packaging, paragraphs 8-22; Commission decision of 1 February 1999 in Case IV/M.1400 Rexam/PLM, paragraphs 8-19; Commission decision of 5 July 1999 in Case IV/M.1539 CVC/Danone/ Gerresheimer, paragraphs 6-14; Commission decision of 23 September 1999 in Case IV/M.1656 Huhtamäki Oyj/Packaging Industries Van Leer, paragraphs 7-20; Commission decision of 12 July 2000 in Case COMP/M.1813 Industri Kapital-Nordkem/Dyno, paragraphs 50-52; Commission decision of 30 May 2000 in Case COMP/M.1948 Techpak International/Valois, paragraphs 17-20; Commission decision of 11 June 2001 in Case COMP/M.2441 Amcor/Danisco/Ahlstrom, paragraphs 8-13.

(12) See Commission decisions, *inter alia*, in Cases IV/M.81 VIAG/Continental Can, IV/M.322 Alcan/Inespal/Palco, IV/M.1400 Rexam/PLM, IV/M.1539 CVC/Danone/Gerresheimer, IV/M.1656 Huhtamäki Oyj/Packaging Industries Van Leer, COMP/M.1948 Techpak International/Valois, COMP/M.2441 Amcor/Danisco/Ahlstrom.

(13) See Commission decisions, *inter alia*, in Cases IV/M.81 VIAG/Continental Can, IV/M.68 Tetra Pak/Alfa-Laval, IV/M.603 Crown Cork & Seal/CarnaudMetalbox, IV/M.1109 Owens-Illinois/BTR Packaging, IV/M.1400 Rexam/PLM, IV/M.1539 CVC/Danone/Gerresheimer, IV/M.1656 Huhtamäki Oyj/Packaging Industries Van Leer, COMP/M.1813 Industri Kapital-Nordkem/Dyno, COMP/M.1948 Techpak International/Valois, COMP/M.2441 Amcor/Danisco/Ahlstrom.

- (38) Given the complexity of the liquid-food packaging sector, it is useful to define the terminology to be used throughout this Decision: (a) 'packaging system or packaging material' refers to the packaging system or packaging equipment used by a beverage company for its products (carton, PET, glass, etc.); (b) 'packaging equipment' refers to SBM machines, carton packaging machines, glass packaging machines, etc.; (c) 'packages' refer to the flat cartons, empty PET bottles or preforms, etc.; (d) 'the packaged product' refers to orange juice in PET, UHT milk in carton, etc.; (e) 'end-use product' refers to the type of liquid-food to be packaged. This terminology will be used throughout the remainder of the text when analysing the relevant market and assessing dominance.

(14) Memorandum to the Commission dated 30 August 2001.

2. SUBSTITUTION BETWEEN PACKAGING SYSTEMS

(39) The Commission considers that its analysis of the relevant market should focus on assessing whether alternative packaging materials and hence alternative packaging systems compete with each other to the extent necessary for them to be placed in the same relevant product market⁽¹⁵⁾. If this is the case, it is then necessary to consider whether customers could easily switch from one piece of alternative packaging equipment to another; for example, a carton filling machine and the equivalent PET equipment, either a PET SBM machine together with a PET filling machine or a PET 'Combi' machine so that the two pieces of equipment ought to be placed in the same relevant product market.

2.1. *End-use product segments*

(40) The Commission's investigation has shown that the use of a given packaging material for a given liquid-food is mainly driven by the liquid's characteristics. The first question, therefore, when considering whether two packaging materials and hence two packaging systems may be potential substitutes is to look at whether they are capable of packaging the same liquids.

(41) Each end product has very particular characteristics, which dictate the choice of packaging. For example, CSDs require packaging that can withstand the pressure of carbonation; for these drinks, for example, carton is simply not an option. Milk requires a light barrier. Beer requires both a light barrier and an oxygen barrier. In some cases, consumer preferences and tradition dictate the choice of material, like glass almost exclusively for wine and champagne. As a result, a dairy, for example, wishing to package its product does not necessarily have a choice between all the packaging materials. There are products that can, however, be packaged in different materials.

(42) Tetra has argued that end-use distinctions are not meaningful in the packaging equipment sector. Tetra focused its argumentation on SBM machinery, which according to Tetra is generic; that is to say, an SBM

machine produces an empty bottle that can be used for different types of end products. The notifying party's arguments in relation to SBM machines are assessed below in recitals 176-182.

(43) The Commission's analysis shows that even for an allegedly 'generic' piece of equipment such as an SBM machine it is justified to examine the equipment market with reference to the end-use segments. An analysis based on end-use segments is even more relevant when comparing whole packaging systems in order to assess whether or not they may belong in the same product market. Given that each liquid has very particular characteristics which dictate the availability of a given form of packaging, it is necessary to look at end products in order to assess whether the various packaging materials are 'regarded as interchangeable or substitutable by the consumer, by reason of the products' characteristics, their prices and their intended use'⁽¹⁶⁾. It is evident that the customer will only be faced with a choice of those packaging materials that are capable of packaging the given liquid-food and, as a result, packaging materials unsuitable for a given product will never be able to exercise any competitive constraint in that product segment. Conditions of competition may therefore differ within each end-use product segment⁽¹⁷⁾.

(44) In the light of the foregoing, the Commission has reached the conclusion that end-use segmentation constitutes a meaningful analytical tool for assessing the liquid-food packaging equipment market⁽¹⁸⁾.

(45) The analysis in this Decision focuses on those products that can be packaged both in carton and in PET: liquid dairy products (LPDs), juices and nectars (juices), fruit-flavoured still drinks (FFDs) and ready-to-drink tea and coffee drinks (tea/coffee drinks). The common product segments, LDPs, juices, FFDs and tea/coffee drinks, form a large part of the whole liquid-food sector; they represented about 40 % of all non-alcoholic beverages in 2000. These products have been traditionally packaged in carton because of their specific characteristics,

⁽¹⁵⁾ The Commission has followed the same approach in *Tetra Pak/Alfa Laval* (cited in footnote 11). This approach was also confirmed by the Court in *Tetra Pak II (ECJ)* (cited in footnote 10). In these cases, the Commission and the Court found that carton packaging systems did not compete with packaging systems using other materials such as glass or plastic bottles. These decisions were based on an assessment of market conditions in the 1980s and early 1990s. In the current merger review, the Commission will of course consider how the market is functioning and the appropriate definition of the relevant market based upon the current and likely future situation.

⁽¹⁶⁾ Commission notice on the definition of relevant market for purposes of Community competition law (OJ C 372, 9.12.1997, p. 3) paragraph 7.

⁽¹⁷⁾ The notifying party seems to agree with this analysis (albeit concluding that the two materials do not compete) when it argues that 'no beverage company will ever see the two types of packaging equipment as direct substitutes for an identified packaging need'. Submission of the notifying party of 21 June 2001.

⁽¹⁸⁾ End-use segmentation for the review of the aseptic and non-aseptic carton packaging equipment markets was used by the Court of First Instance in *Tetra Pak II (CFI)* (cited in footnote 10).

oxygen and light sensitivity, and are increasingly being packaged in PET as a result of recent improvements in PET technology and changes in consumer demand. The beverage industry refers to these beverages as 'sensitive' liquids. The Commission has therefore assessed the impact of the transaction with particular regard to these end-use segmentations.

2.2. *Aseptic and non-aseptic packaging*

- (46) A major distinction for the packaging of liquid beverages is whether they are filled aseptically or non-aseptically. Aseptic packaging is generally defined as the bringing together of pre-sterilised products with packaging rendered sterile and filling the product into the pack in a sterile environment designed to prevent recontamination. Sterilisation involves the elimination of micro-organisms, which might later cause the product to deteriorate⁽¹⁹⁾. By ensuring sterility, aseptic filling of liquids extends the shelf-life of the product significantly. Aseptic filling can be done with a number of different packages: glass, carton, PET and HDPE. Carton is the main packaging material used for aseptic filling with a predominant share of the market.
- (47) Aseptic filling is mainly used for 'sensitive' products, namely juices (or juice-based drinks) and liquid dairy products. Juices and dairy products can also be packaged non-aseptically in which case they require refrigerated distribution. Most other products are packaged non-aseptically without requiring chilled distribution.
- (48) Juices and liquid dairy products differ in one significant respect: juices are high-acid products whereas liquid dairy products have low-acid content. Low-acid products require more stringent aseptic conditions. Unlike high-acid products, in the case of low-acid liquid dairy products, any non-sterility leads to the presence of pathogens, which are harmful to consumer health. Therefore the use of a viable aseptic process is paramount for liquid dairy products.
- (49) The Commission has considered the possibility of substitution between aseptic and non-aseptic packaging in

previous decisions⁽²⁰⁾ and has concluded that aseptic packaging constitutes a separate product market. This distinction has been confirmed by the Court of First Instance and the Court of Justice⁽²¹⁾.

- (50) The Commission's previous assessment remains valid and was confirmed by the market investigation in this case. Aseptically packaged products have a much longer shelf life than products packaged non-aseptically and satisfy different needs. Typically, aseptic milk will last six months while non-aseptic milk will last less than a month. The distribution is different (ambient/chilled distribution), taste is affected to a significant extent which makes the products hardly interchangeable from the consumer's perspective and demand elasticity is very low. In addition, there is no supply-side substitutability (aseptic and non-aseptic filling machines use very different technology) and not all suppliers are capable of producing both machines, aseptic technology being much more complicated.
- (51) On the level of equipment (carton machines or PET filling machines), the distinction between aseptic and non-aseptic packaging has also been confirmed by the market investigation. All market participants responded that there is no substitution between aseptic and non-aseptic filling. This view is not contested by the parties. It is therefore concluded that it is reasonable to segment the market into aseptic and non-aseptic packaging systems.

2.3. *Packaging systems using PET and packaging systems using other materials*

- (52) The notifying party argues that packaging systems using different materials, in particular carton packaging systems and PET packaging systems, form distinct product markets for the purposes of competition law analysis. Tetra argues that no PET equipment supplier has any power to influence a beverage company's choice between carton and PET packaging. Tetra submits in this respect the following justification which is based on two main arguments: (i) minimal overlap: PET and carton are used for different end products with minimal common products and PET use in the common products is limited and will not grow in the future; (ii) no pricing constraints: even with common product overlap and future growth,

⁽¹⁹⁾ See Warrick Research, 'Aseptic Packaging Markets' (2000), p. 1.

⁽²⁰⁾ See Commission decision in *Tetra Pak/AlfaLaval* (cited in footnote 11).

⁽²¹⁾ See *TetraPak II (ECJ)* and *Tetra Pak II (CFI)* (cited in footnote 10).

PET and carton packaging systems form distinct product markets and pricing of one does not constrain the pricing of the other. This is due to the fact that the main driver for the choice of packaging systems is marketing differentiation of the final product, shape, positioning, consumer group that is targeted, etc.

- (53) The Commission agrees that packaging systems using different materials, for example glass and cans, form distinct relevant product markets for competition law analysis and that, therefore, PET packaging systems belong to a distinct product market as the choice of each packaging material is driven primarily by marketing considerations. However, the Commission does not agree that carton and PET do not share common product segments and that there can be no interaction between the two. As will be explained below in Section IV.3.3 on PET growth, the Commission believes that PET will grow rapidly in the same end-use segments as carton. Given that the parties have major activities in the carton and PET sectors (Tetra being a dominant player in carton packaging and Sidel a leading player in PET packaging equipment), the Commission has decided to look more closely at the interplay between carton and PET and the future growth of PET in the traditional carton end-use segments.

3. PET AND CARTON INTERPLAY

- (54) The Commission's investigation showed that the notifying party's contention that there are minimal overlaps between the customer base of PET and carton is not accurate.

3.1. End-product segments overlap

- (55) PET and carton have traditionally been used for packaging different beverages. This is mainly due to different physical characteristics of these packaging solutions. Carton is non-transparent and hence suitable for oxygen and light-sensitive products but cannot withstand carbonation. PET is transparent and can withstand carbonation but has been traditionally less suitable for oxygen and light-sensitive products. As a result, carton has been used mainly for LDPs (primarily white milk) and juices whereas PET has been principally used for water (still and carbonated) and CSDs ⁽²²⁾.

⁽²²⁾ The fastest growing PET segment has been water and CSDs mainly due to a switch from glass packaging. PET is popular with consumers and producers due to its transparency, malleability (many different shapes of bottle), 'unbreakability', re-closeability, good recycling properties, ability to include brand logos on plastic etiquettes, etc.

- (56) This is apparent from Tables 1 and 2 below ⁽²³⁾ which show the main beverages packaged in carton and PET respectively. Common PET and carton products appear in bold italics.

Table 1

Carton products in the EEA in 1999

Product packaged	Million litres	%
Liquid dairy products	21 537	71,05
Juice and nectars	5 665	18,69
Fruit-flavoured still drinks	1 176	3,88
Tea and coffee-based drinks	860	2,84
Wine	765	2,53
Water	305	1,01
Sports and energy drinks	1	0,00

Table 2

PET products in the EEA in 1999

Product packaged	Million litres	%
Water	19 947	54,70
Carbonated soft drinks	15 164	41,58
Fruit-flavoured still drinks	425	1,17
Tea and coffee-based drinks	396	1,09
Wine	241	0,66
Sports and energy drinks	148	0,40
Liquid dairy products	97	0,26
Juice and nectars	28	0,08

⁽²³⁾ Figures provided for 1999. Source: Research company Canadean and the notifying party.

(57) From Tables 1 and 2 it is clear that PET is a suitable material for the packaging of all the products that have been traditionally packaged in carton. Seen from the perspective of the carton sector, therefore, PET may potentially provide an alternative competing material for the entire spectrum of carton-packaged products.

(58) The main common end-use product segments for which both carton and PET are suitable packaging materials are LDPs, juices, FFDs and tea/coffee drinks, the 'sensitive' beverages⁽²⁴⁾. This standard categorisation is widely used in industry analyses, independent studies and Sidel's own materials⁽²⁵⁾. These products cover almost the entirety of carton-packaged products and represent currently roughly 40 % of volume of all non-alcoholic beverages (water, CSD, LDPs, juice, FFDs and tea/coffee drinks (including sports drinks)). All of them can and are currently packaged also in PET. Furthermore, these four categories are similar in that they are all 'sensitive' products packaged both aseptically and non-aseptically but they are also distinct from one another in that for each category the specific characteristics of the product dictate slightly different packaging solutions (juices are high-acid, whereas LDPs are low-acid, FFDs and iced tea do not require the same extent of oxygen barrier as juices).

3.2. *Current use of PET in the common product segments*

(59) The notifying party submits that, even in those product segments that are common to carton and PET, PET's use is very limited and will not grow significantly in the future. The reason is mainly due to the technical difficulties of developing a light barrier for low-acid aseptic milk which will be sufficient to protect the milk from light and at the same time offer a cost-effective packaging solution. Thus, according to Tetra, PET's presence in the common product segments can be ignored.

(60) The Commission's analysis has not supported the view of the notifying party. It is true that PET has not yet made significant inroads into the main carton products (LDPs and juices), mainly due to PET's historical technical limitations, which, so far, have made it an imperfect material especially for aseptic filling. However, the Commission's investigation has shown that the parties,

their competitors and third parties including major chemical companies are making significant investments in researching for a barrier technology which will enable aseptic milk and juice to be packed in PET technically and economically. According to market participants, recent and forthcoming improvements in barrier technology as well as in PET aseptic technologies will therefore change the current situation.

(61) In addition, it has to be noted that already today it is possible to package and sell commercially fresh milk, flavoured milk, iced tea, fresh juice, long-life (hot-fill) juices, fruit-flavoured drinks and sports drinks in PET. The two segments presenting technical problems for the use of PET today are aseptic juices and aseptic white (UHT) milk.

(62) For example, the following branded products with which many consumers are familiar have started being packaged in PET, having switched partially from more traditional carton packaging.

Liquid dairy products

Campina — Stassano (Netherlands, Belgium), Parmalat (Italy), Granarolo (Italy)

Juice and nectars

Del Monte juices (United Kingdom), Pepsi Cola — Tropicana juices (United Kingdom), Coca Cola — Minute Maid (Belgium), Gerber — Ocean Spray (United Kingdom), Conserve Italia — Carioga/Derby/Jolly (Italy), Parmalat — Santal (Italy)

Fruit-flavoured drinks (FFDs)

Schweppes — Oasis (France, Italy), Sunkist (Belgium), Parmalat — Santa (Italy), Glaxo — Ribena (United Kingdom)

Iced tea

Liptons — Ice tea (Belgium), Liptonice (Germany, Italy)

(63) During the investigation, Tetra asked Canadean, a consulting company in the beverage industry, to prepare a study on past and future use of PET in the common product segments, i.e. the 'sensitive' products, in western Europe.

(64) The study confirms that PET is already used in all the common product segments, to a limited extent in the segments of LDPs and juices and to a greater extent in the segments of FFDs and teas.

⁽²⁴⁾ The Commission excludes from its analysis of the common products the water segment for which carton is considered as a 'losing' technology, even though it is used in some EEA countries, and wine for which both PET and carton have very little prospects of use in the future.

⁽²⁵⁾ Sidel 1999 annual report, page 20.

- (65) According to the Canadean figures provided by Tetra (26), in the year 2000, for the main carton-packaged products, PET represented only 0,5 % of packaging for liquid dairy products (carton 70 %, HDPE 17 %, glass 7 %, cans 1 %, other packaging materials 5 %). In the same year, PET represented only 0,5 % of packaging for juices (carton 65 %, glass approximately 31 %, HDPE 2 %, cans 1 %).
- (66) Canadean concluded that for the period 1993 to 2000 the market for LDPs was static, that HDPE growth had eaten into carton sales and that PET only had a marginal effect and mostly on glass. For juice and nectars, carton sales increased in spite of PET and HDPE gains apparently at the expense of glass. Market growth during the period 1993 to 2000 was almost all in cartons.
- (67) According to Tetra, 30,7 billion litres of LDPs were produced in the Community in 2000, of which nearly 50 % were non-aseptic and just over 50 % were aseptic. Flavoured milk represented 2,7 billion litres. PET use was mainly non-aseptic and accounted for more than 60 % by volume.
- (68) For juice, Tetra has estimated that 9 billion litres were produced in the Community in 2000, of which less than 10 % were chilled (non-aseptic). For juices, more than 80 % of PET use was in the ambient segment.
- (69) The picture provided by Canadean is already today very different for the segments of FFDs and tea/coffee drinks which do not require the same barrier properties as LDPs and juices. PET has already made more significant inroads into these segments.

Table 3

Pack mix for LDPs and juice and nectars 2000 (27)

	<i>In %</i>
LDPs	2000
Carton	70,6
Glass	6,7
HDPE	17,3
PET	0,5
Cans	1,0
Juice and nectars	2000
Carton	64,7
Glass	31,8
HDPE	2,0
PET	0,5
Cans	0,9

(26) Figures provided by the notifying party have been prepared by the notifying party's consultant Canadean, an expert in the field of the beverage and liquid-food packaging industry. The study prepared by Canadean was submitted to the Commission on 24 August 2001.

(27) Canadean study submitted to the Commission on 24 August 2001.

- (70) In 2000, in the FFDs segment, PET represented 20 % (carton 42 %). It is expected to grow to approximately 22 % by 2005 (carton 37 %). In the tea/coffee drinks segment PET represented 25 % in 2000 (carton 53 %) and is expected by Canadean to grow to more than 30 % by 2005 (carton 46 %). Canadean concludes that for the period 1993 to 2000 market growth was mainly in plastics, although glass has fared well. PET and HDPE have eaten into carton sales. For tea/coffee drinks carton has captured most of the growth but PET has displaced existing demand for carton. For the period 2001 to 2005 the impact of PET is expected to threaten cartons for both product groups.

Table 4

Pack mix for fruit-flavoured still drinks and iced tea and coffee 2000 (28)

	<i>In %</i>
Fruit-flavoured still drinks	2000
Carton	41,6
Glass	19,8
HDPE	9
PET	2
Cans	2,4

(28) Canadean study submitted to the Commission on 24 August 2001.

Tea/coffee drinks	2000
Carton	53
Glass	5,7
HDPE	0
PET	25,4
Cans	13,6

(71) According to Tetra, 2,7 billion litres of FFDs were produced in the Community in 2000, of which over 95 % were ambient. PET use was mainly in ambient supply and accounted for more than 95 % by volume. For tea/coffee drinks 2,3 billion (including sports drinks) were produced in the Community in 2000.

3.3. Growth of PET in the common product segments

(72) According to Tetra, PET use for LDPs and juices will not increase to any significant extent in the next five years. Tetra acknowledges that PET can and is currently successfully used for the packaging of FFDs and tea/coffee drinks.

3.3.1. Technological considerations

(73) The notifying party claims that PET will not grow due to technical limitations.

(74) As regards LDPs, Tetra submits⁽²⁹⁾ that a light barrier is very important. Light exposure leads to deterioration of vitamins and formation of light-induced off-flavours. The degree of deterioration of milk quality depends on time and intensity of light exposure. These limitations apply only to UHT white milk. Tetra accepts that technical solutions to provide a light barrier for PET exist. This can be achieved with a dark intermediate layer or by covering bottles with a sleeve containing a dark layer. All those solutions are currently technically possible. However, according to the notifying party, they involve high costs and complex manufacturing technology, raise recycling issues and eliminate transparency of the bottle which is one of the major advantages of a PET bottle. In addition, aseptic filling

PET technology for low-acid products (LDPs are low-acid products) is insufficiently developed. Tetra has submitted that no aseptic PET filling machines have proven viable for the packaging of low-acid products and received FDA (US Federal Drug Agency) approval. However, Tetra acknowledges that several filling machine producers, including Sidel, have aseptic filling platforms that it believes are in principle capable of filling LDPs.

(75) As regards juices, Tetra submits that an oxygen barrier is required. Juice is sensitive to oxygen, which can result in loss of vitamin C and changes in the colour and flavour of the product. The sensitivity of juice to oxygen varies with fruit type. The most sensitive are orange juice and red juice (blackcurrant, cranberry, strawberry). According to Tetra, viable barrier technologies exist but are not sufficiently developed and remain costly. In addition, Tetra maintains that aseptic technology for juices still has some limitations.

(76) The Commission's investigation has only partially confirmed Tetra's contentions. It is true that aseptic technology for the filling of low-acid products is still at a developmental stage. It is also correct that UHT white milk requires a light barrier and that juices require an oxygen barrier.

(77) However, the Commission's investigation has shown that these limitations do not apply to large segments of the relevant 'sensitive' product segments. In particular, fresh milk (which constitutes 40 to 50 % of the total milk market in the EEA) distributed in a chilled chain does not pose the same problems. Fresh milk can and is already successfully packaged in standard PET without any barrier properties. Flavoured aseptic milk does not pose particular problems either and is currently packaged in PET.

(78) The Commission's investigation has also shown that the technical limitations put forward by Tetra (light barrier, aseptic filling problems and oxygen barrier) have already been addressed and that technologies will rapidly improve in the future.

3.3.1.1. Light barrier

(79) As regards the light barrier, the Commission found that it is already technically possible to package aseptic milk using multi-layer barriers. The bottle has a white coating on the outside, and usually has a black layer on the inside, so that it protects the milk from light. This type of packaging provides adequate protection but has two main drawbacks. Firstly it is more expensive, which is

⁽²⁹⁾ Response of the notifying party dated 26 July 2001 (page 6) to the Article 11 questionnaire.

the reason why it is mainly used only for premium products (such as buttermilk) and secondly it still has some limitations for recycling. Despite these limitations, a major European dairy has already introduced a PET bottle with a light barrier for churned milk under the Stassano brand which appears in Dutch supermarkets.

- (80) An independent study by the Virginia Polytechnic Institute and State University (2001)⁽³⁰⁾ compared flavour retention in extended-shelf-life milk packaged in HDPE (an established material for the packaging of UHT milk) and PET. The study noted that 'PETE⁽³¹⁾ has many advantages over HDPE in which milk is usually packaged. It has considerable mechanical resistance and is lightweight, transparent, and relatively gas tight. Another benefit is that consumers can see the product, which is not the case with pigmented HDPE. The objective of this study was to determine if development of certain off-flavors and associated flavor compounds in milk was related to packaging material.' The study concluded that 'PETE materials with amber pigmentation are very effective in protecting milk flavor against oxidation. Incorporation of a UV light-blocking agent also yielded improved flavor protection compared with the commonly used HDPE material but was less effective than amber PETE. Higher gas barrier properties of PETE in combination with protection against light oxidation suggests that amber PETE or PETE-UV would be effective materials for extended shelf-life milk'.

3.3.1.2. Aseptic technology

- (81) The Commission has found that aseptic PET filling technology already exists for both low-acid and high-acid products. Sidel has confirmed that, whilst at the present time there is no solution to allow PET to be used at affordable cost for packaging UHT milk, there are no overwhelming technical reasons why PET should not be used for UHT milk, and it is already used for flavoured milk.
- (82) The parties are active in this field and can offer aseptic PET filling machines for low and high-acid products. As regards low-acid products, Tetra claims that no filling machine has proven viable for the filling of low-acid products. However, Tetra has acknowledged that several filling machine producers have aseptic filling platforms capable of filling low-acid products. Indeed, the Com-

mission found (and Tetra acknowledged) that Tetra's own filling machine, the RFA-40, has been used successfully in Asia to fill low-acid products such as low-acid milky teas. These products are easier to fill aseptically than LDPs. Tetra⁽³²⁾ is continuously researching the field to come up with a viable aseptic PET filling solution for LDPs.

- (83) Indeed, many companies are actively trying to promote use of PET for liquid dairy products including coming up with solutions for the packaging of UHT milk. An independent study states: 'There's little doubt that aseptic packaging into plastic bottles is one of the most dynamic areas of food packaging today. Not only will the number of installations continue to rapidly escalate but also the scope of products will continue to increase.... Look for companies like Sidel/Remy, Stork, Serac, Shibuya and TetraPak to aggressively make the necessary technical changes to afford the eventual packaging of shelf stable, low-acid foods on their fillers. This explosion in market activity is driven by the consumers' love for the plastic bottle and the economic advantages the aseptic packaging has over comparable hot fill...' ⁽³³⁾.

- (84) In addition, extended-shelf-life (ESL) milk is increasingly packaged in PET. ESL milk is a non-aseptic non-ambient product which is packaged under ultra-clean conditions which provide it with an extended shelf life (around 30 days). ESL is therefore a midway solution between aseptic and fresh milk. Sidel has sold [...] * Combi SRU machines [...] * to package ESL flavoured milk (Nesquik chocolate and banana-flavoured milk). Lehman Brothers reported that: 'The impact was twice the production speed over the previously used paperboard cartons, flexibility in package designed, improved profitability, and an extended shelf life for wider product line' ⁽³⁴⁾. The Commission has been informed by third parties that ESL milk is at present packaged in PET in a number of European countries. In the Netherlands, for example, ESL milk with a one-month shelf life is packaged in clear PET.

⁽³⁰⁾ American Dairy Science Association, 'Effectiveness of Poly and HDPE in protection of milk flavor', M. van Aard, S. Duncan and J. Marcy, 2001.

⁽³¹⁾ The study uses the term PETE instead of the more common PET for polyethelene tephthalate.

⁽³²⁾ Tetra has one filling machine under development, the LFA-20 ON, which will be capable of filling aseptically both HDPE and PET bottles.

⁽³³⁾ PET strategies 2000, 'Aseptic packaging into plastic bottles' by Thomas Szemplenski. It is not clear whether the study refers to HDPE or PET bottles or both. The reference to hot-fill suggests that the study takes into account the filling of PET bottles; HDPE bottles are not filled with the hot-fill method.

⁽³⁴⁾ Lehman Brothers France, 'Sidel', 24 February 2000.

(85) With respect to juice, PET can be used for packaging of long-life juice that is aseptically filled. Such products are already on the market (Minute Maid 1 litre in France, Tropicana in the United Kingdom and Sinaasappelsap in Belgium). The barrier technology is available. Indeed the Combi SRA developed by Sidel is for long shelf life aseptically filled products (tea, flavoured water, isotonic, juices and possibly dairy products with UV barrier package). Sidel has already sold [...] Combi SRA machine [...] for the packaging of aseptic tea and orange juice.

3.3.1.3. Oxygen barrier

(86) As regards oxygen-barrier technologies, Tetra does not claim that these do not exist. Market respondents confirmed that with existing barrier technology PET can be and is currently used for many types of 'sensitive' products such as FFDs, tea and coffee drinks and some juices and LDPs. The most problematic fields of use are pure juices.

(87) The Commission's investigation has shown that there will be continuing improvements in PET barrier technology. This will make PET an even more suitable material for the packaging of LDPs and juices. The investigation showed that most companies active in PET packaging are already providing barrier-technology solutions. Indeed, both Tetra and Sidel have developed successful barrier technologies using plasma coatings. The Commission found that there are over 20 companies active in this field with different barrier solutions. The most promising future technology is a monolayer PET resin which will include the requisite barrier properties. These technologies are likely to be commercialised shortly and will radically change the PET barrier landscape.

(88) In the light of the foregoing, the Commission has reached the conclusion that both aseptic filling technology and barrier technology currently enables PET to be used for the packaging of LDPs, juices, FFDs and tea/coffee drinks and that both these technologies will continue to improve rapidly and continually improving in the near future.

3.3.2. Cost considerations

(89) The notifying party has argued that one of the reasons why PET will not grow rapidly in the future at the expense of carton is its higher cost. Tetra undertook a cost study, which concluded that the cost of producing

a PET bottle is significantly higher than that of a carton package. For a one-litre aseptic juice, for example, the costs were up to 50 % higher for PET, the additional costs arising from consumables because of the need for the label and a screw-cap, and from higher equipment costs. A large proportion of the cost difference was attributed to the filling/SBM process. Similar results were found on smaller packages and non-aseptic processes for both juice and milk.

(90) The Warrick Report⁽³⁵⁾ found that, for aseptic packaging, 'PET is 30 to 40 % more expensive than carton currently' and stated that to be competitive on total cost, pack price would need to be 5 to 10 % lower than aseptic carton cost, to compensate for the lower distribution cost of carton systems. The report states that even with a reduction in the price of barrier bottles because of higher volume production, the cost will remain approximately 20 % higher than cartons. On this basis the report concludes that 'any use [of PET bottles] will be restricted to niche markets...'⁽³⁶⁾ The main opportunities for aseptic milk packaging include 'possible opportunity for an ambient ESL product — aseptically filled in a non-barrier bottle'⁽³⁷⁾.

(91) The Commission considered the extent to which it would be possible at present and in the future to offer PET at a competitive price to carton.

(92) The Commission's market investigation did not produce a clear picture of the relative costs of PET and carton packaging systems. Some market participants stated that for most applications and in particular for products requiring a barrier, PET is more expensive. The majority of respondents, however, were not able to identify the precise cost differences; for many, this was because they did not have experience in both materials. However, some third parties (notably those with greater experience in PET) informed the Commission that for them PET was actually cheaper than carton. One iced tea producer reported costs per package price for 1,5 litre PET standard to be around 25 % cheaper than one litre carton. Another iced tea producer reported for the same products that the PET price was 33 % cheaper than

⁽³⁵⁾ Warrick Research Report Packaging Markets (2000) 'Aseptic Packaging Markets World & Western Europe'.

⁽³⁶⁾ *Ibid.*, page 25.

⁽³⁷⁾ *Ibid.*, page 18.

carton. One milk producer had undertaken a study comparing carton and PET costs for one-litre aseptic milk packaging on various technologies and design which clearly showed PET to be cheaper in some instances and highly competitive in others. This study did not confirm the large differences between PET and carton reported by the notifying party.

- (93) Tetra has also argued that packaging costs represent only a small proportion (approximately 10 %) of the cost of the final product. Therefore, there appears to be no reason why small cost differentials between PET and carton packaging systems should result in significant price differences of the retail product sold in supermarkets. The reason why PET packaged products are more expensive than carton packaged products is because beverage companies initially position them as premium products to extract higher profits from these lines. As PET becomes established in the market place it is expected that it could also target non-premium product segments. In Italy and Australia where PET for fresh milk is established there is almost no price differential between fresh milk packaged in carton and fresh milk packaged in PET.
- (94) An example of a recent PET introduction is the OLMA dairy in the Czech Republic. OLMA has recently begun to fill its fresh milk and drinking yoghurt in PET. It stated that 'the cost of the new PET bottle in comparison to a market standard carton is about 30 to 40 % [higher], but this fact is completely irrelevant in our new production concept. If we are successful in increasing our fresh milk market share from 3 to 11 %, then all the cost involved in the project will become relative' ⁽³⁸⁾. The introduction by OLMA of fresh milk in PET bottles has already been far more successful than expected, 'the huge demand from the retailers and consumers for the attractive, transparent and lightweight bottle' soon led to a need for greater capacity. OLMA has placed an order for an additional PET line with Elopak Plastic Systems ⁽³⁹⁾.

3.3.2.1. HDPE cost comparison

- (95) Tetra also uses cost arguments to claim that PET will not grow in the milk segment because of its higher cost compared to HDPE. Tetra also suggests that PET is over 10 % more expensive than HDPE. In its reply, Tetra lists the advantages of HDPE for the aseptic packaging of dairy products. HDPE has significantly lower costs than

barrier treated PET, aseptic filling machines for HDPE already exist, PET cannot have off-the-centre necks or handles like HDPE, the sterilisation process for HDPE is simpler and less sensitive than for PET and, finally, coloured PET is difficult to recycle.

- (96) The PCI study ⁽⁴⁰⁾ has also examined how PET compares with HDPE and found that PET offers the same functionality as HDPE, but with a better overall appearance. Clear bottles emphasise the freshness of the product and offer a distinct on-shelf appeal. The cost differential is reported to be about 10 % on the pack as a whole. This array of qualities has so far focused PET on certain parts of the dairy product market where particular qualities offers a clear advantage over the alternatives. These segments include premium qualities fresh milk in sizes of less than one litre, dairy beverages both for household pack sizes and single-serve sizes, and children's single-serve dairy drinks ⁽⁴¹⁾.
- (97) The Commission's market investigation confirmed PCI's suggestion that PET has marketing advantages over HDPE, in particular, where visibility can be achieved. To the extent that marketing advantages exist there is no reason why this slightly higher cost of PET over HDPE should hinder PET's growth prospects. Indeed HDPE's higher cost by comparison to carton did not stop HDPE's rapid growth at the expense of carton in France. In its submission of 3 October 2001 Tetra provided an example from the French milk aseptic market showing that HDPE has now gained a market share of nearly 30 %. HDPE for one litre aseptic milk was over 20 % more expensive than perforated carton. Despite this cost difference, aseptic milk packaged in HDPE successfully penetrated the French milk market to the detriment of carton.

3.3.2.2. Investment costs

- (98) Tetra has considered the level of investment that would be required to achieve the kind of PET growth envisioned by the Commission and considers it unrealistic. Tetra uses the EEA milk market as an example for the investments needed. Tetra argues that, at present, there are about 4 000 carton filling machines installed at dairies throughout the EEA. If PET were to represent 50 % of all milk packaging by 2005, that would mean that 2 000 carton filling lines would have to be replaced within the next three years (nine to 12 months' lead time for the line to be running). As PET filling lines on

⁽³⁸⁾ See www.elopak.com/innovation/pet/break.shtml.

⁽³⁹⁾ See www.elopak.com/newsroom.

⁽⁴⁰⁾ PCI (PET Packaging, Resin & Recycling) Limited, 'The Potential For PET in the Packaging of Liquid Dairy Products', 2001, page 12.

⁽⁴¹⁾ *Ibid.*, page 12.

average run somewhat faster than carton filling lines, this would mean about 1 500 PET filling lines would have to be installed. The average cost for a low-acid PET filling line is about EUR 10 million. This means that total investment required for EEA dairies for the replacement of packaging lines alone would be EUR 15 billion. There would be many additional costs resulting from such a switch, such as costs resulting from a change in the logistics chain and the marketing strategy.

standard aseptic filling line (Alto) and an aseptic Combi line are both expected by Sidel to cost just over EUR [4 to 7 million]* and not EUR 10 million as stated by Tetra. The OLMA project in the Czech Republic was worth EUR 2,7 million and includes SBM machines, bottle storage facilities and the filling machines, all of which were installed in five months⁽⁴⁷⁾.

3.3.3. Marketing considerations

(99) The Commission believes this analysis is flawed on several accounts. Firstly, the Commission did not predict 50 % growth in its statement of objections⁽⁴²⁾. Secondly, PET filling lines will not only replace carton but also glass, cans and HDPE. Thirdly, whilst consumption of plain white milk in larger sizes is not expected to grow significantly, consumption of milk in single-serve bottles and flavoured milk, for example, is expected to grow fast according to the PCI study. Therefore, the capacity for such products does not necessarily need to replace existing capacity. Fourthly, investment in new lines did not seem to prevent the rapid growth of PET in Italy where it took a 10,5 % market share of the fresh milk market in just two years⁽⁴³⁾. Even Canadean⁽⁴⁴⁾ expects this rapid growth in Italy to continue and estimates that 'within the chilled sector PET bottles could reach almost 23 % in Italy by 2005'. Similarly, in France, where HDPE has been taking market share from carton, the rapid investment in HDPE filling lines for aseptic milk enabled HDPE to capture around 10 % of this market in just six years⁽⁴⁵⁾. Fifthly, the lifetime of a carton machine is around 10 years which suggests that on average one would expect 10 % of existing capacity to be renewed each year. On the basis of information supplied by Tetra, this suggests that 400 carton machines will be replaced each year. It is clear that, if only a proportion of such machine sales are captured by PET sales, it can still represent a significant increase in PET capacity.

(100) The Commission also notes that the cost quoted by Tetra in its calculation for an average low-acid PET filling line is significantly higher than that quoted by Sidel⁽⁴⁶⁾ in its cost comparisons of different PET filling lines. A

(101) Marketing is one of the major advantages of PET which will drive its growth in the relevant product segments. The main advantages of PET are its strength (compared to carton, HDPE and glass), light weight (particularly compared to glass); transparency and glass-like appearance (unlike carton, HDPE and cans). PET is reclosable/resealable and ideal for consumption on the move (unlike carton, cans and to some extent glass and HDPE). Finally, PET has shape flexibility in design (unlike carton, cans and glass). The main disadvantages of PET are its costs for barrier applications and its low light barrier.

(102) The Commission's investigation showed that beverage companies, supermarkets and consumers endorse PET enthusiastically because of those advantages. Tetra does not contest that PET is a very attractive packaging material. However, Tetra claims that PET loses its major advantage, transparency, when a light barrier is required in particular with respect to UHT milk which requires an opaque bottle. In this case, Tetra claims that PET has no marketing advantage as compared to HDPE. The Commission has, however, found that opaque PET bottles exist in the EEA market and are successful with consumers. In some instances, partial transparency can be achieved by covering the bottle with a semi-transparent film. An independent research company, PCI⁽⁴⁸⁾, explains that long-life flavoured milk has already been packaged very successfully in PET using this method: 'The PET bottle for Nesquik is in many respects a state-of-the-art bottle at this time. It achieves a 60-90 day shelf life by combining: direct fed from a blowing machine into an aseptic filler; the bottle has a foil seal to improve barrier; UV light damage is controlled by the use of a PETG shrink sleeve; and the pack is distributed in the chill chain'.

⁽⁴²⁾ Such a level was however predicted by some market participants.

⁽⁴³⁾ Parmalat introduced the PET bottle for milk in the Italian market in 1998.

⁽⁴⁴⁾ Canadean study submitted to the Commission on 24 August 2001.

⁽⁴⁵⁾ The market grew from around 10 % to just over 21 % during the period 1994 to 2000.

⁽⁴⁶⁾ Sidel response dated 4 September 2001.

⁽⁴⁷⁾ See www.elopak.com/innovation/pet/break.shtml.

⁽⁴⁸⁾ PCI (PET Packaging, Resin & Recycling) Limited, 'The Potential For PET in the Packaging of Liquid Dairy Products', 2001, page 26.

3.3.4. Growth forecasts

(103) In the light of recent and forthcoming technological developments, cost and marketing considerations, the Commission has concluded that PET use in the common product segments will grow significantly in the next five years.

(104) When considering the potential growth of PET, the Commission consulted various data from research studies done for Tetra (Canadean), independent studies (PCI — PET Packaging, Resin and Recycling, 'The potential for PET in the packaging of liquid dairy products', 2001 Limited, Warrick Research Report Packaging Markets (2000) and the Pictet 'European Packaging Machinery', September 2000) in addition to the market investigation. The result of each of those studies are assessed below.

3.3.4.1. Canadean study for Tetra ⁽⁴⁹⁾

(105) The Canadean study commissioned by Tetra does not foresee significant growth for PET in LDPs and juices. For milk, PET now represents 0,5 % and is expected to increase to 1,2 % by 2005, and for juice PET now represents 0,5 % and is expected to increase to 1,1 % by 2005. Canadean's results are set out in the following tables:

Table 5

Pack mix for LDPs and juice 2000 (actual) and forecast for 2005 ⁽⁵⁰⁾

LDPs	In %	
	2000	2005
Carton	70,6	70,0
Glass	6,7	4,5
HDPE	17,3	19,5
PET	0,5	1,2
Cans	1,0	0,7

⁽⁴⁹⁾ Canadean, 'The Growth of PET Bottles for Selected Beverages in Western Europe', a special study for Tetra, submitted to the Commission on 24 August 2001.

⁽⁵⁰⁾ Canadean study submitted to the Commission on 24 August 2001.

Juice and nectars	2000	2005
Carton	64,7	69,3
Glass	31,8	26,4
HDPE	2,0	2,2
PET	0,5	1,1
Cans	0,9	0,8

(106) The LDP market is, according to Tetra, not expected to grow over all, remaining around 30,5 billion litres in size; the split between aseptic and non-aseptic is also expected to remain fairly constant. The juice market is expected to reach 10 billion litres by 2004; the split between chilled and ambient is expected to remain the same.

(107) Canadean predicts faster growth for FFDs and teas and concludes that, in these segments, PET will threaten carton and will take market share away from carton.

Table 6

Pack mix for fruit-flavoured still drinks and iced tea and coffee 2000 (actual) and forecast for 2005 ⁽⁵¹⁾

Fruit-flavoured still drinks	In %	
	2000	2005
Carton	41,6	36,9
Glass	19,8	20,0
HDPE	9	12,2
PET	20	21,5
Cans	2,4	2,0

⁽⁵¹⁾ Canadean study submitted to the Commission on 24 August 2001.

Tea/coffee-based drinks	2000	2005
Carton	53	46,4
Glass	5,7	6,6
HDPE	0	0
PET	25,4	30,5
Cans	13,6	14,4

- (108) According to Tetra, the FFD market is expected to grow overall to 3,5 billion litres, the split between ambient and chilled is expected to remain fairly constant although a slight increase in the chilled sector may occur. The tea/coffee drinks market is expected to reach 2,7 billion litres by 2004.
- (109) The Canadean study provides some arguments as to why the balance between carton and PET is unlikely to be seriously upset across Europe in the future. Canadean provides a list of events, which will need to occur for the PET share to increase dramatically. First, a multinational drinks company will need to emerge as a pan-European champion of PET packaging. Canadean believes this is unlikely to happen in the case of liquid dairy products. Secondly, PET packaged products will need to be priced significantly below prices charged for the carton packaged equivalent for a sustained period. PET packaged products will also need to be offered at prices considerably below those of HDPE packaged equivalents. Thirdly, a pack size or size range will need to be developed which meets hitherto unsatisfied consumer demand. Fourthly, distributors' own brands and those of smaller drinks companies will also adopt the use of PET packs following the lead of a multinational. Finally, the Italian example is unique and unlikely to be replicated across the EEA.
- (110) The Commission cannot accept Canadean's arguments and believes that Canadean's forecasts are overly pessimistic.
- (i) **Leading multinational company**
- (111) Canadean believes that PET needs to be introduced by a leading multinational drinks company that can force change through its own system, with the agreement of retailers and consumers, and oblige its competitors to follow suit. Whilst the Commission agrees that the introduction of PET by such a company could perhaps
- accelerate the rate at which PET bottles becomes more widely used this is not a necessary condition for substantial growth of PET. The Commission also considers that Parmalat, the Italian dairy which was the main driver of the fast growth of PET experienced in Italy, as a pan-European champion could drive the PET penetration in Europe further. Although its activities in PET in Europe have mainly focused on Italy, Parmalat is also present in more than 20 countries including France, Spain, Germany, Portugal and the United Kingdom and has major activities throughout the world. Parmalat could also develop its successful Italian model in other countries. In addition, the Commission has found that other multinational companies such as [...] are actively promoting liquid dairy products in PET.
- (112) Irrespective of such a driving force, the Commission's market investigation has overwhelmingly indicated that PET is the preferred packaging material for marketing and for consumer convenience. Therefore, it will not be necessary to force PET on the market as both producers and consumers appear to prefer this packaging solution. Likewise retailers did not seem to be against the introduction of PET in a wide range of product areas. Indeed for milk, juice, iced tea and sports drinks most retailers selected PET as their first or second preferred packaging material. Third parties also expressed little doubt that the future would see greater PET penetration, although the enthusiasm for PET as a packaging material was clearly country-related (the exposure of PET is for example greater in France and Italy than in Sweden and Finland) and product related (iced tea producers are more used to PET than most of the German LDP producers).
- (113) In this context the presence of the leading multinational PET machine supplier (Sidel) may have greater influence on the rate at which liquid-food producers are willing to package some of their production in PET. By having experience in a wide range of countries such a company should be expected to draw on its experience developed with downstream producers, most importantly converters, and to cooperate with them to enable a successful launch of PET. The Commission is of the view that a large international supplier of SBM machines together with large independent converters will have the incentive and power to develop the introduction of PET with as

wide a range of companies as possible. The Commission's investigation has confirmed that converters in cooperation with Sidel have been very active in promoting the use of PET for the packaging of branded products.

(ii) Prices

(114) Canadean argues that the retail price at which PET packaged products are introduced should be below the price of the equivalent carton and HDPE packaged products. There is no obvious reason why this should be the case and Canadean provides little guidance on why this should be a condition for significant growth. In Italy for example, as Canadean shows, PET in fresh milk has been successfully launched, gaining significant market shares although it was offered at the same price as carton.

(115) Given the many advantages of PET as compared to carton and consumers' willingness to accept products offered in PET packaging it is not immediately clear why it is necessary to offer this advantageous packaging at a discount compared to the other packaging options.

(iii) Pack size

(116) Canadean argues that pack sizes and size range will need to be developed to meet unsatisfied consumer demand. This argument relies on PET being complementary to carton and achieving penetration by creating new market growth. Initially as seen in the iced tea segment, the introduction of PET will target markets where penetration is possible through market growth to achieve higher margins rather than facing tougher competition in slow growing markets. There is no reason however why PET should not grow significantly in markets where market growth is limited. Moreover it is already possible for PET to be produced in a wide range of sizes with PET being more flexible in design and sizes than carton. The Commission therefore views this condition as being fulfilled at the present time.

(iv) Retailers and small producers

(117) Finally, Canadean suggests that distributors' own brands and those of smaller drinks companies will also have to adopt PET. There is however no reason why retailers or smaller drinks companies could not adopt PET. The Commission's market investigation showed no unwillingness on the part of retailers to accept PET as a packaging for 'sensitive' products. Likewise, there is no reason why smaller companies should be unwilling to

switch to PET. Indeed, in Italy a significant number of small dairies replying to the market investigation were already packaging in PET and the overwhelming majority of the remainder were interested in or planning to introduce PET packaging for their products. Tetra itself in a press release dated November 2000 stated that 'there are still numerous small to mid-size independent operators located across the nation [Italy] serving the needs of people living in the local villages and countryside. Some of them are following a recent international trend that began developing in the late 90s when more and more dairies started packing premium-positioned pasteurised milk into one-litre PET bottles.'

(v) Italian example is unique

(118) Canadean data shows that, in 2000, PET had already reached 4,5 % of the Italian LDP market as a whole (fresh/non-aseptic and UHT/aseptic milk) and that more than 10 % of the Italian fresh milk market used PET in 2000. PET was used to package 150 million litres of milk in Italy and only 26 million litres in the rest of the EEA. This shows the potential for increase in other regions if the Italian example is followed. Similarly in the juice segment, total volume of PET across western Europe was 45 million litres. Just three countries, Switzerland (18 million litres), the United Kingdom (9 million litres) and Belgium (8,5 million litres), accounted for three quarters of total volume.

(119) In its reply, Tetra argues that the Italian example provides no guidance for developments in the rest of the EEA. This is because the relative success of PET packaging for fresh milk in Italy occurred in very special circumstances that are unlikely to be present elsewhere in the EEA. Parmalat introduced PET as a means of boosting sales and profitability and its rival Granarolo followed with its own PET packaging and an advertising campaign. This, Tetra believes, eroded any profitability which may have resulted from the introduction of PET and could well deter entry from other dairies.

(120) It would appear however that, on the contrary, small and medium-sized independent dairies in Italy have started packing in PET bottles following the example of the two major dairies. Tetra has recently sold [...] Tetra Plast LX-2 to [...], a converter [...], which allows these smaller dairies to supply milk in PET without having to carry the full investment cost.

(121) The Italian market may have been the first to develop PET for milk but the Commission does not believe that it is unique. PET use has already penetrated the fresh-milk markets in Belgium, the Netherlands and Austria. Despite Tetra's argument that in the large United Kingdom fresh-milk market dairies have already made considerable investment in switching from carton to HDPE bottles and are therefore unlikely to swing again towards PET in the short to medium term, Canadean has reported that LDPs in PET will be launched in the United Kingdom during 2001 through two major supermarket chains ([...]*). Milk in PET is also expected to be launched in Spain from 2003.

(vi) Conclusion on Canadean study on PET growth

(122) The Commission therefore has concluded that the necessary factors outlined by Canadean for significant growth have to a large extent already occurred or will occur in the near future. In addition, Canadean already acknowledges that there will be significant success for PET in certain segments in specific national markets and across the EEA notably in the tea and coffee-based products sector.

(123) It is also important to note that the forecasts by Canadean were put into question at the oral hearing. Firstly, it was established that the sophisticated forecasting model for the beverage industry, which Canadean has developed in conjunction with City University of London, was not employed when carrying out the predictions for Tetra. Instead Canadean used a model⁽⁵²⁾

⁽⁵²⁾ A univariate forecasting was used, applying a standard exponential smoothing technique. Several assumptions were made including that the price/filled cost relationships between different pack types will remain constant, current trends in pack substitution will either continue or that certain pack types will hit a given 'ceiling' and that adequate production capacity exists in or near the counties concerned to produce the different pack in the volumes predicted.

which considers previous growth as an indicator of future growth and ignores the future technological developments particular to barrier technology. Secondly, the forecasts are not based on any evidence from customers or supermarkets, whereas the Commission's market investigation took the views of these participants into account. Given that the decision to package products in PET is said to be customer driven, a study excluding customer views is not particularly robust.

(124) For the reasons set out above, Canadean's forecasts for PET's growth seem over-pessimistic. In addition to technological improvements, the Commission has looked closely at the expected growth of the PET market in the new segments of 'sensitive' products (LDPs, juices, FFDs, tea/coffee drinks) from the perspective of the parties, third-party respondents and independent analysts.

3.3.4.2. *Canadean's independent studies prior to the merger*

(125) Canadean produces annual reports with analyses of various beverage segments. The Commission has obtained from third parties reports on three of the four relevant segments: juices, FFDs and teas. There is no independent Canadean report on LDPs (an independent study by another company PCI is analysed below).

(126) Canadean's calculations for PET penetration in 2000 in the juice segment are set out in Table 7. These are a snapshot of the year 2000 and do not include growth forecasts. It is important to note that PET in Europe was non-existent in the juice segment in 2000 (it has now appeared) and that if the example of other regions is followed Europe represents enormous growth potential.

Table 7

Share of consumption by pack mix

% Share	PET	Carton	Glass	Other plastic (HDPE)	Cans
W. Europe	0	68	29	2	1
N. America	19	44	5	18	5
Asia	30	37	7	2	23
Australasia	38	31	4	25	3
Middle East/N. Africa	7	61	11	16	5

Source: Canadean Global Juice and Nectar Report 2000.

(127) In its submission of 3 October 2001, the notifying party claimed that developments in other regions such as North America and Australasia were not relevant for an analysis of the European market. Tetra claimed that the US experience in PET in juice was not informative because of the widespread use of hot-filling, which is not accepted by European consumers due to taste issues. The Commission has, however, found that hot-fill is used to a large extent in some European markets such as Germany. In any event, the recent developments in aseptic PET filling for high-acid drinks (which Tetra accepts is possible in contrast to low-acid drinks) mean that aseptic rather than hot-fill can be used to cater for Europeans' preference for aseptic-filled liquids.

3.3.4.3. *PCI study on The Potential for PET in the Packaging of Liquid Dairy Products' (2001) ('PCI study')*

(128) PCI states that developments in aseptic filling of PET are enabling it to offer an alternative to the aseptic carton and so increase significantly its potential in the dairy products market, enabling it to move out from the simple market application of short-shelf-life fresh milk sold through chilled distribution systems⁽⁵³⁾. According to PCI, standard PET provides some protection and is an adequate barrier for short-shelf-life products. Where a longer shelf life is required, other packaging types must

be used (such as cartons with a layer, or plastic bottles with a barrier layer). Alternatively, PET's UV barrier can be improved by the addition of proprietary UV barrier compounds or amber colouring.

(129) Long-life packaging allows brand owners to fill PET from high volume centralised locations and ship to sales outlets over a wide area. The packaging therefore meets the requirements of the modern dairy industry. PCI does not, however, expect PET to make inroads in the low-end commodity part of the white milk market. 'We do not anticipate that PET will be very successful in replacing existing packaging — mainly cartons and HDPE — in the commodity fresh milk sector mainly because this is by and large a price-sensitive segment. There are exceptions, however, most notably in Italy where the premium Alta Qualita segment has already converted to PET to a large extent. The Italian example may suggest opportunities to other dairy companies seeking to differentiate plain milk varieties'⁽⁵⁴⁾.

(130) The PCI study states that PET is not likely to make any inroads in aseptic milk, a segment that accounts for at least 45 % of the milk market. In making this prediction PCI may have failed to take into account developments in light barrier technologies for UHT white milk. PCI also shows that dairy products in PET bottles have already been introduced in the following Member States: Belgium, Netherlands, Italy and the United Kingdom. PCI predicts that PET will reach 9,2 % for plain fresh milk in Europe by 2005 and 25 % for other dairy

⁽⁵³⁾ PCI study, page 8.

⁽⁵⁴⁾ PCI study, page 12, emphasis added.

beverages. According to PCI the 'other dairy beverages' ⁽⁵⁵⁾ segment is 'one sector of the liquid milk market that is experiencing rapid growth in Europe (...). One of the most successful to have emerged recently has been flavoured dairy drinks, based on milk and yoghurt' ⁽⁵⁶⁾. Total PET consumption for dairy products is predicted to rise from 4 000 to 43 000 tons in Europe by 2005. According to PCI 'this is a realistic projection' ⁽⁵⁷⁾.

3.3.4.4. Warrick Research Report Packaging Markets (2000) ⁽⁵⁸⁾ ('Warrick Report')

(131) According to the Warrick Report, another independent study of the liquid-food packaging sector, milk and juices account for some 80 % of aseptically packed product volume in Western Europe.

(132) The aseptic milk markets in Western Europe are 'mature — in many cases in slight decline. Aseptic PET systems will therefore tend to replace other types of pack rather than grow with additional demand' ⁽⁵⁹⁾. The use of a wider range of packs means that companies are more likely to use aseptic filling, because they are not limited to the use of "brik" cartons which tend to be associated with economy products' ⁽⁶⁰⁾.

(133) In the juice market 'cartons are under long-term threat from plastic bottles. Increasing importance of premium and branded products will put more emphasis on pack design, which will enable carton designs to be promoted for use with quality products. Continuing improvements to shape, pouring facility, closure, etc. will be important in this market. Carton systems will need to ensure that their cost advantage in high-volume markets is maintained through increased line speeds, pack cost reduction and improved efficiency' ⁽⁶¹⁾. 'The success of juice drinks with preservatives in plastic bottles may affect demand for aseptic carton systems' 'Opportunities in the juice sector will depend on companies exploring the use of different types and designs of pack' ⁽⁶²⁾.

(134) For example, in France, aseptically filled plastic bottles (PET and HDPE) now have a significant share of the premium pure juice market. However, plastic bottles have made little impact in any other country in the premium long-life sector ⁽⁶³⁾. In the tea segment, 'in most markets, aseptic PET is likely to be the main pack type, with cartons continuing to predominate in Germany' ⁽⁶⁴⁾.

(135) The Warrick Report provides some conclusions for overall PET penetration in the aseptic market for 'sensitive' products. Warrick states that 'plastic bottles have shown the most rapid growth in liquid-food packaging, and are expected to be the fastest growing type of pack in the next three years. Most of the growth will be for PET bottles, in particular for ready-to-drink tea. HDPE bottles currently account for about half of bottle use' ⁽⁶⁵⁾. The fastest-growing sector in recent years has been ready to serve tea, and new beverages such as flavoured water and sports drinks. These are also expected to be the fastest-growing sectors over the next few years ⁽⁶⁶⁾.

(136) The Warrick Report forecasts use of aseptic filling to increase by about 50 % by 2003. Most of the increase will be for PET, the use of which will approximately double to some 2 billion packs ⁽⁶⁷⁾. The value of the whole aseptic market in Europe was EUR 4,5 billion in 1999. Of that, aseptic carton packaging was over EUR 3,5 billion in 1999.

3.3.4.5. Analysts' reports — Pictet 'European Packaging Machinery' (September 2000) (Pictet Report)

(137) The Pictet Report predicts strong growth for PET. According to the Report, 'demand for PET is expected to grow by 10 % p.a.' ⁽⁶⁸⁾. 'Future growth will be strongly underpinned by the use of PET bottles with improved barrier qualities which can be filled with oxygen-sensitive products' ⁽⁶⁹⁾. 'As consumers are increasingly insisting on PET packaging for milk, juices and sauces, it is of the utmost importance to have an aseptic-filling solution for PET bottles' ⁽⁷⁰⁾.

⁽⁵⁵⁾ Non-white milk including flavoured milk, milky drinks, yoghurt drinks, etc.

⁽⁵⁶⁾ PCI study, page 33.

⁽⁵⁷⁾ PCI study, page 13.

⁽⁵⁸⁾ Warrick Research Report Packaging Markets, 'Aseptic Packaging Markets World & Western Europe', 2000.

⁽⁵⁹⁾ Warrick Report, pp. 16, 25.

⁽⁶⁰⁾ Warrick Report, page 20.

⁽⁶¹⁾ Warrick Report, page 21.

⁽⁶²⁾ Warrick Report, page 18.

⁽⁶³⁾ Warrick Report, page 11.

⁽⁶⁴⁾ Warrick Report, page 12.

⁽⁶⁵⁾ Warrick Report, page 16.

⁽⁶⁶⁾ Warrick Report, page 6.

⁽⁶⁷⁾ Warrick Report, page 32.

⁽⁶⁸⁾ Pictet Report, page 5.

⁽⁶⁹⁾ Pictet Report, page 5, emphasis added.

⁽⁷⁰⁾ Pictet Report, page 5.

(138) According to Pictet, thanks to recent improved barrier properties, 'PET is now also becoming an attractive packaging option for other oxygen-sensitive products, like milk and fruit juice which offer appreciable market potential.'⁽⁷¹⁾ Pictet continues: 'the attractive market outlook for PET containers should, in our opinion, not be adversely influenced by aseptic cartons which are currently also used for oxygen-sensitive products. We see clear comparative advantages for PET containers over aseptic cartons (see table below) and we expect plastic to gain ground rapidly on cartons'⁽⁷²⁾. 'We are expecting sales growth for juice cartons to decelerate as juices will be increasingly filled in PET bottles. [page 15] With aseptic filling becoming a standard for PET bottlers, the matter of filling the bottles with oxygen-sensitive liquids, like fruit juices, is no longer an obstacle'⁽⁷³⁾ As for milk, Pictet expects to see a 'shift towards cartons being substituted by PET bottles'⁽⁷⁴⁾.

3.3.4.6. Parties' forecasts

(139) Sidel has made some estimations of how it foresees the PET markets developing. In its Dossier de Presentation⁽⁷⁵⁾ Sidel predicts an annual growth of [...] for fruit juices, teas and isotonic drinks. By 2005, Sidel forecasts that PET sales in these product areas will increase by [...]*. At its annual meeting⁽⁷⁶⁾ Sidel stated that the segment of juices, teas and isotonic drinks were 'increasingly shifting to PET,...at the expense of carton and glass containers'. Furthermore in an interview with PET Planet⁽⁷⁷⁾ Francis Oliver said 'I predict that the PET market will double in a short time...New application will include beer, milk, fruit juices...'. From this it is clear that Sidel views the common product segments as being produced increasingly in PET in the future.

(140) Tetra predicts rapid growth for the aseptic PET filling market (sold only to customers in the common product segments). Within the last three years the number of installed machines in the EEA has increased by [70 to 80 %]*, with the highest increase in 2000. This market growth is expected to continue over the next years at a rate of [20 to 30 %]* annually⁽⁷⁸⁾.

3.3.4.7. Market investigation

(141) The Commission's market investigation showed the extent to which market participants expected PET to grow in the future. Third-party views on this differ widely across type of third party, country of origin and experience of PET. German milk producers for example saw little prospect for growth in the near future, whereas Italian and Belgian producers were far more optimistic. Furthermore, iced tea producers were very optimistic, expecting fast growth for PET at the expense of carton.

(142) Generally, market participants suggested significant growth in PET use in the short term in the 'sensitive' products. For those participants who felt able to quote the proportion of the 'sensitive' products that would be packaged in PET in the 2005, the Commission found that on average PET would represent around 40 % in milk, 30 % in juice, 40 % in FFDs and over 50 % in iced tea. Respondents who were unable to predict the exact proportion of PET use in the future provided the Commission with some insight as regards their opinion on future growth. One major company active in the 'sensitive' products market stated: 'If it was cost effective and acceptable to consumers then there would probably be an incentive to move from carton to PET because of the considerations that currently differentiate carton and PET including image to consumers and consumer acceptance, pack differentiation, robustness and effective resealability'. Another company stated: 'We believe that technology already exists to provide good oxygen and light barrier properties and that PET will grow rapidly in the four sectors mentioned.'

(143) The Commission's investigation showed that third parties were very enthusiastic about PET's future growth when improvements in barrier technology become established. An SBM machine supplier stated that 'we are strongly convinced that thanks to the barrier technology PET will be able to gain market share for juices versus carton'. Most respondents projected rapid PET growth to the detriment of carton in both milk and juice in the near future in such an eventuality. PET, due to its inherent advantages — transparency, malleability, ease of use, low cost and recyclability — is seen as a competitive material. Provided barrier technology becomes established, a significant number of market participants expect PET to reach more than 50 % of milk and juices to the detriment of carton in the next 4 to 5 years. A major company active in barrier technology

⁽⁷¹⁾ Pictet Report, page 11.

⁽⁷²⁾ Pictet Report, page 11.

⁽⁷³⁾ Pictet Report, page 15.

⁽⁷⁴⁾ Pictet Report, page 15.

⁽⁷⁵⁾ Dossier de Presentation Sidel, Communication Sidel, 2000.

⁽⁷⁶⁾ Presentation Sidel, Group Annual Meeting, May 2000.

⁽⁷⁷⁾ PET Planet Insider Volume 2 N04+5/01 Francis Oliver, President of Sidel France 'Innovation is my added value to the company'.

⁽⁷⁸⁾ Notification, paragraph 68.

forecasted that with a further cost reduction in their technology and improvements in PET manufacturing economics (i.e. blowing), PET will compete effectively with carton bricks and will lead to a substantial penetration of this material in this segment.

3.3.5. Conclusion on the current use and growth of PET in common product segments

- (144) In the light of the above, the Commission has come to the conclusion that there is already significant overlap between PET and carton in the FFDs and tea/coffee drinks segments where PET already represents 20 % and 25 % respectively. PET will continue to make inroads into these segments at the expense of carton⁽⁷⁹⁾. Under a conservative estimate, with PET reaching 30 % in each of these segments by 2005, PET would pack 800 million litres of tea/coffee drinks (including sports drinks) and 1 billion litres of FFDs.
- (145) Despite the current overall limited presence of PET in LDPs and juices on an EEA-wide basis, there is significant PET presence in LDPs and juices in certain Member States such as Italy, Belgium, Netherlands, France and the United Kingdom.
- (146) The improvements in barrier technology and aseptic PET filling are expected to enhance PET's position in all four relevant product segments. The Commission has made a careful assessment of the parties' submissions and forecast estimates, third-party studies, responses to the market investigation and a review of the technological improvements. It is concluded that in the LDP and juice segment, PET will grow significantly in the next five years.
- (147) The Commission considers that it is realistic to expect that PET will reach at least 10 to 15 % in fresh milk and 25 % in flavoured and other dairy beverages by 2005. PET's use for UHT milk (which represents approximately 50 % of the total milk market in the EEA) is uncertain even though the relevant light-barrier technology exists. Growth will depend on developments in low-acid aseptic filling and cost reductions. The Commission considers that PET has significant potential at least in smaller,

premium segments of aseptic milk such as single-serve packages. With PET reaching at least 15 % of fresh milk, 25 % of other dairy beverages and only 1 % of UHT milk by 2005, PET will package approximately 3 billion litres per annum (this represents approximately 9 % of the total European market for liquid dairy products).

- (148) As regards juice, in the light of the market investigation, the Commission expects substantial switching from glass to PET and a more limited switching from carton to PET to occur. Major beverage companies have already introduced juice in PET; these include the Minute Maid and Tropicana brands. The Commission believes that it is realistic to expect PET to reach at least 20 % of the overall juice market in the EEA by 2005; this would represent approximately 2 billion litres of juice filled in PET. This is still significantly lower than the level that PET has reached in North America and Australasia.

3.4. Rivalry between PET and carton in overlap products

- (149) The Commission also investigated whether, given that carton and PET are technically substitutable, i.e. both materials can package the same products, and given the growth of PET in the common product segments, carton and PET packaging systems substitute each other to such an extent that they should be placed in the same product market for competition law analysis.
- (150) Tetra has argued that even if the two materials can be used for packaging the same products, PET and carton packaging systems form distinct product markets and the pricing of one does not constrain the pricing of the other. This is due to the fact that the main driver for the choice of packaging systems is marketing differentiation of the final product, shape, positioning, and consumer group that is targeted.

3.4.1. Rivalry in the retail market

- (151) Tetra has argued that beverage companies tend to use PET for premium products whilst reserving carton for bulk, low-margin products for price-conscious consumers. As a result, according to Tetra, PET and carton target different consumer groups and do not compete in the retail market. Tetra has supported its argument by producing examples showing that the same product (orange juice or apple juice) in the same supermarket own-brand was consistently more expensive when packaged in PET than in carton containers.

⁽⁷⁹⁾ This is accepted by Canadean in its study for Tetra submitted to the Commission on 24 August 2001. Canadean concludes: 'Yes, PET (and HDPE) will eat into carton and glass share' in the FFD segment. Canadean concludes: 'PET will threaten cartons' in the tea/coffee segment.

(152) The market investigation has only confirmed the notifying party's view partially. The Commission found that PET has been used as a marketing tool for the introduction of premium and branded products. However, the Commission found that PET is also used for low-margin products such as white milk; for fresh milk, which represents close to 50 % of the total dairy market in the EEA and, to a more limited extent, aseptic milk. PET has already captured 10 % of the fresh milk market in Italy where it is sold at the same retail price as carton packaged milk. There is nothing to prevent beverage companies from using PET in different simpler shapes for non-premium products as PET becomes established in the market and packaging costs continue to fall. Indeed, an analyst concludes, 'our analysis of the PET market clearly shows that PET has both marketing and economic advantages for mass consumption markets' ⁽⁸⁰⁾.

(153) In addition, the investigation revealed that carton is used for premium and branded products and in these segments PET would presumably constitute a direct rival. Moreover, new technological developments in carton have resulted and will continue to result in more differentiated carton shapes, which could provide a direct marketing alternative for premium and branded goods. Iced tea products by Twinings, for example, are at present sold in round 'can-like' carton containers.

(154) It is therefore concluded that, whilst not being perfect substitutes at consumer level, both carton and PET can target the same consumer groups and offer a choice in all the common end-use product segments and that, in any event, PET will be well placed to target premium products that have in the past been packaged in carton.

3.4.2. Elasticity of demand between PET and carton packaging systems

(155) Tetra has stated that the choice of packaging is driven by numerous factors, including the physical properties of the liquid and the packages, packaging sizing and shape, consumer perceptions of the nature of the

beverage and the package and branding concepts. This diversity of factors means that beverages are usually marketed in multiple types of packaging to satisfy varying consumer needs, and also that different beverages are packaged in a different mix of packaging materials.

(156) This has been confirmed by the market investigation to a certain extent. The submissions and data collected by the Commission show that an assessment of the level of substitution between different packaging materials is a complex exercise and that many parameters need to be taken into account. For example, packaging cost comparisons differ drastically depending on the size of the package used.

(157) The relative cost of PET has already been discussed in Section IV.3.3.2. Tetra submitted that, regardless of relative cost, the main driver of a beverage company's choice for a packaging material and hence packaging system is market differentiation and consumer preference. The market investigation only partially confirmed the view of the notifying party. Market respondents were asked, for example, whether they would switch from a carton packaging system to a PET packaging system and vice versa if the cost of one packaging system rose permanently by a small percentage (5 to 10 %). The majority of market respondents confirmed that such small price increases would not have a significant influence on their choice of packaging system. This argument is naturally stronger when comparing specific pieces of equipment which form only a part of the overall packaging system (e.g. it is estimated that the cost of the SBM machine accounts for 20 to 40 % of the cost of a whole PET filling line).

(158) However, the market investigation also revealed that, whilst cost is not the primary factor in the choice of packaging system, in particular, given that the two packages are not seen as perfect substitutes by consumers, it nevertheless remains a significant factor. Many respondents indicated that a price increase of 20 % would be sufficient to make them switch to the alternative packaging system. The investigation also showed that switches would mainly be one-way from carton to PET packaging systems and not vice versa. This is not surprising given that PET is seen as a more modern material which is, over all, preferred by consumers, all other factors (including price) remaining equal.

⁽⁸⁰⁾ Pictet Report, page 5. The analysis speaks about mass consumption markets in CSDs and water but also makes clear that future PET growth will be underpinned by the use of PET bottles with improved barrier qualities for oxygen-sensitive products.

3.4.3. Switching costs

(159) The market investigation has shown that customers would be unwilling to abandon installed carton lines in favour of new PET lines unless there were significant price differences (much more than 5 to 10 %) or compelling consumer demand. This argument does not apply in cases of new installations either as additions of capacity or when old lines come to the end of their life (normally PET and carton lines have a life-span of approximately 7 to 10 years). In addition, switching costs are not prohibitive although they are relatively high. The establishment of a new PET line costs approximately EUR 1,5 million for a standard line to around EUR 7 million for a high-capacity aseptic line.

3.4.4. Supply-side substitutability

(160) The Commission agrees with the view of the notifying party that the mechanical concepts of carton packaging machines and SBM machines are very different and that the technology is not transferable. It is not possible to modify a carton packaging machine in order to produce PET bottles and vice versa. Both Tetra and its smaller rival carton supplier, SIG, have been able to obtain a foothold in the PET market through acquisitions rather than through capitalising on their own existing carton packaging technology.

(161) Whilst the Commission agrees that there is not sufficient supply-side substitutability indicating in itself a single product market, it cannot accept Tetra's contention that the two sectors are so different that know-how in one cannot have any use in the other. This is particularly so with regard to aseptic technology. Tetra contends that whilst aseptic technology has been an important driver of success in carton packaging (the majority of cartons being used are aseptic) this has not played any role in PET (where less than 0,5 % is aseptic). The reason for PET's limited aseptic role is that it has been used for products where aseptic filling is not required (e.g. CSDs). However, if PET is to increase its presence in the new product segments, aseptic filling will be a key driver of its success. Aseptic know-how is therefore an important driver, which may be transferable from the carton sector to the PET sector.

3.4.5. Conclusion on whether packaging systems using PET compete with other packaging systems

(162) PET and carton materials are both capable of packaging and do package the four relevant product segments (LDPs, juices, FFDs, tea/coffee drinks) which form almost the entirety of carton-packaged products. PET's use is therefore likely to increase in the future with PET taking market share away from carton to a certain extent. However, for the reasons set out in this Section 3.4 and in particular because the cross-price elasticity of demand between the two systems is currently not sufficiently high, it is concluded that they do not form part of the same product market for the purposes of competition law analysis even though some price restraining effects at the margin appear to exist.

(163) It is therefore concluded that for the purposes of market definition, carton packaging systems and PET packaging systems (and hence carton packaging equipment and PET packaging equipment) form distinct relevant product markets. It is also concluded that although substitution between the two systems does not currently have the necessary effectiveness and immediacy required for the purposes of market definition (i.e. they are weak substitutes), this may change in the future as PET's barrier technology improves and PET/carton costs converge. Therefore, the possibility cannot be ruled out that, in the future, these markets could converge to the extent that they would belong to the same relevant product market for competition law purposes. In addition, given their presence in the same sector of liquid-food packaging, their common product segments, customer base and increasing use of aseptic technology, the two packaging systems belong to two very closely neighbouring markets. The interaction between the two systems will need to be analysed further at the stage of assessment of dominance in Section V.

(164) Having concluded that the two packaging systems belong in distinct but closely neighbouring product markets, it is necessary to analyse whether there are distinct relevant product markets for specific equipment within each packaging system. The market is analysed with particular regard to the common end-use products (LDPs, juices, FFDs and tea/coffee drinks) and also to the aseptic and non-aseptic distinction.

4. PET PACKAGING SYSTEMS

4.1. *SBM machines*

(165) SBM machines are used to convert PET preforms or PET resin into the finished PET bottle. SBM machines are available in a wide range of different models. SBM machine output is measured in bottles per hour (bph) running from 1 000 to 50 000 bph. Most SBM machines on the market are standard SBM machines producing empty standard PET bottles from preforms. However, there are speciality SBM machines that produce preforms and then blow the preforms in a single step (single-stage machines); SBM machines that produce PET bottles that can be filled with the hot-fill method (these bottles need to be thicker to withstand the heat of the filled liquid); wide-mouth SBM machines producing bottles for marmalade and sauces; preferential heating machines to make containers for detergent and shampoo and, finally, 'Combi' SBM machines which combine bottle-blowing and filling in one machine.

4.1.1. **Low and high-capacity SBM machines**

(166) The notifying party argues that the SBM machine market can be divided into low and high-capacity machines based upon the number of bottles per hour (bph). Low-capacity SBM machines are defined as output of less than 8 000 bph whereas high capacity SBM machines have an output of more than 8 000 bph. Both parties are active in the low-capacity segments whilst only Sidel is present in the high-capacity segment. Tetra believes that further distinctions between the two categories, high and low-capacity machines, are not appropriate or necessary for the purposes of analysing the competitive conditions in the EEA.

(167) There are significant differences between low and high-capacity SBM machines, which have led the Commission to the conclusion that they belong in distinct product markets. From the demand side, low and high-capacity machines are clearly not interchangeable for a customer with a particular need. High-capacity machines can only use a specific technology (the rotary technology) whereas low-capacity machines can use both rotary and the less complex linear technology⁽⁸¹⁾. The entire output

spectrum cannot be satisfied by all SBM machine suppliers. Indeed, due to the fact that high-capacity machines require much more sophisticated technology, there is no supply-side substitutability. A low-capacity SBM supplier cannot produce high-capacity SBM machines. Barriers to entry in the high-capacity sector are much higher than in the low-capacity sector due to the technological requirements and fewer suppliers are capable of producing high-capacity machines.

(168) The Commission's investigation has confirmed the distinction between low and high-capacity machines with the overwhelming majority of respondents confirming the notifying party's contention that high and low-capacity SBM machines form distinct product markets.

4.1.2. **Single-stage and two-stage SBM machines**

(169) The notifying party argues that there is no distinction between single-stage and two-stage machines. In the single-stage process, the entire PET bottle production, from resin input to final PET bottle output, occurs in one integrated machine. The two-stage process splits the production process into, first, production of the PET preforms in an injection moulding machines and, second, conversion of the preforms into the finished PET bottle in an SBM machine. Single-stage machines are only used for the low-capacity segment. Tetra is of the view that the single-stage and two-stage machines do compete at least for some applications in the low-capacity segment. The Commission takes the view that that for the purpose of analysing the present transaction, this distinction has no significant impact.

4.1.3. **Hot-fill SBM machines, wide-mouth machines and preferential heating machines**

(170) The notifying party further argues that there are no separate markets for SBM machines making bottles for hot-filling or pasteurisation. There is a very small market for such machines in the EEA as the processes are rarely used. Sidel, but not Tetra, offers such a machine commercially but has in the past three years [...] sold [...] in the EEA out of a total of [...] SBM machines. Therefore, the notifying party does not consider that SBM machines for hot-filling bottles should be considered a separate product market. The same applies to wide-mouth machines and preferential heating machines.

⁽⁸¹⁾ In particular, low-capacity SBM machines can use linear technology which convey through the SBM machine a line of PET preforms in sequential batched movements. Rotary technology involves a continuous cam-driven movement around a complex carousel-wheel mechanism enabling a rapid and fluid flow of bottle conversion.

(171) These distinctions have no significant impact on the analysis of this transaction, since Tetra is not present in hot-fill, wide-mouth machines and preferential heating machines and those machines are of limited use in the EEA. For the purposes of the analysis of this transaction it is therefore not necessary to define a separate market for hot-fill SBM machines, wide-mouth machines and preferential heating machines.

4.1.4. Combi machines

(172) The notifying party argues that there is no separate market for Combi machines as they are equivalent to a combination of SBM machine and filling machine that is available as a 'turnkey' solution from other suppliers or can be assembled by the customer itself.

(173) Combi machines combine blowing, filling and capping in a single machine. No conveying, storage or rinsing of the bottles is required. A Combi machine takes less space and requires fewer personnel than a traditional PET line, which would include a separate SBM machine, conveyor, filling and capping machine. Sidel has the following types of Combi machine: the Combi SRS for still water, the Combi SRG for CSDs, the Combi SRU (ultra clean) for 'sensitive' products (juices and LDPs), and the Combi SRA for aseptic filling of 'sensitive' products.

(174) The Combi machine is an innovation by Sidel introduced in 1999. So far Sidel has sold [...] Combi machines and [...] aseptic Combi machines [...]. In its reply, Tetra points out that Sidel's competitors Kronos and Procomac/Sipa have also developed similar machines, BLOC and SYNCRO and that the Procomac/Sipa machine is also available in an aseptic version. Given that the Combi machine is a relatively recent innovation, it is difficult to assess whether customers find it substitutable to standard PET lines to the extent that the Combi should be treated as part of the SBM machine market and/or the PET filling machine market. There are some indications that the Combi may form a distinct product market. From the demand side, the Combi offers certain characteristics and advantages which make it ideal for certain customers. According to Sidel's promotional literature the Combi has the following advantages: savings on floor space (up to 50 % smaller footprint compared to a traditional PET line), significant sterilising and rinsing solution savings, reduced labour costs (one operator can operate the entire line), significantly improved filling

hygiene, reduced risk of contamination (no risk of contamination between blowing and filling). In its reply, Tetra claims that the machines of Kronos and Procomac/Sipa have substantially the same advantages. Tetra argues that a Combi machine has a standard speed based on the SBM component compared to a standard filler which can run faster when filling small bottles. According to Tetra, a Combi machine can also have a greater risk of downtime for the whole system should one component fail. It appears, however, that a Combi machine is less expensive than a combination of a separate SBM and filling machine. Therefore, for example, small increases in the price of the Combi would not lead customers to switch to traditional PET lines.

(175) In the light of the above, it is concluded, however, that for the purposes of analysing the present transaction, it is not necessary to define a separate market for Combi machines.

4.1.5. End-use distinctions in the SBM machine market

(176) The notifying party objects strongly to an analysis of the SBM machine market, which takes into account end-use products. Tetra argues that, firstly, SBM machines are not end-use specific, secondly, they are sold to all beverage companies regardless of end-use application and thirdly, that the SBM machine supplier will not even know the intended or present use or even whether the bottles produced by the SBM machine are going to be filled aseptically or not⁽⁸²⁾.

(177) The Commission does not agree with Tetra's contention. It is true that the majority of SBM machines are 'generic'. Nevertheless, a PET packaging line, of which the SBM machine is only one component, is usually tailored to the specific products filled by the customer. This is even more significant in the case of the 'sensitive' products requiring barrier properties and sterilised or ultra-clean conditions. There are also specific end-use SBM machines for products that will be hot-filled or filled aseptically in a Combi machine. Thus, the requirements of 'sensitive' products in particular dictate very specific characteristics of a PET line which make a standard PET line an insufficient substitute for the needs of 'sensitive' beverage producers. For example, a Sidel SRS G Combi machine which is designed for carbonated drinks cannot be a substitute for a beverage producer wanting to fill juices. For this application, an aseptic SRA Combi machine would need to be used.

⁽⁸²⁾ Reply, paragraph 45.

- (178) In any event, a distinct group of customers for the relevant product may constitute a narrower, distinct product market when such a group could be subject to price discrimination. This will usually be the case when two conditions are met: (a) it is possible to identify clearly the group to which an individual customer belongs at the moment it purchases the relevant products and (b) trade among customers or arbitrage by third parties should not be feasible⁽⁸³⁾.
- (179) These requirements are met here. For example, in the notification, Tetra states that SBM suppliers 'often customise machines according to the wishes of individual customers'⁽⁸⁴⁾. Indeed, SBM suppliers and in particular Sidel, which takes pride in its customer-oriented approach work closely with their clients to tailor PET packaging lines to their specific needs. Sidel works closely with the customer to design the requisite moulds (which will give the bottle its finished shape) and tests the bottle under real-life conditions in its testing centre in Le Havre. Sidel's marketing brochure, 'The World of PET' explains to its potential customers that 'when looking for a partner to collaborate on your entire PET production line, Sidel is your best choice. We rely on a concept called production line intelligence, based on flow control. This means that based on your product, its package and output rate desired Sidel offers you a tailor-made turnkey solution'⁽⁸⁵⁾.
- (180) Furthermore, all SBM machines orders are made on the basis of tenders. Each machine is sold as a result of individual negotiation where substantial discounts are sometimes granted off the price list. The Commission's investigation showed that Sidel has occasionally granted discounts of up to [...] on the list price to individual customers. In the notification, Tetra states that 'price is often negotiated on the basis of the specific needs of individual customer for the transaction'⁽⁸⁶⁾. The Commission therefore believes that a SBM supplier will at the point of selling have very specific knowledge of how the machine will be used and for which end product. The moulds supplied with the SBM machine and designed specifically for each individual client are also not generic.
- (181) Indeed, Sidel was able to identify end-use for the majority of its unsuccessful bids for SBM machines during 2001. In its submissions to the Commission Tetra has also been able to identify in precise terms the end-use for which its customers use the procured SBM machine.
- End-use identification will in particular be possible in the end-use markets where carton is also present as the packaging material. Customers of SBM machines wanting to package liquid dairy products or juice, for example, are easily identifiable and the Commission found few such customers packaging both end-use products. Tetra could also identify SBM customer by end-use and provided details to the Commission⁽⁸⁷⁾.
- (182) Finally, arbitrage for SBM machines is virtually impossible. The notifying party argues that there is a second-hand market for SBM machines where arbitrage could take place. However the Commission's market investigation suggested that the second-hand SBM machine market generally involves the sale of obsolete technology, is very small and will thus not prevent price discrimination. The second-hand market consists mainly of machines that are 10 to 15 years old and are sold in eastern/south-eastern Europe. Demand-side considerations suggest therefore that it is possible for a SBM producer to price discriminate between different types of end-use.
- (183) In the light of the foregoing, the Commission considers that end-use price discrimination is possible for SBM manufacturers. Tetra's economic consultants have attempted to refute these arguments by examining Sidel's ability to price-discriminate based on the end-use of an SBM machine. Tetra's economic consultants examined whether in the past there was any evidence of price discrimination based on end-use and it was concluded that there was no evidence that Sidel's margins on high-capacity machines have varied based on end-use⁽⁸⁸⁾. However, the Commission examined the regression analysis employed and found that the estimation was not robust⁽⁸⁹⁾. When carrying out its own estimation based on the data supplied by the parties introducing further explanatory variables⁽⁹⁰⁾, [information concern-
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- (83) Paragraph 43 of the Commission's notice on the definition of relevant market for the purposes of Community competition law (OJ C 372, 9.12.1997, p. 3).
- (84) Paragraph 47, page 18 of the notification.
- (85) The World of PET, Sidel publication, page 8, emphasis added.
- (86) See paragraph 69, page 28, of the notification.
- (87) In addition, in its agreement with Graham Machinery Group for the sale of EBM machines to produce HDPE bottles Tetra and Graham have been able to define in precise terms the permitted end-uses of the EBM machines. [...].
- (88) Memorandum by the notifying party's economists to the Commission dated 30 August 2001.
- (89) The overall goodness-of-fit of the model was poor because important variables like capacity were not used in the regression. The regression was indicating that margins follow a pure random walk which is clearly unrealistic. Given the omission of variables, the error term could be correlated with included explanatory variables, a potential cause of a lack of robustness.
- (90) Capacity, time trend, dummy variables for oil, CSD, beer, water; firms based in Germany, France and United Kingdom.

ing Sidel's pricing policy]*. Following the oral hearing, the parties provided further arguments. The Commission considers, however, that its conclusion remains valid.

4.1.6. SBM machine speed in end-use segmentations

(184) In its reply, Tetra maintained that, if end-use distinctions were appropriate they should be limited to the low and medium-capacity segment of the market. According to Tetra, the Commission should make an important distinction as regards SBM machine use in the 'sensitive' beverages segments. According to Tetra, SBM machines used to make bottles for filling 'sensitive' beverages are for the most part low-capacity machines (8 000 bph) or at best machines that run at medium speeds (8 to 15 000 bph). Tetra explains this fact by arguing that 'sensitive' beverages are at present niche beverages and hence beverage companies need to use low-capacity machines to satisfy low-volume demand.

(185) The Commission cannot agree with Tetra's contention. The data provided by the notifying party in its reply⁽⁹¹⁾ shows that, in fact, the average speed of SBM machines used in the EEA for 'sensitive' beverages (juices) in the period 1995 to 2000 was more than 8 000 bph reaching maximum speeds of 19 600 bph. As a result, all these SBM machines should be classified as high-capacity machines. In addition, the fact that lower-capacity machines are used by producers of 'sensitive' products when they initially introduce a PET packaging line does not mean that higher capacities cannot be used as PET use becomes more established and the demand for PET products increases. Indeed, Sidel's innovative Combi system SRA which is designed for long-shelf-life aseptically filled products (tea, flavoured water, isotonic, juices and possibly dairy products with UV barrier package) has a nominal output of 25 200 bph for a 1 litre bottle which suggests that Sidel expects these beverages to be filled at high-capacity outputs.

(186) In the light of the above it is not correct to maintain that only low-capacity machines are used for the 'sensitive' beverages. The Commission considers that the decision to invest in a PET filling line will be demand-driven

when a beverage producer foresees a consumer need for PET packaging. It is therefore concluded that both high and low-capacity machines can be used for 'sensitive' beverages depending on the volume of the product that a beverage company intends to fill.

4.1.7. Conclusion on the market definition for SBM machines

(187) In the light of the foregoing, it is concluded that high-capacity SBM machines form a separate market from low-capacity SBM machines. In addition, it is not necessary to define separate markets for single-stage SBM machines (which are excluded from market analysis and, in any case, are not present in the high-capacity segment), hot-filling SBM machines and SBM machines for wide-mouth applications, SBM preferential heating machines and Combi machines.

(188) In the light of the specific characteristics of the 'sensitive' products and the ability for price discrimination, it is further concluded that separate relevant markets exist for each distinct group of customers on the basis of end-use in particular in the four 'sensitive' beverage segments, LDPs, juice, FFDs and tea/coffee drinks. Customers filling these products can be easily identified and targeted with specific practices by a supplier.

4.2. Barrier technology

(189) PET is a gas-permeable material. In order for PET to be used effectively for the packaging of 'sensitive' products which need protection from oxygen and CO₂ (CSDs in small packs, beer, juices, tea/coffee drinks and, to a more limited extent, LDPs) the barrier properties of PET need to be enhanced through the addition of barrier technology materials. The barriers are aimed at preventing oxygen and aldehydes (found in the plastic) from entering into the packaging and degrading its contents and carbon dioxide from leaking out of the package and degrading the carbonation of beers, sparkling mineral water and CSDs. When PET bottles are treated with barrier technologies the shelf life of the packaged product increases significantly.

(190) The notifying party submits that barrier technology is a distinct relevant product market, which includes all products and processes capable of enhancing the barrier properties of PET.

⁽⁹¹⁾ Reply, page 27.

- (191) Barrier technologies can be divided into four principal categories: (i) *multilayer* technology (applied by combining a standard PET plastic material with a barrier material sometimes in combination with oxygen scavengers); (ii) *spray coatings* (barriers sprayed on the outside of the bottle in a separate step after blowing); (iii) *plasma coatings* (internal as well as external plasma coatings); and (iv) *monolayer enhanced PET* (enhanced PET resin which contains the requisite barrier properties).
- (192) Multilayer technologies have been on the market longest and are therefore considered more established. Multilayer involves combining a standard PET plastic material with a barrier material sometimes in combination with oxygen scavengers⁽⁹²⁾. The manufacturer uses this material to either create a multilayer preform from scratch (co-injection) or to cover a standard preform (over injection). Multilayer preforms are blown in a standard SBM machine.
- (193) Barrier-coating involves applying the barrier by spraying the outside of a finished PET bottle in a separate step after blowing. Dedicated machinery is needed to coat the bottles but standard SBM machines are still used to create them.
- (194) Plasma coatings are the most recent barrier technologies. They involve the application of a thin layer of either amorphous carbon (Sidel's Actis) or silicon oxide SiOX (Tetra's Glaskin) to the inside or outside of the bottle in a separate step after the bottle has been blown on a standard SBM machine. Dedicated proprietary machines are needed to apply the plasma coatings onto the finished bottle. Plasma coatings have still not become widespread in the marketplace.
- (195) Finally, monolayer barrier PET is an enhanced resin, which includes the barrier properties already and does not have to be treated further. This material can be used to produce standard preforms which are then blown on standard SBM machines producing bottles which contain

the required barrier properties. Monolayer PET has not been commercialised yet but is expected to be commercialised in the near future⁽⁹³⁾.

- (196) The parties are active in plasma coatings through their Actis (Sidel) and Glaskin (Tetra) barrier technologies as well as multilayer through the Sealica technology⁽⁹⁴⁾ (Tetra). While each of these categories constitutes a slightly different approach to the barrier issue, the notifying party considers that there is no basis for defining separate markets.

- (197) The Commission conducted a wide-ranging inquiry in order to assess whether or not barrier technologies form distinct product markets and, in particular, whether or not plasma coatings (where the parties' activities overlap) may form a distinct product market. Most market respondents, including companies with significant expertise in barrier technology, as well as independent studies, supported Tetra's contention that, for the time being, all barrier technologies are substitutable from the demand side as they produce identical or at least similar results⁽⁹⁵⁾. For example, [...] has marketed beer in multilayer bottles as well as testing plasma-coated bottles. [...] uses both multilayer technology in some countries whilst using its own plasma coating technology in other countries. The end product is indistinguishable to consumers.

- (198) Moreover, barrier technology is an emerging market. The market investigation further showed that no single barrier technology has emerged as the clear winner even though there are indications that the parties' plasma technologies, which are well developed, have some cost advantages. The Commission's investigation revealed that some independent third parties are actively researching the barrier-technology field and are close to the stage of commercialisation of new monolayer technologies that may offer greater cost advantages than plasma coatings whilst also having the advantage that the material could be used as standard PET on standard SBM machines (that is, the technology is not machine-specific) without additional capital costs.

⁽⁹³⁾ The parties have argued that non-PET materials such as PEN (polyethylene naphthalate) or Borex (a modified co-polymer) should be included in the monolayer category. These materials are much more expensive than PET and also in the case of Borex cannot be used on PET SBM machines. The Commission therefore concludes that they should be excluded from the relevant product market.

⁽⁹⁴⁾ Tetra has recently discontinued the use of Sealica technology.

⁽⁹⁵⁾ Nonetheless, the parties' view that technologies for plastic material other than PET (i.e. the HDPE multilayer applications and the enhanced materials technologies such as the Borex and the Pen technologies) belong to the same market is questionable and the Commission has decided to exclude them from the relevant product market. Excluding such materials enhances the parties' market share but does not change the competitive assessment.

⁽⁹²⁾ Oxygen scavengers as active chemical compounds used in PET bottles in conjunction with barrier materials. While barrier materials act as a passive defence to keep gas out of the bottle, oxygen scavengers actively consume oxygen that is already in the bottle.

(199) In the light of the foregoing it is concluded that barrier technologies for PET form part of the same product market, which includes multilayer and plasma barrier coatings and monolayer solutions. The Commission does not, however, exclude the possibility that any one of the technologies (most likely monolayer or plasma) might, in the future, acquire such technical features and cost advantages that it should be placed in a distinct product market.

4.3. *PET filling machines (aseptic/non-aseptic)*

(200) The notifying party has argued that PET filling machines should be split into two distinct product markets: aseptic and non-aseptic filling machines.

(201) The Commission has reached the conclusion that aseptic and non-aseptic packaging belong to distinct relevant product markets. As regards PET filling machines in particular, the Commission's market investigation confirmed that aseptic and non-aseptic PET filling machines are not substitutable either from the demand side or the supply side. Aseptic filling machines fill a product under sterilised conditions ensuring a longer shelf-life. They employ much more complex technology than non-aseptic filling machines and are usually used for different categories of products, the 'sensitive' products, LDPs, juices and tea/coffee drinks. It has therefore been concluded that aseptic PET filling machines and non-aseptic PET filling machines belong to different product markets.

(202) The notifying party has argued that aseptic PET filling machines are not interchangeable with other aseptic filling machines and, in particular HDPE aseptic filling machines and hot-fill PET machines. HDPE filling machines are used almost exclusively for packaging UHT milk. HDPE filling machines have significant technical differences distinguishing them from aseptic PET filling machines. Not all suppliers can offer both types of machines. However, these distinctions may blur in the future as some market participants, including Tetra (LFA-20 ON) are developing machines that can switch between HDPE and PET aseptic filling.

(203) Hot-filling is a non-aseptic method for high-acid drinks (mainly juices) in which sterilisation is achieved by heating the drink to approximately 80 degrees Celsius and filling into the PET bottle at that temperature. Hot-filling achieves similar shelf life to aseptic PET filling. However, it affects taste of the product. Consumers

generally consider aseptically filled products to have a fresher taste. Hot-filling is less popular in the EEA whereas it is widely used in North America. Hot-fill machines also use different technology, which is closer to the simpler non-aseptic filling technology. The bottles must be thicker than standard PET bottles to withstand the heat. There is therefore little demand or supply-side substitutability.

(204) In the light of the foregoing, it is concluded that there are two distinct product markets for aseptic PET filling machines and non-aseptic PET filling machines.

4.4. *PET preforms*

(205) The notifying party has submitted that there is a separate market for preforms. PET preforms are pre-production tubes made from PET resin that are used in an SBM machine to produce the final bottle. There are two kinds of preforms: standard resin preforms and preforms with enhanced barrier properties. Preforms are usually produced by converters and are sold to beverage companies for the production of bottles or are used by converters for the production of bottles. Barrier-enhanced preforms are used for oxygen and light-sensitive products. Standard and barrier enhanced preforms are not substitutable either from a demand-side perspective (for example, a standard preform cannot be used for the filling of an oxygen-sensitive product) and from a supply-side perspective (standard preforms are commoditised whereas barrier-enhanced preforms need specific technologies which not all suppliers of standard preforms have).

(206) In the light of the foregoing, it is concluded that preforms are a distinct product market as there appears to be no substitute from a demand or a supply-side perspective. Users of SBM machines can only use PET preforms to produce PET bottles. Producers of other kinds of plastic cannot switch their supply to production of preforms. In addition, standard and barrier-enhanced preforms form two distinct submarkets.

5. CARTON PACKAGING SYSTEMS

(207) The notifying party has submitted that there are four relevant distinct product markets within the carton packaging sector: aseptic carton packaging machines, aseptic cartons, non-aseptic carton packaging machines and non-aseptic cartons.

(208) Carton packaging consists of the introduction of pre-manufactured but not yet folded (flat) carton material into a single carton filling machine in which it is both folded and filled. The aseptic and non-aseptic production processes are split into parts: creation and supply of carton material and manufacture and supply of carton filling machines. The basic carton material is printed, creased, laminated and cut into reels or blanks. Aseptic carton needs an additional process whereby a layer of aluminium is laminated between two layers of polyethylene in the aseptic carton which serves as a barrier for oxygen, flavour and light penetration. The carton is then inserted in the filling machine where it is sealed at the bottom, filled with the liquid and sealed at the top. Aseptic machines first pass the carton through a sterile bath and then dry it with sterile air.

(209) The Commission has defined the relevant market in carton packaging in previous decisions involving Tetra and its findings have been confirmed by the Court of First Instance⁽⁹⁶⁾. The notifying party does not contest these definitions and the market investigation has revealed that there have not been any significant changes in the carton packaging market to justify different equipment definitions. It is therefore concluded that there are four distinct product markets: aseptic carton packaging machines, aseptic cartons, non-aseptic carton packaging machines and non-aseptic cartons.

C. RELEVANT GEOGRAPHIC MARKETS

(210) The notifying party submits that the relevant geographic market for PET packaging equipment (including SBM machines, barrier technology and filling machines) and preforms is at least EEA-wide, as all suppliers are active throughout the EEA, are capable of providing and provide their equipment on a cross-border basis.

(211) The Commission's investigation and analysis broadly supported the view that the relevant geographic market for PET packaging equipment and preforms is the EEA. Non-EEA suppliers have a very limited presence in the EEA market. The same applies with regard to the market for liquid packaging equipment in general and, in particular, carton packaging equipment⁽⁹⁷⁾.

⁽⁹⁶⁾ See *Tetra Pak/Alfa-Laval* (cited in footnote 11).

⁽⁹⁷⁾ The Court of First Instance has held that the market for carton packaging machines covers the whole of the Community (see *Tetra Pak II* (CFI) (cited in footnote 11), paragraphs 86-99. The Commission's market investigation has confirmed that there have not been any significant changes in the market and that therefore the Court's assessment remains relevant.

(212) In the light of the foregoing, it is concluded that the relevant geographic market for all the above relevant product markets is the EEA.

D. COMPETITIVE ASSESSMENT

(213) The Commission's market investigation and analysis has shown that the operation could strengthen Tetra's dominant position in the market for aseptic carton packaging machines and aseptic cartons and create a dominant position in the market for PET packaging equipment and, in particular SBM machines (low and high-capacity) in the 'sensitive' product end-use segments, LDPs, juices, FFDs and tea/coffee drinks.

(214) The merged entity's future dominant position in two closely neighbouring markets as well as a notable position in a third market (EBM machines and HDPE filling machines) are likely to reinforce its position in both markets, raise barriers to entry, minimise the importance of existing competitors and lead to a monopolistic structure of the whole market for aseptic and non-aseptic packaging of 'sensitive' products in the EEA.

1. TETRA'S CURRENT DOMINANT POSITION IN ASEPTIC CARTON AND LEADING POSITION IN NON-ASEPTIC CARTON

(215) Tetra, through its industry group Tetra Pak, focuses on the development, manufacture and sale of systems for the processing, packaging and distribution of liquid-food products. Tetra's business includes carton packaging, where it is the worldwide market leader and, since the 1990s, plastic packaging and processing equipment. In particular, Tetra produces carton packaging material, the filling machinery and related secondary line and distribution packaging equipment for both non-aseptic (Tetra Brik, Tetra Rex and Tetra Top cartons) and aseptic (Tetra Brik Aseptic carton) carton packaging. Tetra is the only company of its kind in the world capable of supplying its customers with comprehensive systems that integrate processing lines with packaging and distribution systems. The focus of the company includes liquid dairy, cheese, beverages and prepared foods⁽⁹⁸⁾. Tetra's 1999 annual accounts show the following split for products packaged in TetraPak packages in that year: UHT milk [...]*, juices and still drinks [...]*, pasteurised (fresh) milk [...]* and other products [...]*.

⁽⁹⁸⁾ Annual Report of Tetra Laval Group (2000), pp. 6, 14 and 15.

- (216) In its decision of 24 July 1991⁽⁹⁹⁾ the Commission found that Tetra held a dominant position on the market for aseptic carton packaging machines and the market for aseptic cartons. That finding was upheld by both the Court of First Instance⁽¹⁰⁰⁾ and the Court of Justice⁽¹⁰¹⁾. The Commission also found that Tetra held a dominant position in a decision under the Merger Regulation (Case No IV/M.68 — *Tetra Pak/Alfa-Laval*⁽¹⁰²⁾). The factors which led the Commission and the Court to reach that conclusion are set out here.
- (217) In relation to the aseptic carton packaging machines and the market for aseptic cartons, the Court found that Tetra Pak held approximately 90 % of these aseptic markets. The Court considered it to be clear that holding such market shares meant that Tetra Pak's position on the market made it an inevitable partner for packers and guaranteed it the freedom of conduct characteristic of a dominant position. The Commission was therefore correct in taking the view that such market shares were in themselves and in the absence of exceptional circumstances evidence of the existence of a dominant position. The Court also took account of the existence of only one competitor (PKL, which has subsequently merged with SIG) holding approximately 10 % of those markets. The Court further found that the existence of technological barriers and patents prevented new competitors from entering the market in aseptic machines. All these factors contributed in the Court's view to the maintenance and strengthening of Tetra Pak's dominant position both on the market for aseptic machines and aseptic cartons.
- (218) The Commission's market investigation has confirmed almost unanimously the absence of any significant changes to the market situation during the past five years (until 2001) in the carton packaging sector which should alter the Commission's assessment of Tetra's market position in the aseptic carton market. Briefly, Tetra continues to be dominant in aseptic cartons because of the following factors: very high market shares (in the region of 80 % over a long period of time); weak position of competitors (SIG with [10 to 20 %]* and two smaller players, Elopak, International Paper and VarioPak, with no more than [0 to 10 %]*); technological complexity and barriers especially the aseptic know-how and superiority of Tetra's technology (SIG cannot match Tetra's system of continuous reel of aseptic carton); patents (many expiring but new added every year); and finally, paramount importance of proven track record in aseptic packaging (customers require guarantees of product sterility) which results in very high barriers to entry. These factors and Tetra's size, R & D capabilities, financial strength and international presence (service and sales forces around the globe) make it an inevitable business partner for liquid-food beverage companies wishing to package their liquids in carton, especially aseptic carton.
- (219) In particular, as regards the parties' market shares, according to the figures obtained from the notifying party, Tetra holds approximately 80 % of the aseptic carton packaging market for liquid-foods in the EEA (in value), whilst the competitors (International Paper, SIG, Elopak and Variopak) held around 20 % of the market collectively in 2000. Tetra appears to capture an equivalent share of the market even when its position on the market is assessed on the basis of total packs (in millions) produced or litres (in millions) packaged. According to Tetra, in terms of aseptic filling machine installations, its share of all aseptic installations in 2000 amounted to [70 to 80 %]* ([...]* installations) in the EEA and its competitors to some [20 to 30 %]* ([...]* installations) collectively. Tetra's market share in particular aseptic end-use segments in the year 2000 was the following: aseptic juices (including teas and FFDs) [60 to 70 %]*; aseptic LDPs [80 to 90 %]*.
- (220) Although its share of the aseptic carton market is currently slightly lower than that found in an earlier Commission decision⁽¹⁰³⁾, Tetra has continued to hold a high market share during the past 10 years which in terms of stability of market share is a considerable period of time.
- (221) Some market participants have indicated in their replies to the Commission's inquiry the emergence of competitors (Elopak and International Paper) on the market in the last 10 years. Some of the replies point out that Tetra's strong position is due to its commercial strength and that some competitors can match the superiority of some of Tetra's systems (quality of cartons, innovations, printing technology but not sealing technology) but they cannot match the extensive product line of Tetra. Moreover, most of the market participants asked continue to regard the proven past experience in aseptic packaging guaranteeing the sterility of the end product important for customers, which makes it difficult for new suppliers to enter the market.

⁽⁹⁹⁾ *Tetra Pak II* (Commission) (cited in footnote 10).

⁽¹⁰⁰⁾ *Tetra Pak II* (CFI) (cited in footnote 10).

⁽¹⁰¹⁾ *Tetra Pak II* (ECJ) (cited in footnote 10).

⁽¹⁰²⁾ *Tetra Pak/Alfa-Laval* (cited in footnote 11).

⁽¹⁰³⁾ *Tetra Pak/Alfa-Laval* (cited in footnote 11).

- (222) In its response to the Commission's statement of objections, Tetra stated that 'Tetra Laval accepts, for the purposes of this proceeding, the Commission's assessment that Tetra Laval presently enjoys a leading and arguably dominant position in aseptic carton packaging and packaging equipment'.
- (223) In view of the foregoing, it is concluded that Tetra continues to hold a dominant position on the market for aseptic carton packaging machines and the market for aseptic cartons, which means that it can act to an appreciable extent independently of its competitors, customers and ultimately of its consumers.
- (224) Secondly, as to the relation between holding a dominant position in the market for aseptic carton and a leading position in the non-aseptic carton market, the Court has considered, in the context of the application of Article 82 of the Treaty, the associative links between the non-aseptic markets and the aseptic markets⁽¹⁰⁴⁾. In that case, it was not necessary to establish whether the market power which gives Tetra Pak its position of leader on the non-aseptic markets should be considered equivalent to its directly occupying a dominant position within the meaning of Article 82. Given that Tetra Pak held 78 % of the overall market in packaging in both aseptic and non-aseptic cartons, the Commission was found to have acted correctly in assuming that Tetra would still hold a dominant position on that wider overall market.
- (225) In its reply, the notifying party stated that it did not agree with the extension of the associative links theory in *Tetra Pak II* to the merger control context but did not provide substantive arguments as to why this theory, which has been confirmed by the Court of Justice in *Tetra Pak II*, should be discarded. Tetra claimed that, in any event, this theory had no bearing on the present procedure as the acquisition of Sidel had no effects on the carton packaging market⁽¹⁰⁵⁾ and decided not to provide further arguments.
- (226) The Commission does not accept Tetra's claim and considers that Tetra remains dominant in the carton packaging market as a whole. There is no reason why the Commission should discard a theory upheld by the Court of Justice when faced with almost identical market conditions. The importance of the associative links between the aseptic and non-aseptic carton markets mentioned in *Tetra Pak II* arose from the fact that the key products packaged in aseptic and non-aseptic cartons are the same and from the conduct of manufacturers and users. Both the aseptic and the non-aseptic machines and cartons at issue in that case were used for packaging the same liquid products intended for human consumption, principally dairy products and fruit juice. Moreover, it was established that a substantial proportion (35 %) of Tetra's customers operated both in the aseptic and the non-aseptic sectors⁽¹⁰⁶⁾. Finally, the Court of Justice considered that the Commission had correctly noted that the conduct of the principal manufacturers of carton-packaging systems confirmed the link between the aseptic and the non-aseptic markets. Tetra and PKL already operated on all four markets and the third competitor, Elopak, well-established in the non-aseptic sector, had attempted to gain access to the aseptic markets. The Court considered that the fact that Tetra Pak held nearly 90 % of the markets in the aseptic sector indicated that, for undertakings producing both fresh and long-life liquid-food products, Tetra was not only an inevitable supplier of aseptic systems but also a favoured supplier of non-aseptic systems.
- (227) Moreover, by virtue of its technological lead and its quasi-monopoly in the aseptic sector, Tetra was able to focus its competitive efforts on the neighbouring non-aseptic markets, where it was already well-established, without fear of retaliation in the aseptic sector, which meant that it also enjoyed freedom of conduct compared with the other economic operators on the non-aseptic markets as well. Consequently, the Court of Justice found that these circumstances, taken together and not separately, justified the Court of First Instance, without any need to show that the undertaking was dominant on the non-aseptic markets, in finding that Tetra Pak enjoyed freedom of conduct compared with the other economic operators on those markets. The Court of Justice found that 'the quasi-monopoly enjoyed by Tetra Pak on the aseptic markets and its leading position on the distinct, though closely associated, non-aseptic markets placed it in a situation comparable to that of holding a dominant position on the markets in question as a whole'⁽¹⁰⁷⁾.

⁽¹⁰⁴⁾ *Tetra Pak II* (CFI) (cited in footnote 10), paragraph 118, confirmed by the Court of Justice in *Tetra Pak II* (ECJ) (cited in footnote 10), paragraphs 28 to 29.

⁽¹⁰⁵⁾ Reply, paragraph 41.

⁽¹⁰⁶⁾ See paragraph 120 of *Tetra Pak II* (CFI) and paragraph 29 of *Tetra Pak II* (ECJ) (both cited in footnote 10).

⁽¹⁰⁷⁾ See paragraph 31 of *Tetra Pak II* (ECJ) (cited in footnote 10).

- (228) In this respect, the Commission's investigation in the present case does not appear to disclose any fundamental change in the market situation for non-aseptic carton packaging machines and carton. On the basis of the information in the Commission's possession, Tetra appears to continue to hold a leading position in the markets for non-aseptic carton.
- (229) According to its own figures, Tetra held [50 to 60 %]* of the non-aseptic carton packaging market for liquid-foods in the EEA (in value) in 2000. The next player in this market, Elopak held a much smaller share followed by SIG, International Paper, and Variopak. Tetra seems to capture an equivalent share of the market, if its position on the market is assessed on the basis of litres (in millions) packaged. Based on total packs (in millions) produced, its market share accounted for [50 to 60 %]* of the market in the EEA. Tetra's market share in particular non-aseptic end-use segments in the year 2000 was the following: non-aseptic juices [30 to 40 %]*, overall juices [60 to 70 %]*; non-aseptic LDPs [50 to 60 %]*; overall LDPs [70 to 80 %]*.
- (230) Already in 1987, Tetra was reported as having a market share of approximately 55 %⁽¹⁰⁸⁾ in the non-aseptic machine market. Consequently, Tetra has managed to hold a high market share during the past 10 years, which in terms of stability of high market shares is a considerable period of time.
- (231) The Commission therefore has reached the conclusion that Tetra continues to hold a dominant position on the market for aseptic packaging machines and cartons and a leading position in the market for non-aseptic packaging machines and cartons. Given that in the overall market for packaging in both aseptic and non-aseptic cartons Tetra holds some [60 to 70 %]* of the overall market, Tetra also has a dominant position in the carton packaging market as a whole.
2. SIDEL'S LEADING POSITION IN PET PACKAGING EQUIPMENT
- 2.1. **Sidel has a leading market position in SBM machines**
- (232) Sidel is active in the design and manufacture of packaging systems with a core focus on the development of plastic packaging. The markets on which Sidel operates are mass-consumption markets, comprising of drinks (water, fruit juices, isotonic drinks and beer), food products such as milk, cooking oils and sauces and cosmetics or pharmaceutical products (shampoo, cosmetic creams and toothpaste)⁽¹⁰⁹⁾.
- (233) Sidel is active in both low and high-capacity machines. In low-capacity SBM machines, according to the notifying party, Sidel had a market share of [30 to 40 %]* both in terms of capacity and by unit sales in the EEA in 2000. The second largest player was Tetra with a market share of [20 to 30 %]* but with machines of lower quality using the linear rather than the more complex rotary technology used by Sidel's machines. Other competitors are much smaller and include ADS with an approximate market share of [10 to 20 %]*, Urola with [0 to 10 %]*, Sipa with [0 to 10 %]* and SIG with [0 to 10 %]*, respectively. It is also important to note that Sidel's low-capacity machines are higher-quality rotary machines. Sidel's share of low-capacity rotary machines is, according to Sidel, in the region of [greater than 70 %]*.
- (234) In high-capacity SBM machines, Sidel enjoys an even stronger position. Sidel has been the pioneer and world leader in producing SBM machines for over 10 years with a particular focus on top-end high-capacity SBM machines. This has led independent analyst BNP Paribas to state that 'Sidel machines have become the industry standard' and that 'Sidel virtually monopolizes the high-margin top end'⁽¹¹⁰⁾. In the annexes to the notification, Tetra states that 'Sidel enjoys a very strong position in the high margin top end of the market which is maintained by its R & D spending, by its global service network and by having set the industry standard'.
- (235) According to data provided by Sidel, Sidel's market share in particular end-use segments in terms of capacity installed in the period 1995 to 2000 was the following: fresh milk [30 to 40 %]*; UHT milk (flavoured) [60 to 70 %]*; overall LDPs [60 to 70 %]*; non-aseptic juice (including hot-fill) [70 to 80 %]*; aseptic juices 50 to 60 %; overall juices [60 to 70 %]*.
- (236) In 1999, Sidel's SBM machines (both low and high capacity) accounted for [60 to 70 %]* of global installed base and [60 to 70 %]* of installed base in Europe. More than one in two PET bottles in the world are produced using Sidel machines. In the market for high-capacity SBM machines, where the capacity of the machine exceeds 8 000 bph, Sidel is also the clear market leader, a position which is illustrated not only by its high market share but also by some specific strengths the company has which will be set out below.

⁽¹⁰⁸⁾ See paragraph 119 of *Tetra Pak II* (CFI) (cited in footnote 10).

⁽¹⁰⁹⁾ Annual Report of Sidel (1999), p. 19.

⁽¹¹⁰⁾ Equity research of BNP Paribas on Sidel of 9 October 2000.

- (237) In the market for high capacity SBM machines, in 2000, Sidel had a market share of [60 to 70 %]* (based on capacity) and [60 to 70 %]* (based on units sales) in the EEA. In comparison to the market for low-capacity SBM machines, where less complex technology is used, the number of competitors is very limited: there are only three competitors active in this market. In terms of market share, all its competitors hold a much weaker position. Kronos has a market share of approximately [10 to 20 %]*, SIG [10 to 20 %]* and Sipa [0 to 10 %]*, respectively. Tetra maintains that since all SBM machine orders are made on the basis of tenders, historic market shares are not a reliable indicator as to future market success. However, unless there is specific evidence that the past pattern no longer reflects the present situation, it is reasonable to assume that a manufacturer's market share gives at least an indication of its strength.
- (238) It appears that since 1998 Sidel has lost some [10 to 20 %]* of its share in the high capacity market but only [0 to 10 %]* in the low-capacity market. This loss of market share has been attributed to competitive pressure from SIG, Kronos and Sipa with no single competitor gaining share consistently.
- (239) During the period 1998 to 2000, the company did experience certain losses in some regions but it invested strongly in research and development, which led to the introduction to the market, for example, of the Actis-barrier technology and aseptic Combi technologies in 1999. With these technologies Sidel aimed at targeting 'sensitive' products (beer, milk and fruit juice) and adding some [...] packaging units to the existing potential market of 300 billion units for still and carbonated liquids. This focus is further reflected in the expenditure in that same year of some EUR 39,3 million on research and development representing some 4,5 % of its sales. These investments allowed Sidel to gain market share in complete packaging lines and open up new markets in dairy products, fruit juice and beer⁽¹¹¹⁾.
- (240) Tetra has argued that the Commission has overstated Sidel's market shares. This does not appear to be justified. The Commission's market investigation and analysis confirmed that Sidel holds market shares in the region of [greater than 50 %]*. According to Sidel's most recent estimates, its market share continues to be very strong, in the region of [60 to 70 %]* on the basis of sales in the first three quarters of 2001 and [50 to 60 %]* on the basis of installed base.
- (241) The Commission's market investigation also confirmed that the SBM machinery segment generates high profit margins. On the basis of figures provided by Sidel and its economic consultants, Sidel has enjoyed margins of approximately [...] for its high capacity SBM machines over the last three years. In its reply, Tetra maintains, firstly, that Sidel's margins have decreased by [...] points in the last four years and, secondly, that gross margins of this magnitude are not at all unusual, but are necessary to recover risky R & D expenditure and cover personnel and other costs. The Commission's analysis indicates that Sidel's margins are relatively high for the industry in question. The difference between Sidel's lower margins in the more competitive low-capacity market and the higher margins in the more concentrated high-capacity market are indicative of some degree of market power on the part of Sidel in the high-capacity market.
- (242) Sidel continues to be widely perceived by customers as the company supplying the best SBM machines in terms of quality and technical assistance, reliability, flexibility, durability and time delivery. This has led some major customers to have a policy of buying almost exclusively Sidel machines. Sidel is also the only company which produces some specific types of machines such as extremely high-capacity machines (50 000 bph).
- (243) Furthermore, a significant proportion of Sidel's SBM machine sales (approximately [...]) are integrated in complete bottling lines. To meet customers' growing demand for integrated services, Sidel can offer its customers wide-ranging services providing extensive expertise in designing primary packaging (Shapes Design Department, Moulds Design Department, Blowing Test Center), automated systems to manage the mixing of product ingredients (Guérin) adding to food safety, leading blow-moulding equipment, innovative filling methods (Combi), product-flow management solutions (Gebo) ranging from designing the line to delivering a turnkey system as well as control of overwrapping and palletisation.
- (244) Sidel has a network of 25 service organisations world-wide. Annually, Sidel provides some 12 000 hours of training to its customers in seven training centres around the world. In 1999, services accounted for 19 %, machines for 63 % and for complete lines 18 % of Sidel's total sales⁽¹¹²⁾.

⁽¹¹¹⁾ Annual Report of Sidel (1999), p. 3.

⁽¹¹²⁾ Annual Report of Sidel (1999), pp. 8, 27; 'The World of PET', p. 32.

(245) In its reply⁽¹¹³⁾ and at the oral hearing Tetra strongly argued that Sidel faces fierce competition from its three high-capacity competitors and that Sidel's strengths are not sufficient for the Commission to conclude that Sidel can act independently of its competitors and customers and that, as a result, Sidel does not have a dominant position in high-capacity SBM machines. In particular, Tetra argued that the high-capacity SBM machine market is characterised by cycles of innovation and imitation. There are no significant patents in the industry and competitors have managed to copy Sidel's machinery in the past. Many of Sidel's innovations have been copied within two to three years once they became commercially accepted. Sidel's three high-capacity competitors can compete with Sidel as they can offer similar machinery at all speeds of capacity except perhaps the very high-capacity machines of 50 000 bottles per hour. In particular, Tetra provided a comparison between Sidel's machinery and services and those of its competitors and concluded that Sidel's three major rivals, SIG, Kronos and SIPA, can compete with Sidel in every respect including machine capacity and service. The notifying party's contentions were not supported by the market investigation. For example, at the oral hearing Tetra claimed that SIPA can offer hot-fill and wide-mouth machines; this is not correct. Tetra also played down Sidel's R & D expenditure. However, the Commission found that Sidel spent [...] in 1998 for R & D which according to Sidel's President, Mr. Olivier, 'places us far ahead of our principal competitors'⁽¹¹⁴⁾.

(246) The Commission agrees with Tetra that Sidel's position in high-capacity SBM machines is not one of dominance. However, the Commission has concluded that Sidel's position in high-capacity SBM machines is a very strong one and that Sidel is the leading company in this field in the EEA and worldwide. In particular, it is still clear, and this was confirmed by the Commission's market investigation, that Sidel's machines use leading technology and enjoy an excellent reputation in the market place. Customers of Sidel responding to the Commission's enquiry confirmed that Sidel was ahead of its competitors in terms of quality of its machines, scale and scope of testing, 'debugging', bottle design, and depth of experience.

(247) Technological barriers to entry in the high-capacity market are still insurmountable for the smaller companies active in the low-capacity SBM machine segment. Sidel is still the only supplier of certain types of machine such as 50 000 bph machines. Finally, Sidel's market position in terms of market share as regards its competi-

tors is indicative of its leadership in the SBM machine market (Sidel [60 to 70 %]*, largest competitor [10 to 20 %]* in the high-capacity market, largest player in the low-capacity market with a market share in the region of [greater than 30 %]*, [greater than 70 %]* for rotary low-capacity machines, and a market share of [60 to 70 %]* in a combined market of high and low-capacity SBM machines in terms of capacity). The combination of those factors is also indicative of Sidel's leading position in SBM machinery.

(248) It is therefore concluded that Sidel has a leading, but not dominant, position in SBM machines of high and low capacity. Sidel is the only company capable of providing the full range of SBM machines from very low capacity to the highest capacity always using leading rotary technology.

2.2. *Sidel's strong experience in aseptic and non-aseptic PET filling and the innovative Combi machines*

(249) The importance of effectively managing filling operations in combination with blow moulding is particularly apparent with regard to 'sensitive' products such as milk and fruit juice to ensure clean or ultra-clean packaging processes.

(250) Sidel manufactures both aseptic (Rémy) and non-aseptic (Alsim, Girondine) filling machines. Aseptic PET filling is a relatively recent technology, which currently faces rapid growth. According to the information submitted by Tetra, demand for aseptic PET filling machines first originated in Italy and France but has, during the past three years, grown in other EEA countries. The total market volume of installed aseptic PET filling machines has increased by [70 to 80 %]* (from [...] machines to [...] machines) during 1998 to 2000 with a [30 to 40 %]* increase of the installed base in the year 2000 alone. For the next few years the market is expected to continue to grow by [20 to 30 %]* annually with the countries currently having a low installed base of aseptic filling machines experiencing a particularly strong growth.

(251) Rémy, acquired by Sidel in 1999, was one of the first manufacturers of aseptic PET filling machines and a leader in PET aseptic technology. Before 1998, only four main suppliers were active in the market: Procomac ([30 to 40 %]*), Serac ([20 to 30 %]*), Sidel/Rémy ([30 to 40 %]*) and Tetra ([0 to 10 %]*). Five new entrants have successfully entered the market between 1998 and 2000 (Kronos, SIG, KHS-Kloeckner, Stork and GEA) by together capturing [40 to 50 %]* of the aseptic PET filling market.

⁽¹¹³⁾ Reply, paragraph 43.

⁽¹¹⁴⁾ French original: 'nous placent loin devant nos principaux concurrents', interview of 13 April 1999.

- (252) In 2000, Sidel's market share in aseptic PET filling machines based on the installed base was [20 to 30 %]* (number of machines) or [10 to 20 %]* (bottles per hour) in the EEA. The market share is lower, [0 to 10 %]*, if one refers to Sidel's sales of aseptic PET filling machines during 1998 to 2000 (one machine). In the same year, Procomac had a market share of approximate [30 to 40 %]*, Kronos [20 to 30 %]*, Tetra [10 to 20 %]*, SIG [10 to 20 %]* and KHS-Kloeckner, Stork and GEA each [0 to 10 %]* respectively.
- (253) Tetra estimates that the average filling speed of the machines sold by KHS-Kloeckner, Stork and GE, and recently Sidel, are in the same range of 12 000-13 000 bph. The machines sold by Procomac (12 000 to 20 000 bph) and Kronos (20 000 bph) are faster; only SIG is believed to be slower (6 000 bph). Information from Sidel, shows, however, that its ultra-clean and aseptic PET filling technology using flowmeter feeding⁽¹¹⁵⁾ allows for speeds up to [...] (fermented milk, 100 ml), [...] (pasteurised whole milk, 1 l) and [...] (orange juice with pulp, 1 l). Flowmeter feeding includes filling with no nozzle/package contact which reduces the contamination risk.
- (254) Sidel's technology in aseptic filling was further strengthened in 1999 by the breakthrough of its innovative Combi technology, which allows the integration of blowing, filling and capping of a PET bottle in a single machine. This innovative technology represents a similar approach to the manufacture of PET bottles to that achieved by traditional aseptic carton packaging machines. In comparison to a line of a SBM machine and a filling machine, the Combi has many advantages for customers in terms of floor space and cost savings. In particular, the Combi SRU (non-aseptic ultra-clean) and SRA (aseptic) developed for 'sensitive' products, such as juices and liquid dairy products, enables beverage companies to produce and fill 'sensitive' products in PET bottles in an integrated machine reducing the risk of contamination. The Combi SRU, a Combi machine operating in an ultra-clean but not aseptic environment, has a capacity of [...] ([...] moulds), [...] ([...] moulds) to [...] ([...] moulds). Sales of Combi machines have grown from [...] in 1998 to [...] in 1999. Sidel has sold [...] Combi machines in the EEA. Sidel has also developed a fully aseptic Combi machine, the Combi SRA, which has already been commercialised in the EEA and will be used for the aseptic filling of long-life juices and dairy products.
- (255) Tetra has maintained and the Commission's investigation has confirmed that other competitors of Sidel have also just started offering their own Combi machines. At the moment, three other suppliers have the capability of offering a Combi machine. However, only one other supplier, Sipa in conjunction with a filling company Procomac, can offer an aseptic Combi machine. Sidel's Combi is the first one to be commercialised in the EEA.
- ### 2.3. *Sidel's other PET activities*
- (256) In addition to SBM machines, barrier technology and filling machines, Sidel is, according to Tetra, active on a worldwide level in the supply of secondary line equipment (mainly conveyor belts), distribution packaging equipment (various machines that package single product units together for distribution) and related services to various industries. Such equipment comprises, in particular: conveyors (air and mechanical) that transport single-unit containers between the various packaging stages of a packaging line; machines that prepare the filled containers for shipment (such as tray packers, film-overwrapping machines; palletisers, boxing robots and gluers); de-palletisers that handle pallets of empty containers for subsequent filling; and control systems necessary for the operation of various parts of a production line.
- (257) Sidel supplies this equipment to customers in various industries, in particular the liquid-food industry, the non-liquid-food industry, the health and beauty industry and the cleaning agent industry. Sidel's significant position in these markets is reflected in its market share which, according to Tetra, does not generally exceed [20 to 30 %]* but may do so, if a narrow market definition were to be adopted.
- (258) The Commission notes that Sidel has strong capabilities in offering tailor-made solutions for product lines such as conveying, alignment, degrouping, accumulation, transfer, distribution and elevations operations including line audit services for locating any malfunctions and proposing corrective actions and the service of Sidel's Test and Simulation Centers. It faces competition mainly from Kronos and several smaller more local competitors.
- ### 2.4. *Conclusion*
- (259) On the basis of the foregoing, it is concluded that Sidel has a leading position in the high and low-capacity SBM machine market across all end-use segmentations and a strong position in other PET packaging equipment, in particular aseptic filling machines, secondary equipment and associated services.

⁽¹¹⁵⁾ In particular, Sidel's 8100 series, 8200 series and 8300 series. See 'The World of PET', p. 21.

3. CREATION OF DOMINANCE IN THE MARKET FOR PET PACKAGING SYSTEMS, IN PARTICULAR SBM MACHINES, AND STRENGTHENING OF DOMINANT POSITION IN THE MARKET FOR CARTON PACKAGING SYSTEMS

(260) Despite Tetra's contention in the notification and subsequently that the operation affects solely the PET packaging equipment sector (and, in particular, SBM machines, barrier technologies and aseptic filling machines) it is clear that, in the light of the foregoing, the operation should be seen primarily as the merger between the dominant company in carton packaging equipment and the leading company in PET packaging equipment, two closely neighbouring markets, with significant repercussions in the liquid-food packaging sector. A significant number of respondents (including competitors and, more significantly, customers) in the Commission's market investigation viewed the concentration in those terms and raised concerns about the merged entity's future market power.

(261) The concentration would strengthen the merged entity's dominant position in carton packaging equipment and cartons and enable the merged entity to acquire a dominant position in PET packaging equipment, in particular, SBM machines of high and low-capacity. The combination of those two dominant positions in two closely neighbouring markets would enable the merged entity to enhance its position in the sector for liquid packaging equipment, in particular for 'sensitive' products (LDPs, juices, FFDs, tea/coffee drinks) and to reinforce its dominant positions.

(262) The strengthening and creation of dominance would take place through a number of factors, including horizontal and vertical effects, and, in particular, through leveraging of existing dominance and elimination of actual and potential competition from a neighbouring market.

3.1. *Horizontal effects in the PET equipment market*

(263) The proposed transaction produces direct horizontal effects as both parties are active in three distinct product markets: SBM machines (low capacity); barrier technology and aseptic PET filling machines. The horizontal effects set out below would enhance the merged entity's position in these three markets. It is therefore important to analyse them at the outset in order to show that the already strong position of Sidel would

immediately be strengthened further through the merger. This position would reach the level of dominance through the leveraging of the merged entity's dominant position in aseptic carton packaging equipment and aseptic cartons.

3.1.1. *SBM machines*

(264) The Commission has concluded that the market for SBM machines can be broadly divided into high-capacity SBM machines (capacity > 8 000 bph) and low-capacity SBM machines (capacity < 8 000 bph).

3.1.1.1. *High-capacity SBM machines*

(265) The transaction would not directly enhance Sidel's leading position in the high-capacity SBM machine market through horizontal effects since Tetra is not active in this segment of the market. However, the merger would eliminate Tetra as a potential competitor in the high-capacity SBM machine market. Tetra currently does not offer high-capacity machines. By buying Sidel, Tetra would disappear as a potential entrant in the high-capacity SBM market and a competitor in other areas of PET equipment. Indeed, Tetra would acquire the leading company in SBM machinery with the most advanced technology and most extensive product range. Thus, Tetra would ensure that its potential need to develop its PET technology was eliminated.

3.1.1.2. *Low-capacity SBM machines*

(266) In the low-capacity SBM machine market there are significant horizontal overlaps. The operation would result in a combined market share of [50 to 60 %]* ([30 to 40 %]* for Sidel⁽¹¹⁶⁾ and [20 to 30 %]* for Tetra) in terms of capacity of machines sold during the period 1998-2000. The main competitors in this market are ADS with an approximate market share of [10 to 20 %]*, Urola with [0 to 10 %]*, Sipa with [0 to 10 %]* and SIG with [0 to 10 %]*, respectively.

⁽¹¹⁶⁾ According to Sidel's most recent estimates (August 2001), its market share in the low-capacity SBM machine market was higher: [40 to 50 %]* on the basis of sales in 2001. According to Tetra's estimates and the Commission's own analysis, Tetra's market share remains [at 20 to 30 %]* on the basis of sales in the year 2001.

(267) Tetra submits that this horizontal overlap in the low-capacity market would not cause any competition problems: Sidel's and Tetra's SBM machines are not the closest substitutes within the low-capacity segment as there are great differences in technology, price and customer perception; the parties do not have a single common customer in the EEA and the parties do not meet in tenders. The low-capacity segment is characterised by the presence of many competitors, which could respond to a price rise by Tetra/Sidel and could capture market share; and there do not appear to be any capacity constraints or significant barriers to entry in this market.

(268) The market investigation and the Commission's analysis confirmed Tetra's contention only to a limited extent. It appears that Sidel's and Tetra's low-capacity SBM machines are not the closest substitutes, at least according to customers' perception, reputation and technological quality. The market investigation showed that Sidel's machinery is seen as more complex (using rotary technology in contrast to Tetra's machines which use linear technology), of better quality and generally more expensive than Tetra's⁽¹¹⁷⁾ which is seen as an entry-level SBM machine offering for simpler applications with marginal impact in the overall SBM machine market. Despite the repeated contentions of Tetra that the parties do not meet in tenders, Sidel has identified Tetra as the winning company in [...] occasions out of [...] of its unsuccessful bids in the EEA since 1998. Whilst these [...] bids may include bids where Sidel was not even asked by the customer to participate, the precise listing of the bids suggests that, on at least some of these occasions, Sidel and Tetra were bidding for common customers. It is therefore not right to say that Tetra's and Sidel's low-capacity SBM machines do not compete at all for the same customers in the EEA. In addition, the parties have acknowledged that they have common customers for their low-capacity machines outside the EEA.

3.1.1.3. Conclusion

(269) In the light of the foregoing, it is concluded that the low-capacity market would become more concentrated as a result of the operation. Whereas there is currently no single supplier holding more than [30 to 40 %]* of the market, after the merger, the merged entity would be by far the biggest player with market shares in the region of 60 %. Several competitors would remain in the market but with small market shares of no more than [10 to 20 %]*.

⁽¹¹⁷⁾ According to figures provided by the parties, Sidel machines are indeed consistently more expensive than Tetra's. However, the price differential is not so high as to justify in itself that the two machines be placed at opposite ends of the low-capacity market.

(270) Post merger, in both the low and high-capacity segments, Tetra/Sidel would have market shares of [60 to 70 %]* or more. Tetra/Sidel would be by far the leading company throughout the entire spectrum of SBM machinery from the simplest low-capacity machines to the highest-capacity and most technologically advanced machines.

3.1.2. Barrier technology

(271) As explained in the section on market definition, there are currently a number of different barrier technologies providing solutions to the oxygen-barrier limitations of PET. Multilayer technology is already on the market with a significant number of multilayer bottles being produced both in-house and by converters in particular for juice, LDPs and to a limited extent beer. Plasma technology has also been commercialised but is still in the early stages of commercialisation. Monolayer technologies (enhanced PET resins) have not yet been commercialised but are expected to reach the market within the next year.

(272) The parties are both active in plasma technology. Plasma technology is applied onto PET bottles using dedicated proprietary machines in a separate step after the bottles have been blown.

(273) Sidel has recently commercialised its Actis range. Actis is a carbon-based technology, which uses a layer with a brownish tint on the inside of the bottle. Actis uses rotary technology and can reach speeds of up to 10 000 bottles per hour. The process has received FDA approval in the United States. Actis has already reached the stage of commercialisation but contrary to Sidel's optimistic expectations for sales of hundreds of Actis machines, Sidel has [...] sold [...] machines to date. Sidel has also developed a version of its Actis technology, Actis Lite. Actis Lite has a lighter, almost invisible, yellow tint, and is, thus, more suitable for juices.

(274) Tetra is active in plasma through its Glaskin technology and in multi-layer technology through its Sealica multi-layer barrier-enhanced preforms. Tetra's Glaskin is a clear SiOX compound coated onto the inside of the bottle. The machines can reach speeds of up to 12 000 bottles per hour. The technology is in the early

stages of commercialisation. Sealica is a multilayer technology using the over-injection method to produce barrier-enhanced preforms. Preforms are then blown on standard SBM machines. Sealica is also in the early stages of commercialisation. Tetra has recently taken a commercial decision to abandon Sealica⁽¹¹⁸⁾.

(275) In the overall barrier-technology market, the combination of the parties' technologies would give the merged entity a market share of approximately [10 to 20 %]* on the basis of barrier-enhanced bottles produced in 2000.

(276) Some market participants responding to the Commission's enquiry expressed concerns about the combination of the parties' plasma technologies. These concerns were repeated at the oral hearing. These market participants see plasma as the most advanced and cost-effective existing barrier technology. For example, a respondent to the Commission's market investigation stated that plasma would be the only cost-effective technology in the long run and the only technology suitable for high-speed lines under attractive financial conditions. A company active in barrier technology stated that 'technically PET barrier technology will allow for the packaging of liquid dairy products and juices in the next two to three years. Costs are expected to drop as volumes increase and thus the carton packaging will likely lose to PET containers. In addition to economics and product performance, recycling of PET containers will likely influence the degree to which PET packaging penetrates the single-serve market for milk and juices. Both barrier technologies offered by Sidel and Tetra Laval are the only technologies that have demonstrated recyclability in existing PET streams. If the cost performance is demonstrated for juices/milk, these technical platforms will offer the lowest cost and most recycle of friendly options to the PET packaging industry'.

(277) The economics of plasma, especially Sidel's Actis, which is already commercialised, are attractive. The cost of an Actis machine is EUR [...]*. It is not considered a large investment for the customer. Sidel will charge users a royalty on the use of the machine. The royalty charge is important, since 'it will provide a long-term, stable income for Sidel, which is independent of the cyclical machine delivery revenue stream'⁽¹¹⁹⁾... If Actis is

successful it should create a base of installed machines which would generate a stream of steady and profitable income through the royalties. The model for this might be... the aseptic paperboard packaging industry... where a machine is sold to the customer for modest margin (or even no margin). The profits and then made on the long-term servicing or material supply contracts generated by the initial machine sale'⁽¹²⁰⁾.

(278) However, some market participants confirmed the parties' view that plasma also has significant disadvantages as it is still in a developmental stage and continues to face significant technological problems such as flaking under heat pressure. Sidel's Actis technology also has a technical disadvantage in that it is pigmented (amber) which makes it suitable for beer bottles but less suitable for other applications.

(279) The parties have repeatedly stressed that a combination of Sidel's Actis machine with Tetra's Glaskin plasma (which is clear) would not be possible and that, as a result, the combination of the parties' technologies would not result in an enhanced 'winning' plasma barrier. Due to the technical complexities of this market, it has not been possible to confirm or rebut this allegation.

(280) In a distinct plasma market, the parties are the two main players but still face competition from Kronos/Coca Cola (with an already established technology, Bestpet) and other competitors that are about to enter this market from outside the EEA. Indeed, in its reply to the statement of objections, Tetra provided evidence showing that [...]* has a plasma-barrier process in trial phase and another company, [...]*, has a patented plasma-based technology.

(281) Finally, there is also a widely-held view in the industry that the establishment of an enhanced monolayer PET would ultimately be the winning technology. Such an enhanced resin would not need special equipment but would be used to produce standard preforms containing the requisite barrier properties, which could then be blown in standard SBM machines. The Commission's market investigation has confirmed that monolayer technologies would be particularly attractive from both a technical and an economic point of view. The investigation has revealed that such technologies are likely to be commercialised in the near future.

⁽¹¹⁸⁾ Reply, paragraph 59.

⁽¹¹⁹⁾ See JP Morgan, London, 20 February 2001, company update Sidel, page 12.

⁽¹²⁰⁾ Ibid, page 13.

Conclusion

(282) In the light of the foregoing, it is concluded that the combination of the parties' plasma and multilayer technologies would enhance the merged entity's position in the barrier technology market significantly (the merged entity would have two advanced and viable plasma technologies) but not to the extent that a dominant position in barrier technology would be created.

3.1.3. Aseptic filling machines

(283) Both Tetra and Sidel are active in aseptic PET filling machines; there is therefore a direct horizontal overlap between the parties' activities in this market.

(284) Tetra established its PET filling machines in 1999 through acquiring the relevant technology from an Italian engineering company. Machines are produced in Italy and sales of the machines are made by the general Tetra marketing units in each country, some of which have specialists focusing on plastic bottle filling machines. Tetra's aseptic PET filling machine, the RFA-40, can be used for bottles of 0,2 to 1,5 litres and has a capacity of 12 000 bph. The RFA-40 is more suitable for high-acid drinks (juices) but has also been used successfully in Asia for low-acid tea drinks. Tetra submits that the RFA-40 is not suitable for LDPs. Tetra has sold [...] machines in the EEA generating a turnover of approximately EUR [...] in 2000 within the EEA. Worldwide, Tetra has an installed base of [...] machines.

(285) Sidel is active in aseptic PET filling machines through its subsidiary Rémy, a leader in PET aseptic technology. Its aseptic filling machine business is located in France (Octeville-sur-Mer). Rémy was one of the early players in the market for aseptic PET filling and has an established market position and benefits from excellent reputation and aseptic 'brand' recognition. Rémy was combined with Sidel's centralised sales force for SBM machine sales in 2000. In the last three years Sidel has sold [...] aseptic filling machines in the EEA. In addition, Sidel has commercialised an aseptic Combi machine, the Combi SRA which allows the integration of blowing, filling and capping of a PET bottle in a single machine. Sidel sold [...] aseptic Combi machines in the EEA in 2001.

(286) Aseptic PET filling is a relatively recent technology that, according to the parties, has now entered a rapid growth phase in the EEA. In the notification, Tetra stated that the total number of installed aseptic PET filling machines

in the EEA in 2000 was [40 to 50]* machines. According to the notification, the number of machines installed had increased dramatically, by [70 to 80 %]* in the period 1997 to 2000, and growth was expected to be [20 to 30 %]* annually. There are several companies active in the aseptic PET filling market, the main ones (apart from the parties) being Procomac, Serac and Kronos.

(287) Given the very small size of the market (only [40 to 50]* machines installed in the EEA) calculation of market shares on the basis of yearly sales may be misleading. Tetra has proposed a calculation of market shares based on installed base and average sales between 1998 and 2000.

(288) According to data provided in the notification, Tetra's EEA share of the installed base by capacity is [0 to 10 %]* and Sidel's [10 to 20 %]*. The merger would therefore result in a merged entity with [20 to 30 %]* of the installed base (and [10 to 20 %]* of new sales capacity between 1998 and 2000). Procomac has [30 to 40 %]* of the installed base, Serac [10 to 20 %]* and Kronos [10 to 20 %]*. Of sales between 1998 and 2000 the competitors have [30 to 40 %]*, [0 to 10 %]* and [30 to 40 %]* respectively. Tetra argues that several new entrants have penetrated the market since 1998 and have captured almost [40 to 50 %]* of new sales between 1998 and 2000.

(289) Whilst the Commission acknowledges the fact that new entrants have made inroads in terms of machines sold after 1998, the number of all machines sold is so low that it is difficult to attach any particular importance to market shares figures on the basis of yearly sales⁽¹²¹⁾. It is also important to note that Sidel's Combi machine, which is a particularly innovative product, was introduced very recently and has not yet made its full impact

⁽¹²¹⁾ For example, in its response to an Article 11 request for information dated 17 August 2001, Sidel provided updated figures for the aseptic filling market on a worldwide basis. According to Sidel's calculations, [20 to 30]* machines were sold worldwide in 2001. Sidel sold [...] of those machines, whilst Serac sold [...] and Procomac [...]. On the basis of these few sales in 2001, Procomac is clearly the market leader with [20 to 30 %]* market share with Sidel having [10 to 20 %]* and Tetra [0 to 10 %]* (Tetra did not sell any machines in the first two quarters of 2001).

on the market. Furthermore, in internal documents provided to the Commission with the notification Tetra expresses the view that the aseptic filling machine market is still fragmented, with no clear established leader. [...]*(¹²²).

(290) In the light of the foregoing, it is concluded that the merged entity would have a strong position in aseptic PET filling machines, being one of the three biggest players in the aseptic PET filling machine market with [30 to 40 %]* of the installed base, possession of leading aseptic PET filling technology, high aseptic 'brand' recognition and an international sales force.

3.2. Vertical effects

(291) The merger would also have significant vertical effects. It would result in the vertical integration of the merged entity in three packaging systems (carton, PET and HDPE) and could lead to vertical foreclosure of independent converters.

(292) The merger would result in a market structure which could foreclose independent converters in the following way: (i) the merged entity would be the only vertically integrated liquid food packaging company in carton (carton packaging machines and carton reels), HDPE (EBM machines and HDPE bottles) and PET packaging (SBM machines, barrier technology, aseptic fillers, preforms and bottles); (ii) the merged entity's dual position as supplier and competitor of converters would be likely to create a channel conflict in the market. Using its strong market position as supplier of SBM machines to converters which are to a certain extent dependent on Sidel, the merged entity may be able to raise converters' costs and marginalise their market position as suppliers of preforms and turnkey installations. Tetra/Sidel may be able to offer combined packages of SBM machines and preforms for instance by using Tetra's successful business strategy in carton, offering the SBM machines at a low price and recouping the cost by tying the customer with a long-term contract for the supply of standard and barrier-enhanced preforms. The merged entity may also have the ability to offer turnkey installations to its customers without the use of converters.

3.2.1. Vertical integration of the merged entity in carton, PET and HDPE

(293) Sidel is not a vertically integrated company. It is currently only an equipment manufacturer supplying specialised equipment used by packaging companies to produce empty PET bottles (SBM machines) and HDPE bottles (EBM machines) and to fill the bottles with liquids (aseptic and non-aseptic PET and HDPE filling machines). Sidel is not active in the market for consumables (preforms) or the market for finished bottles. All PET equipment suppliers (Sidel's main competitors such as Sipa, SIG and Kronos) follow the same business model of focusing on equipment rather than vertically integrated offerings. That is not to say that equipment suppliers do not provide full lines as turnkey solutions; they increasingly do so on request from their clients. The parties estimate (and this has been confirmed by the market investigation) that [20 to 30 %]* of sales take place on the basis of turnkey full-line installations. Full lines, however, include only equipment such as SBM machines (and moulds), filling machines, conveyors, labellers, etc. Consumables such as preforms are not part of the offering. PET equipment suppliers are not active in the downstream packaging market; that is, they do not sell finished bottles.

(294) The market structure has enabled independent companies (converters) to acquire a special position in the market. Converters buy SBM machines and moulds from equipment suppliers (mainly from Sidel) and use them to produce and then sell empty PET and HDPE bottles to their clients, beverage companies. Converters also produce preforms, which they sell to beverage companies that have in-house installations. The sale of preforms is converters' main business. This industry structure has enabled beverage companies to source their packaging needs through a variety of sources using equipment from a number of suppliers, sometimes buying the ready bottles from converters.

(295) By contrast, Tetra is a vertically integrated packaging company. Indeed, Tetra is the 'only company in the world that can offer the food industry a one-stop-shop for processing and packaging equipment' (¹²³). Tetra can supply processing equipment, packaging machines and

(¹²²) Internal Tetra document provided as Annex 3 to the notification, pursuant to paragraph 5.4 Form CO.

(¹²³) Tetra Laval's Annual Accounts 2000, page 15.

also packages (the carton material in reels or PET preforms and finished bottles). Tetra's upstream (preforms) and downstream (packages or finished bottles) activities are the following.

3.2.1.1. Carton packages

- (296) Tetra is the market leader with a market share in the region of 80 % for aseptic and 50 % for non-aseptic carton packages. Tetra follows a business model of offering integrated solutions of machines and cartons (reels or blanks) to its customers.

3.2.1.2. HDPE bottles

- (297) Tetra supplies finished HDPE bottles mainly to dairies in the United Kingdom that are used for non-aseptic filling of pasteurised and ESL⁽¹²⁴⁾ milk. Sidel is active as a supplier of EBM machines but not as a downstream supplier of HDPE bottles. In this downstream market, Tetra acts as a converter. Tetra's bottles are supplied through 'Hole-through-the-wall' arrangements. Tetra produces the bottles using machinery from Graham Engineering Corporation [...]*. Tetra's market share in this downstream market for the supply of non-aseptic HDPE bottles in the United Kingdom is [20 to 30 %]* (the leader being Nampack, a converter, with [60 to 70 %]*). Tetra recently also started supplying HDPE bottles in Belgium. The Commission's market investigation revealed that Tetra has an [...]* agreement with Graham Engineering for the use of its EBM machines in the EEA. Third parties have expressed concerns that the combination of Sidel's EBM machine position with

Tetra's/Graham's position would cause competition problems as the merged entity would have a very strong position in the market for EBM machines in the EEA⁽¹²⁵⁾.

3.2.1.3. PET preforms, bottles and plastic closures

- (298) Tetra is the third largest independent preform supplier in the world with a market share of [10 to 20 %]*⁽¹²⁶⁾. The main players in this market are converter companies such as Schmalbach (leader with [30 to 40 %]*) and Alpla. Moreover, Tetra has patented a proprietary barrier technology (Sealica) which it uses to produce and sell barrier-enhanced preforms. Tetra has announced that it has abandoned the Sealica technology. Tetra also has plans to produce a limited number of finished PET bottles enhanced with its proprietary barrier technology Glaskin, mainly through hole-through-the-wall arrangements⁽¹²⁷⁾. In addition, Tetra is active in plastic beverage bottle closures⁽¹²⁸⁾ through its subsidiary Novemal (acquired in 1999). According to figures provided by Tetra, Novemal had [10 to 20 %]* market share in 2000 in the EEA.

- (299) The merged entity would have a full-line PET capability. This is explained graphically in Table 8.

⁽¹²⁵⁾ During the Commission's market investigation, a major dairy suggested that the parties were the only source in the EEA of EBM machines capable of producing aseptic HDPE bottles with handles which are particularly used for large size packs of milk. The Commission's investigation revealed that the Graham machines for which Tetra is the sole source of supply in the EEA [...]* and the new Sidel [...]* are indeed capable of producing aseptic HDPE bottles with handles. However, the investigation revealed that two other suppliers, Bekum and Techne, also supply machines capable of producing aseptic HDPE bottles with handles. The Commission decided to send the notifying party a supplementary statement of objections concerning, *inter alia*, EBM machines, on 24 September 2001. The statement supplemented the original statement by including a more accurate description of the parties' activities in the HDPE field. In the light of Tetra's reply dated 1 October 2001 and the Commission's analysis, the Commission concluded that the position of other players' allayed concerns about dominance in a potential market for machines producing aseptic HDPE bottles with handles.

⁽¹²⁶⁾ In the reply, Tetra maintains that its market share is closer to [0 to 10 %]* according to the Commission's method of calculation (open market) and closer to [0 to 10 %]* if in-house production is taken into account.

⁽¹²⁷⁾ Notification, paragraph 172.

⁽¹²⁸⁾ Closures are air/watertight seals for packaged products which offer the possibility of closing and re-closing the packaging and are manufactured separately from the packaging.

⁽¹²⁴⁾ Extended-shelf-life (ESL) milk is fresh pasteurised milk which has a shelf life of approximately 90 days. This places it between UHT (aseptic) milk and short-life fresh milk.

Table 8

PET full-line capability

Market	Tetra	Sidel	Tetra + Sidel
Preforms	[10-20 %]*	Not active	[10-20 %]*
SBM (low-capacity)	[20-30 %]*	[30-40 %]*	[50-60 %]*
SBM (high-capacity)	Not active	[60-70 %]*	[60-70 %]*
Barrier technologies	Active	Active	[10-20 %]*
Aseptic PET fillers	[0-10 %]*	[10-20 %]*	[20-30 %]*
Non-aseptic PET fillers	Not active	Active	< 10 %
Secondary line and distribution packaging equipment ⁽¹²⁹⁾	Not active	Active	< 25 %
Plastic bottle closures	[10-20 %]*	Not active	[10-20 %]*

(300) The combination of the parties' activities would result in a merged entity which would be vertically integrated in carton (Tetra), HDPE (Sidel's EBM machines and Tetra's bottle production and [...] agreement with Graham Engineering for EBM machines) and PET (Tetra's preforms and bottle business and Sidel's equipment). No other company in the liquid-food packaging industry is integrated in this way.

3.2.2. Channel conflict — possible foreclosure of converters

(301) The merged entity's vertical integration is likely to create a channel conflict in the market as the merged entity would be a supplier and competitor of converters. A converter stated in its response to the Commission's market investigation that 'the combination of Tetra Laval's preform capacity and aseptic expertise with Sidel's blow/fill/seal platform could and possibly will dominate the in-house blowing and filling market for all

products for which PET bottles could be used (ranging from milk to isotonic drinks to juices etc.) (...) all PET converters will share these serious concerns' ⁽¹³⁰⁾.

(302) The 'channel conflict' that converters are likely to face by being simultaneously customers (Sidel) and competitors (Tetra) of the merged entity does not arise simply as a result of Tetra's activity in the preforms market, even though Tetra's preform activities make the channel conflict particularly direct. Tetra's activities as a packaging company (as opposed to a packaging equipment company) in carton and HDPE make it an indirect competitor of converters in all their activities. For example, converters are currently working with Sidel to produce innovative PET designs specifically aimed at the LDP and juice markets where Tetra has major activities in cartons and activities in HDPE. In bringing new products to the market, converters have to work very closely with Sidel as the final design will be blown on a Sidel machine, and must achieve specification and reach guaranteed production outputs. Converters have expressed concerns that 'any future project be it a new customer, an enhanced tool or an improved design would inevitably be disclosed to a competitor an impossible situation with a doomed business perspective' ⁽¹³¹⁾.

⁽¹²⁹⁾ Secondary line equipment is principally conveyor belts and distribution packaging equipment is various machines that package single product units together for distribution.

⁽¹³⁰⁾ Response to the Commission's market investigation submitted on 8 June 2001.

⁽¹³¹⁾ Third-party response dated 8 June 2001.

3.2.2.1. Converters' dependency on Sidel

- (303) The business concept of a converter is twofold. On the one hand, converters purchase SBM machines and moulds from equipment suppliers for use in their own production and sell the finished PET bottles to their customers, beverage companies for filling. Secondly, converters manufacture preforms, which they sell to beverage companies that have in-house production of PET bottles. This has allowed beverage companies to source their packaging needs through a variety of sources but it also requires converters to cooperate closely with the SBM machine manufacturer to test their preforms and moulds and to acquire equipment which they provide to their customers.
- (304) Given Sidel's position as the pre-eminent high capacity SBM machine supplier, its unique capabilities for many specific applications and more importantly its focus on a customer-oriented approach with dedicated design and testing centres designed to customise PET solutions for a customers' production needs, Sidel has become the major packaging partner for independent converters.
- (305) Converters have stated that they have very specific needs for their PET bottle production given their size of activity. Converters are indeed Sidel's largest customers. [...] out of the [...] largest customers of Sidel are converters. Converters claimed that they had invested heavily in Sidel machinery and moulds (the shaped piece of metal that is inserted in the machine to give the final bottle its shape). This would make it economically impossible for them to switch to other suppliers for their needs even if these other suppliers could offer machines in the range and quality of Sidel, which they do not. For example, a major EEA converter stated that it has more than [...] Sidel machines in operation and only [...] SBM machines from other suppliers. This converter also stated that it has generally been unhappy with the performance of the non-Sidel SBM machines it operates.
- (306) Converters responding to the Commission's market investigation stated that they would be incapable of switching to other SBM machine suppliers for the majority of their production needs and stated the speed, reliability and quality of Sidel machines as critical factors. It is important to note that the barriers to entry into the high capacity SBM machine segment are particularly high given the technological complexity, know-how and high levels of investment required. A converter explained that machines of other suppliers did not reach the speed, reliability and quality of Sidel machines. On one occasion
- a converter returned another supplier's SBM machine due to poor quality and frequent breakdowns. In this regard, it is important to note that servicing is extremely important for the continuing operation of the SBM machines. Converters' business is a low-value, high-volume business which depends on continuous and efficient output. Converters stated that only Sidel had the short response time required to satisfy their service needs.
- (307) Converters also stated that they depend on Sidel for the testing and development of their preforms, mould design and bottles. Converters cooperate closely with Sidel at the R & D stage in order to achieve specifications and reach guaranteed production outputs. They share confidential and proprietary designs and projects with Sidel. In this way, Sidel has acquired invaluable inside knowledge of the downstream packaging markets and has a vast library of confidential drawings, preform and old designs. One market respondent for example stated that 'to be successful a PET converter has to work closely together with the machine manufacturer like Sidel sharing trade secrets and proprietary knowledge. This is not only the case with regard to the servicing of machines and equipment but also with regard to common developments of new designs or technologies' ⁽¹³²⁾.
- (308) These factors led the Commission to conclude provisionally in the statement of objections that it would be reasonable to define a distinct market for top-end high-capacity machines and services to converters. In its written response and at the oral hearing, Tetra submitted further factual evidence which suggested that converters' position as regards Sidel was not one of dependency. Converters do not need top-end high-capacity machines. Converters' preference for Sidel was simply driven by commercial reasons and not any particular, special needs converters have which only Sidel was capable of satisfying ⁽¹³³⁾. Specific instances of bad performance of competitors' machines were isolated incidents which should not be taken into account. Indeed, according to Tetra converters 'have procured many machines supplied by Sidel's competitors and seem to have no problem

⁽¹³²⁾ Market response dated 8 June 2001.

⁽¹³³⁾ For example, the notifying party produced evidence showing that converters do not have specific needs for the top-end high-capacity machines (e.g. above 40 000 bottles per hour) which only Sidel could satisfy.

with them' ⁽¹³⁴⁾. In addition, Tetra claimed that the fact that converters have invested heavily in Sidel machinery is not a relevant factor as there are no substantial barriers for converters to switch to other suppliers' machines; for example, a large EEA converter bought three machines from Kronos in 2000. Tetra also claimed that converters do not depend on Sidel for testing and designing moulds and preforms. Investment in moulds is not, according to the notifying party, a major barrier for switching as moulds need to be replaced every three years due to periodic changes in bottle forms. In addition, suppliers like SIG have designed their SBM machines so that they can accommodate Sidel moulds; this allows them to break more easily into Sidel's customer base.

(309) Converters have continued to express concerns that, post merger, Sidel may be lost as an independent supplier of machines and the merged entity may be able to displace converters from their activities in the PET packaging market: offering turnkey solutions, preforms and finished PET bottles. Converters expressed concerns that the merged entity would have no incentive to provide them with equipment and efficient service when it could simply bypass them and offer its customers complete installations (from preforms to filling machines). Converters are dependent on Sidel for purchases of SBM equipment in order to be able to provide turnkey offers.

(310) The Commission considers that converters are to a certain extent dependent on Sidel and would continue to be dependent on the merged entity. It appears that converters could turn to other suppliers of SBM machines for purchases of new machinery and design and testing of preforms. However, switching costs and the continued need to use the large number of Sidel machines they have already acquired will prolong converters' current degree of dependency on Sidel.

3.2.2.2. Possible effects of the channel conflict

(311) The market structure resulting from the merger is likely to create a channel conflict. A merged Tetra/Sidel may have the ability to refuse the supply of equipment or adopt price and other discriminatory practices in order to favour its own integrated business to the disadvantage of converters. For example, the merged entity might

raise prices to converters for its equipment and offer beverage companies more attractive prices coupled with long-term finance deals or, more likely, long-term supply of preforms. In this way, the close cooperation of converters with Sidel for the design and testing of preforms in order to bring innovative new products to beverage companies could be lost.

(312) Being vertically integrated and having a leading position in SBM machinery, the merged entity may have the ability to marginalise converters by offering customers combined packages of SBM machines and preforms as well as turnkey installations.

(313) Tetra follows the same business model of combined packages in its carton business, supply of machine with long-term finance paid off through the supply of carton material. Tetra believes it can follow the same carton business model in the plastics sector. In internal documents Tetra considers that there is a much weaker tie between filling machine supply and packaging material supply in the plastics industry compared to the carton industry [...]* ⁽¹³⁵⁾.

(314) Indeed, Tetra has made wide use of such practices in the past (bundling carton equipment and carton packages or SBM equipment with preforms) with great success. The market investigation has revealed that a significant number of bids won by Tetra for SBM machine sales have been won on the basis of preform/SBM bundling which competitors (including major companies such as Sidel) could not match. Tetra usually offers the SBM at a relatively low price (undercutting its competitors) and ties customers with long-term contracts for the purchase of preforms. Data provided to the Commission by Sidel also shows that Tetra has managed to win a significant number of bids by offering a combination of preforms and SBM machines. This strategy has enabled Tetra to get a high market share in the low-capacity SBM market (second largest player in four years) despite the low quality of its machines and the general insignificance of its presence in the overall SBM machine market. With Sidel's leading SBM machines of high capacity Tetra could have the ability to continue with its commercially successful strategy of combining SBM machines and preforms thus raising both the merged entity's SBM machine market share and its preform market share and to marginalise converters.

⁽¹³⁴⁾ Reply, page 34.

⁽¹³⁵⁾ Internal Tetra document submitted as Annex 3 to the notification.

(315) As regards turnkey installations, customers (especially unsophisticated customers) can turn to converters or other independent consultants for their turnkey installations. The independent consultant then can put together a PET line including Sidel SBM machines, other suppliers' fillers or secondary equipment and its own preform supplies. Sidel also offers turnkey installations with the exception of preforms where it is not active. Thus, at the moment a customer beverage company has the choice of obtaining a Sidel SBM machine directly from Sidel or from converters which also supply preforms.

(316) Indeed, Tetra has succinctly described the current more open structure of the PET packaging sector as follows: '... customers can turn to third-party PET consultants, who specialise in putting together mix-and-match full lines to meet their clients' needs. Thus, even the most unsophisticated customer can contract for the necessary expertise and buying power to assemble its full line needs from the most suitable individual components'⁽¹³⁶⁾.

(317) A customer of the parties⁽¹³⁷⁾ stated that 'Sidel was a machine supplier. Tetra was a machine and package material supplier. Following the merger, there is the risk that the packaging production equipment may no longer be free on the market but only the packaging produced with such equipment. Such, our concerns are mainly about the vertical integration of equipment with a packaging material supplier'.

(318) There is therefore a concern that, post merger, the merged entity may have the ability to marginalise converters from these activities by refusing the supply of SBM machines or raising their costs and favouring its own integrated business. This could remove some elements of intra-brand competition for the sale of Sidel SBM machines.

3.2.2.3. Tetra's decision to exit the preforms market

(319) Tetra has acknowledged channel conflict that would be created as a result of the merger and considers the channel conflict negative from a business perspective as it would antagonise some of its customers. Tetra does not, however, believe that such a channel conflict would result in the creation or strengthening of a dominant

position. Tetra has maintained that the merged entity would not have the ability to foreclose converters as this would not be feasible: first, converters are its biggest customers and it does not want to alienate them; second, converters could turn to other suppliers both for production and design of preforms as well as for bottle blowing; third preforms are a commodity business; fourth Tetra's activities are currently so limited ([0 to 10 %]* market share in 2000) that it could not possibly dominate the preforms market; fifth, competitors could also acquire preforms businesses; and finally competitors could also offer turnkey installations in competition with the merged entity.

(320) The Commission's market investigation and analysis of the market produced results which partially support the notifying party's arguments.

(321) First, the fact that converters are the biggest customers of the merged entity needs to be qualified. Lost sales to converters could be replaced by direct sales to converters' customers (the beverage companies) with the added advantage of tied preform supplies; this would make up for any possibility of lower margins achieved on the SBM machine sales. Second, converters have stated that they could turn to other suppliers for their SBM machine needs and for design and testing of preforms. This appears to be correct even though the Commission considers that converters will continue to be dependent on Sidel for their installed base of machines⁽¹³⁸⁾. Third, standard preforms may be a commodity business but barrier-enhanced preforms enjoy high margins⁽¹³⁹⁾. However, Tetra has announced that it has recently discontinued the use of Sealica technology. Fourth, Tetra's market share in the open (i.e. excluding in-house production) market on which it competes with

⁽¹³⁶⁾ Submission of the notifying party dated 8 June 2001.

⁽¹³⁷⁾ Third-party response by a major company to the Commission's market investigation.

⁽¹³⁸⁾ The notifying party's contention as to preform production is correct. Neither Tetra nor Sidel supply machines that make preforms. These are supplied by independent companies such as the Canadian company Husky (the leading player). As a result, converters do not depend on Sidel and will not depend on Tetra/Sidel for their preform production. This is not part of the 'channel conflict' created by the simultaneous presence of the merged entity in the machinery market and packaging market, i.e. as a supplier and competitor of converters.

⁽¹³⁹⁾ It is also worth noting that cardboard is a commodity product but enhanced-multilayer cardboard which contains aluminium foil as a barrier to oxygen is not. This is the type of carton that Tetra sells to its customers on an on going basis.

converters is in the region of [10 to 20 %]* not [0 to 10 %]*. The market investigation revealed that Tetra has reached this position in three to four years and this without having any advantage arising from superior technology and leading position in SBM machines (which it would have after the merger). Tetra would have no difficulty increasing its capacity. The market investigation showed that with a modest (for Tetra Laval) investment of EUR [...] (less than [...] of the value Tetra is willing to pay for Sidel's shares) Tetra could double its preform capacity. Fifth, competitors do not currently have any preforms business and are pure equipment suppliers. However, the preforms market has very low barriers to entry and competitors could offer preforms together with the full line of PET equipment. Competitors also have the ability to team up with converters for the supply of preforms if this is commercially attractive. However, barriers to entry into the market for barrier-enhanced preforms are considerably higher. Finally, as regards turnkey installations the main high-capacity competitors of the merged entity can offer full PET equipment lines (with the exception of preforms).

(322) The Commission therefore considers that, to the extent that Sidel is not dominant in SBM machines, inter-brand competition would not be significantly affected. If however, Sidel became dominant in SBM machines in particular in the 'sensitive' product segments, this could allow the merged entity to dominate the preforms market, in particular barrier-enhanced preforms used for 'sensitive' products, by engaging in the practices described above in particular by marginalising converters and offering combined packages of SBM machines and preforms.

(323) Given its acknowledgement of the negative effects of the channel conflict from a business perspective, Tetra has taken a commercial decision to exit the preforms market thus eliminating any concerns that converters raised. Tetra expects that this will improve its business relations with converters. Indeed, in this way the elimination of the channel conflict is likely to ensure the continuation of Sidel's strong position as regards sales of SBM machines to converters. Tetra has announced this commercial decision in public press releases and reiterated it in its reply and again at the oral hearing. Tetra has offered the divestiture of its preforms business as a commitment to the Commission. This is discussed further in the section on commitments below.

3.2.2.4. Conclusion

(324) In the light of the foregoing, it is concluded that the proposed transaction would result in Tetra/Sidel being vertically integrated in three packaging systems: carton, HDPE and PET. This may create a channel conflict with independent converters with possible anti-competitive effects, mainly a possible reduction in intra-brand competition for Sidel machinery and, in the event Sidel becomes dominant in SBM machines for 'sensitive' end products, the creation of a dominant position in the barrier-enhanced preforms market. Therefore, the Commission does not conclude that these vertical concerns would, by themselves, result in the creation of a dominant position for PET equipment or preforms.

3.3. Leveraging of existing dominance and elimination of potential competition

(325) The notifying party has argued⁽¹⁴⁰⁾ that not only are carton and PET packaging two separate markets for purposes of competition law analysis but that they are also so loosely connected that neither anti-competitive effects nor efficiencies can arise from the combination of the dominant carton packaging company with the leading company in PET equipment (in particular SBM machinery). As regards efficiencies, Tetra stated in its reply that 'Tetra Laval management did not anticipate substantial synergies with Sidel, but rather assumed that Sidel's PET business, operating with solid management could prosper and achieve solid returns on Tetra Laval's investment'⁽¹⁴¹⁾.

(326) Tetra claims⁽¹⁴²⁾ that the absence of any possibility of competitive effects across the two markets arises from the following factors: (i) the two markets are separate and distinct product markets; (ii) the two markets are not closely 'associated'; (iii) the Commission has neglected to analyse the competitive influence of other packaging materials such as glass, cans and HDPE⁽¹⁴³⁾; (iv) the Commission's arguments are based on the assumption that Sidel is dominant in SBM machines and will have a vertically integrated PET offering. Tetra also claimed that, even if there was a possibility for leveraging effects, leveraging would not have any anti-competitive effects⁽¹⁴⁴⁾.

⁽¹⁴⁰⁾ Submission of the notifying party dated 21 June 2001 and other submissions including the notifying party's reply, in paragraphs 77 et seq.

⁽¹⁴¹⁾ Reply, paragraph 5.

⁽¹⁴²⁾ Reply, paragraphs 77-81.

⁽¹⁴³⁾ Reply, paragraphs 38-39.

⁽¹⁴⁴⁾ Submission of the notifying party's economists dated 26 September 2001.

- (327) The Commission's leveraging concerns are set out in detail in the following paragraphs and address Tetra's economic arguments as to the lack of anti-competitive effects as well as the non-profitability of tying or bundling in this market. It is, however, important to clarify at the outset that the above four arguments of the notifying party suggesting that no anti-competitive effects across the two markets can possibly arise in this case are not relevant or sufficient to dispel the Commission's concerns.
- (328) First, the Commission has indeed reached the conclusion that the two markets (carton and PET packaging equipment) are separate. Secondly, the Commission considers, however, that these two markets are closely associated. Thirdly, given this market separation by packaging material (which Tetra does not contest) and Tetra's lack of dominance in non-carton markets, the Commission's analysis does not rest upon effects on other markets such as glass, cans or HDPE, even though the Commission has investigated and taken these markets into account⁽¹⁴⁵⁾. Carton is currently and will remain the most important packaging material for LDPs and juices. It is thus sufficient that the dominant company in carton packaging would have the ability to leverage its position from the carton into the PET equipment market and thus dominate the PET equipment market for 'sensitive' end products as well for the operation to be incompatible with the common market. Finally, Tetra's argument that the Commission's leveraging concerns arise from Sidel's dominance in SBM machines is wrong. The Commission has not found Sidel to be currently dominant in the SBM machine market. Sidel is, however, the leading company in this market. The Commission's concerns arise from Tetra's dominance in the carton market.
- (329) The Commission cannot agree with the notifying party that the two distinct markets for carton and PET equipment are so loosely connected that no competition concerns can arise from the merger. Both markets belong in the same industry sector, liquid-food packaging. PET is a packaging material for the main carton-packaged products, LDPs, juices, FFDs and tea/coffee drinks and is in, a technical sense, a substitute for carton in these end-use product segments and can be considered a 'weak substitute' to carton in an economic sense. The three main carton suppliers, Tetra, SIG and Elopak⁽¹⁴⁶⁾ are all active in PET. There is already a significant number of common carton and SBM machine customers which will inevitably increase in the future with the anticipated growth of PET in the common end-use product segments which was discussed in the section on market definition.
- (330) In the light of the above factors, the proposed transaction would create a market structure providing considerable scope for anti-competitive effects arising from the merged entity's simultaneous dominant and leading position in carton and PET equipment respectively. By acquiring Sidel, Tetra would ensure that its dominant position in aseptic carton packaging was retained and strengthened by eliminating Sidel as a source of competitive constraint. In addition, leveraging its dominant position in carton, Tetra/Sidel would have the ability to reach a level of dominance in PET equipment and in particular SBM machines of high and low-capacity in the relevant end-use segments.
- (331) This will be explained in four stages. First, the Commission's analysis shows that, even though it has concluded that PET and carton packaging systems do not currently form part of a single relevant product market (see market definition section), they belong to closely neighbouring product markets with a common pool of customers. The Commission's market investigation has indeed revealed that both PET and carton will be used in all the common PET-carton end-use product segments (LDPs, juices, FFDs, tea/coffee drinks) as beverage companies will increasingly want to have a mix of packaging materials. PET is expected to take market share away from carton and in some cases may even compete with carton in some segments of the market. Secondly, the Commission's analysis shows that, given the future growth of PET in the new 'sensitive' product segments, the merger would enable the merged entity to acquire a dominant position in PET by leveraging its dominant position in carton packaging, having a first mover advantage in the customer base coupled with strong market shares, unparalleled range of products and technology, and unassailable international presence. Thirdly, the Commission analysis shows that, given

⁽¹⁴⁵⁾ It is noteworthy that Canadean in the study prepared for Tetra submitted to the Commission on 24 August 2001 maintains that in the market for LDPs 'glass is the main loser, while cans continue their downward drift'.

⁽¹⁴⁶⁾ Elopak does not manufacture PET equipment but, realising the necessity of offering both carton and PET to its clients, has entered into alliances with PET equipment manufacturers to address its customers' needs.

this growth of PET, Tetra's acquisition of Sidel would strengthen Tetra's dominant position in carton as well. Without the merger Tetra would have to compete vigorously in order for carton not to lose market share to PET by innovating (new carton shapes and solutions) and lowering carton prices significantly in some cases. The merger would eliminate this competition and enable Tetra to monitor and anticipate any switch from carton to PET. Fourthly, as a result, the combination of the two dominant positions would consolidate the merged entity's position in the sector for liquid-food packaging for 'sensitive' products, in particular aseptic packaging thus reinforcing the two dominant positions.

3.3.1. Parallel use of PET and carton by beverage companies (product and customer overlap)

(332) Contrary to Tetra's contention⁽¹⁴⁷⁾, carton and PET share common product segments which cover almost the entirety of carton-packaged products. This makes carton and PET technical substitutes in that both packaging materials can package the relevant end-use product segments. Furthermore, carton and PET may be considered 'weak substitutes' in an economic sense.

(333) The Commission's market investigation confirmed the view that beverage companies will need and use both PET and carton packaging for their products. The choice of packaging used by the end-use producer is primarily a marketing decision, although the costs of packaging chosen cannot be ignored. Tetra has stated repeatedly, that 'marketing considerations are far more important than relative differences in packaging costs in a beverage company's decision as to which packaging material to use. Beverage companies are keenly aware that certain types of containers are associated by consumers with certain images or occasions'⁽¹⁴⁸⁾.

(334) As explained in the section on market definition, many third parties thought that over time the overriding advantages of PET would result in PET being used more frequently. Tetra believes that 'it is apparent in the market place the plastic packaging is either capturing or will be in a position to capture a major portion of the

growth in liquid-food packaging. Plastics is more often than not the container selection when customers convert from glass, cans and carton packaging'⁽¹⁴⁹⁾.

(335) In the light of the data collected during its investigation, the Commission also considers that more products will be placed in PET in the future, as explained above in the market definition section on PET growth (Section IV.3.3). However that is not to say that carton will disappear. Rather, the two packaging types will be used (maybe in the same retail location) to target specific locations and occasions of consumption. The Canadean study prepared for Tetra also expressed this view:

'Because mass markets are fragmenting into many different segments, the choice of pack for any given brand is no longer a simple one between PET bottle versus carton. Nor is the choice based solely on cost comparisons between different pack types.

The drinks marketer ... is seldom making one choice when it comes to selecting the pack for a brand. More often the team is looking at a range of pack types and sizes so as to hit the main segments, locations, occasions that are out there in the market place'⁽¹⁵⁰⁾.

(336) It would therefore appear that carton and PET are and will in the future be used for the packaging of the same products. In some cases PET and carton will be used as complementary packages and in others PET and carton may compete for the same end-user in the market place. Consumers may see a greater choice of packaging of products targeted at particular use, occasion and/or consumer groups. For example PET may be better suited for on-the-move consumption whereas carton is more suited for consumption at home where it is not necessary to have the added benefits of PET, namely consumption direct from the bottle and re-closeability. For large-size containers both carton and PET could be used to target the same consumer groups.

(337) It is the Commission's view therefore that PET is already becoming an important alternative, as well as complementary, packaging to carton in the 'sensitive' product markets and that it will continue to grow in importance. This will particularly be the case with

⁽¹⁴⁷⁾ Reply, paragraphs 95 to 99.

⁽¹⁴⁸⁾ Submission of the notifying party dated 18 July 2001.

⁽¹⁴⁹⁾ Internal Tetra document provided as Annex 3 to the notification.

⁽¹⁵⁰⁾ Canadean study submitted to the Commission on 24 August 2001 'The Growth of Pet Bottles for Selected Beverages in Western Europe', pp. 66-67.

technological progress which is causing the aseptic filling techniques to become more economical and the continued development of more efficient barrier technology. Sidel itself sees the overlap in customer base increasing significantly in the future as expressed by Mr Olivier, Sidel's CEO: 'I guess in 10 years from now it will be something like 50 % cardboard and 50 % PET' ⁽¹⁵¹⁾.

(338) Given the common product overlaps and the expected growth of PET in those product segments, there is a common pool of customers which, primarily for marketing reasons, will need and use both carton and PET to satisfy the needs of their various customers. The parties have identified a significant number of overlap customers of their own brands of SBM and carton machines. Almost [...] of Sidel SBM machine sales ⁽¹⁵²⁾ have been made to Tetra's carton customers ⁽¹⁵³⁾. This overlap reflects common customers of the parties' brands of carton and SBM machines, not all customers that utilise a carton and SBM packaging machine in parallel. In addition, apart from the Tetra-Sidel overlap customers, Tetra has also identified [...] overlap customers which have purchased both carton and SBM machines from Tetra. Tetra's own calculations show that in the period 1996 to 2000 (a period when PET use in the EEA in the relevant product segments was minimal), it sold a total of [...] SBM machines. [...] of these, or [...], were sold to overlap customers.

(339) The Commission found that parallel use of PET and carton is already an established practice for a significant number of customers. For example, the Commission's investigation of Italian dairies showed that approximately half of the dairies responding to the Commission's investigation (including the two largest dairies in Italy) already use both carton and PET for the packaging of their milk and that the overwhelming majority of the remainder (which currently use only carton) are interested or are planning to use PET in the future. Retailers have also stated that they stock PET and carton-packaged products which they offer to the same customer groups. There are several examples of branded liquid-foods packaged in both carton and PET such as Minute Maid orange juice, Stassano milk, Nesquik milk

and others. Canadean, the notifying party's expert, has identified a large number of companies that currently use both carton and PET lines in the EEA ⁽¹⁵⁴⁾.

(340) In addition, it is clear that as regards some specific pieces of PET equipment such as aseptic PET filling machines or ultra-clean/aseptic Combi SBM machines the overlap product and customer base may be 100 %. This is because aseptic PET equipment is by its nature specific to the relevant end-use product segments, LDPs, juices, FFDs and tea/coffee drinks where carton is currently the predominant packaging material. The same argument applies when looking at whole PET packaging lines of which the SBM machine is only a part. An aseptic PET packaging line is optimised for the filling of 'sensitive' beverages. In such cases the customer overlap may again be 100 %.

(341) Finally, it is also important to note that even with a small penetration of PET in the overall market for LDPs and juices the number of overlap customers will be significant. This is because even if, as Tetra claims, a customer uses PET only for niche or premium products and reserves carton for the majority of its production, the customer will still be an overlap PET-carton customer. It is therefore expected that a growing number of producers will have both carton lines and PET lines within their premises and thus the Commission expects the proportion of common customers to increase in the future. The current developments in Italy are not unique and the proportion of common customers is therefore expected to reach at least the level observed there at present. This has led some respondents to the Commission's investigation to allege that it is not unreasonable to conclude that 'every carton client of Tetra is a potential PET client ...' ⁽¹⁵⁵⁾.

3.3.2. Effects on the PET equipment sector: creation of a dominant position in PET packaging equipment, and in particular SBM machines, by leveraging of dominance in aseptic carton packaging

(342) The bringing together of Tetra's dominant position in carton packaging and Sidel's leading position in PET packaging equipment, in particular SBM machines would create a market structure which would enable the

⁽¹⁵¹⁾ PET Planet Insider Vol. 2 N04+5/01 Francis Oliver, President of Sidel France 'Innovation is my added value to the company'.

⁽¹⁵²⁾ Around [...] customers representing around [...] of Sidel's customers across all end-use product segments.

⁽¹⁵³⁾ Submission of the notifying party dated 21 June 2001.

⁽¹⁵⁴⁾ According to Canadean the following companies use (already in 2000) both PET and carton. In the juice segment: Del Monte; Pepsi; Joker; Eckes Granini; Coca Cola; Gerber; Emig; Conserve Italia; Parmalat. In FFDs: Britvic; Schweppes; Garcia Carron; Chaudfontaine; Glaxo (Ribena); Parmalat. In iced tea: Liptons; San Benedetto; Nestle/Coca-Cola; Migros. In LDPs: Campina; Parmalat; Granarolo; Cooperlat; Friesland; NOM; Bergland Milch.

⁽¹⁵⁵⁾ Third-party response to Commission questionnaire dated 8 June 2001.

merged entity to leverage its dominant position in aseptic carton packaging to acquire a dominant position in the PET packaging equipment market and, in particular, the market for SBM machines (low and high-capacity) used for 'sensitive' products. In this way, the PET equipment sector which is currently more open and competitive than the carton equipment sector would become increasingly concentrated.

3.3.2.1. *Strategic move*

- (343) Tetra's acquisition of Sidel appears to be a strategic move which Tetra expects to enable it to become and remain 'the world's leading liquid-food processing and packaging company' [...] (156). Through the acquisition of Sidel, Tetra would achieve these objectives by leveraging its dominance in carton packaging equipment into PET packaging equipment.

3.3.2.2. *Tetra claims leveraging not possible*

- (344) Tetra has stated that 'the separate markets for PET and carton packaging equipment are not susceptible to bundling' (157). Tetra bases this argument on the following alleged factors: (i) limited customer overlap; (ii) buyer power of overlap customers; (iii) the fact that PET and carton equipment is sourced separately; (iv) the fact that carton and PET equipment are not complements; (v) the fact that SIG can match the merged entity's offerings and thus neutralise any bundling strategy.

- (345) The Commission's investigation has not corroborated the notifying party's assertions. First, the customer overlap of the parties is already significant and will grow in the future to such an extent that every carton customer is likely to be a potential PET customer. Secondly, the majority of dairy and juice companies in the EEA are not large and powerful customers with significant buyer power but small and medium-sized enterprises which have been traditionally dependent on Tetra for their carton packaging needs. In any event, even the largest customers of the parties do not represent

more than [...] of sales. Thirdly, the Commission's market investigation revealed that, even at current levels of PET use, some customers are already sourcing carton and PET equipment at the same time and demand common service and guarantees. In any event, nothing would stop the merged entity from inducing customers to source their equipment at the same time and from a single source changing the structure of the business. Fourthly, carton and PET do not need to be 'complements' in the economic sense of the term (i.e. products which are consumed or produced together in a fixed proportion (158)) for tying, full-line forcing or bundling to take place. Most importantly, the fact that PET and carton are not 'complements' in the economic sense of the word but rather technical substitutes provides a stronger economic incentive for leveraging. This is explained further below in the section entitled 'ability and incentive to leverage'. Finally, SIG and other competitors would not be in a position to match the merged entity's product range, customer contacts, financial and market strength (its market share is no more than [10 to 20 %] and it currently lacks PET barrier technologies).

3.3.2.3. *Ability to discriminate*

- (346) Tetra claimed that leveraging would not be possible because the merged entity would not have the ability to price discriminate and thus target selectively specific customer groups (159). Tetra bases its claim on three arguments: SBM machines are generic; SBM machine suppliers do not know the intended use of SBM machines; there is no evidence of past price discrimination by Sidel.

- (347) The Commission cannot accept Tetra's arguments. The Commission found that Tetra's claim was not correct and that, on the contrary, price discrimination is possible (160). The majority of SBM machines are indeed generic in that they produce empty bottles. However, PET lines, of which SBM machines form a part, are not generic. They are modified in order to fill particular liquids.

(156) Internal Tetra document provided as Annex 3 to the notification.

(157) Submission of the notifying party dated 21 June 2001 and subsequent submissions.

(158) Complements in the economic sense of the term are products which are consumed together like coffee and milk or sinks and taps or produced together like petrol and diesel oil.

(159) Reply, paragraph 106.

(160) This has already been explained in the market definition section discussing SBM machines, Section IV.4.1.5.

- (348) SBM suppliers have very good knowledge of the customer's intended end-use and work closely with the customer in designing the specifications he requires. SBM suppliers visit the customer's site providing service and spare parts on an ongoing basis. The parties provided the Commission with all their past sales broken down by end-use products showing that they had very specific knowledge of end-use. In addition, sales for SBM machines are largely on the basis of tenders and individual negotiations. This makes price discrimination possible.
- (349) Finally, the Commission found evidence of past price discrimination using data provided by Sidel.
- (350) The notifying party's economic consultants provided arguments to show that there is no evidence of price discrimination based on the end-use of an SBM machine by examining Sidel's margins. It was concluded that there was no evidence that Sidel's margins on high-capacity machines have varied based on end-use⁽¹⁶¹⁾.
- (351) In the notifying party's regression analysis the dependent variable was the margin on sales by Sidel of high capacity SBM machines. The explanatory variables used in this regression were (a) as series of 'year' dummy⁽¹⁶²⁾, (b) a 'new generation' dummy to control for possible differences in margins on 'Series 2 machines' and (c) a series of 'end-use' dummy variables that indicate the type of liquid-food packaged by the customer. The notifying party found that none of the end-use dummies were statistically significant. The Commission examined the regression analysis employed and found that the estimation was not robust⁽¹⁶³⁾. The Commission carried out its own estimation based on the data supplied by Tetra introducing further explanatory variables⁽¹⁶⁴⁾. The Commission's regression used price of the machine sold, rather than the margin earned on the sale as a dependent variable. The explanatory variables used were the capacity of the machine, a time trend, three country dummies and three dummies for end-uses (oil, water and CSDs). [information concerning Sidel's pricing policy]*.
- (352) At the oral hearing Tetra claimed that the Commission's analysis is fundamentally flawed because it does not test for the presence of price discrimination. Tetra argues that, in order to detect price discrimination, one has to make sure that the transactions concern the same product. Tetra claimed that the Commission is not controlling explicitly for cost. Although capacity does to some extent control for differences in the characteristics of the deals concerned, Tetra argues that capacity is a very poor control variable for difference in specifications, given that deals vary in a number of dimensions besides the capacity of machines. Tetra considers that cost provides a much better control for the effects that differences in the characteristics of the transactions concerned have on prices.
- (353) Tetra therefore re-estimated the Commission's regression but included cost as an explanatory variable with the result that, once cost was included in the price regression, the end-use dummies were again not statistically significant. Tetra concludes that there is no evidence that Sidel has been able to discriminate across buyers according to end-use.
- (354) On the issue of whether capacity controls for cost, the Commission found that using capacity as an explanatory variable is justified as it is clearly a crucial factor of cost. Regressing costs on capacity and end-use applications and location give a goodness-of-fit of 64 % and all variables are significant thus suggesting that cost is to a large extent explained by capacity.
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- (161) Memorandum by the notifying party's economists to the Commission dated 30 August 2001.
- (162) As explained in 'A Guide to Econometrics' (Peter Kennedy, Blackwells, 1992), a dummy variable is an artificial variable constructed such that it takes the value unity whenever the qualitative phenomenon it represents occurs, and zero otherwise. They are used just like any other explanatory variable.
- (163) The overall goodness-of-fit of the model was poor because important variables like capacity were not used in the regression. The regression was indicating that margins follow a pure random walk which is clearly unrealistic. Given the omission of variables, the error term could be correlated with included explanatory variables, a potential cause of a lack of robustness.
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- (164) Capacity, time trend, dummy variables for oil, CSD, beer, water; firms based in Germany, France and United Kingdom.

(355) Tetra's latest regression uses both cost and capacity as explanatory variables. This creates multicollinearity⁽¹⁶⁵⁾ (which means that the coefficients may have very high standard errors and low significance levels)⁽¹⁶⁶⁾ and the results become statistically defective.

(356) The Commission's original equation is therefore statistically meaningful as it is explaining price by capacity and variables linked to end-use and location. Given that the margin is the difference between price and cost, these variables (end-use and location) should also be useful in explaining the margin. This was not found to be the case in Tetra's first equation. To explain this it is worthwhile noting that the margin is the result of demand side and supply side effects and therefore it is not possible to infer the existence or non-existence of price discrimination because the two effects cannot be separated without additional information.

(357) This additional information can be found in the heteroscedasticity of residuals that can be detected in all the equations⁽¹⁶⁷⁾ discussed so far. Heteroscedasticity arises when the regression residuals have variances that are not constant across observations. In particular the residuals in Tetra's original regression are not purely random. A regression on the squared residuals on to capacity and other variables shows that capacity and location have a significant effect on the variance of residuals.

(358) Heteroscedasticity is therefore found to be evidence of price discrimination and the customer specific effects are found to drive the variance of Sidel margins. Taking into account heteroscedasticity, Tetra's original regression and the Commission's regression are both correct in showing that price discrimination does take place.

3.3.2.4. Ability and incentive to leverage

(359) The Commission's analysis has confirmed that the market structure resulting from the merger would be particularly conducive to leveraging effects.

There would be a common pool of customers requiring both carton and PET packaging systems to package 'sensitive' liquids.

Tetra has a particularly strong dominant position in aseptic carton packaging with [80 to 90 %]* of the market and a dependent customer base.

Tetra/Sidel would start from a strong, leading, position in PET packaging systems and in particular SBM machines with a market share in the region of [60 to 70 %]*.

Tetra/Sidel would have the ability to target selectively specific customers or specific customer groups as the structure of the market enables price discrimination.

Tetra/Sidel would have a strong economic incentive to engage in leveraging practices. As carton and PET are technical substitutes, when a customer switches to PET he/she is a lost customer on the carton side of the business either because he/she partially switched from carton or because he/she did not switch some of the production to carton from other packaging materials. This creates an added incentive to capture the customer on the PET side of the business to recover the loss. Therefore, by leveraging its current market position in carton, Tetra/Sidel would not only enhance its market share on the PET side but defend or compensate its possible loss on the carton side.

Competitors of Tetra/Sidel in both the carton and the PET equipment markets would be much smaller, with the largest competitor having no more than [10 to 20 %]* share in the market for carton packaging machines or SBM machines.

(360) In such exceptional circumstances, there is a need for particular vigilance when analysing effects of concentrations on the market⁽¹⁶⁸⁾.

⁽¹⁶⁵⁾ Table 8, column 5 of the notifying party's economic analysis dated 26 September 2001.

⁽¹⁶⁶⁾ As explained in 'A Guide to Econometrics' (Peter Kennedy, Blackwells, 1992), multicollinearity is an approximate linear relationship amongst some of the regressors. The consequence is that the variances of the collinear variables are quite large. These arise because the estimation procedure is not given enough independent variation to calculate with confidence the effect it has on the dependent variable. As a result, the estimates are not precise and do not provide reliable results.

⁽¹⁶⁷⁾ Table 8 of the party's economic analysis dated 26 September 2001.

⁽¹⁶⁸⁾ See Commission decision in *Tetra Pak/Alfa Laval* (cited in footnote 11), where the Commission stated that 'TetraPak holds a position of great market power. ... When faced with such a high degree of dominance, the Commission must be particularly vigilant, because in such circumstances even a very small increase in market power can have a disproportionately large negative effect on the competitive conditions on the market place.' In the same case, which was cleared by the Commission, the Advisory Committee expressed its view that 'concentrations involving market-dominating undertakings with very high market shares should be judged particularly critically as regards their potential effect of strengthening market domination'.

3.3.2.5. Leveraging practices

- (361) Owing to its strong dominant position in aseptic carton packaging, Tetra's customer base covers almost the entire dairy and juice beverage industry. The Commission's market investigation confirmed that Tetra is an unavoidable business partner for dairies and juice producers in the EEA.
- (362) It is also important to note that Tetra's relationship with its customers is a very close one. The nature of Tetra's business and one of its major commercial advantages is the strong ties it creates with its customers. Indeed, Tetra is not a simple equipment supplier, which sells machinery to its customers and severs its links with them. On the contrary, Tetra supplies consumables (the aseptic carton reels or non-aseptic carton blanks) to many of its customers on a long-term basis⁽¹⁶⁹⁾.
- (363) Through the merger, Tetra/Sidel would have a unique advantage in entering these markets over PET equipment competitors that lack this established customer base in the traditional carton end-use segments. Tetra/Sidel would be in a position to know exactly which customers have plans to switch to PET and, knowing the clients' needs through its carton side of the business, would be able to impose on them timely and bespoke PET solutions enabling them to make the switch from carton to PET seamlessly with a single supplier.
- (364) Leveraging its dominant position in aseptic carton in a number of ways, Tetra/Sidel would be able to marginalise competitors and dominate the PET equipment market, in particular SBM machines. Tetra/Sidel would have the ability to tie carton packaging equipment and consumables with PET packaging equipment and, possibly, preforms (in particular barrier-enhanced preforms). Tetra/Sidel would also have the ability to use pressure or incentives (such as predatory pricing or price wars and loyalty rebates) so that its carton customers buy PET equipment and, possibly, preforms from the Tetra/Sidel and not from its competitors or converters.
- (365) Many customers who will continue to need carton packaging for part of their production needs could be forced or provided with incentives to source both their carton and PET equipment from a single supplier of carton and PET packaging equipment. Customers having long-term agreements with Tetra for their carton packaging needs will be particularly vulnerable. Tetra may offer them renewed contract terms allowing them to switch

part of the production to PET provided they take PET equipment and services from Sidel or customers may be dependent on Tetra through long-term contracts (most customers will not make a complete switch from carton so will continue to need Tetra in the carton field). In this way, Sidel's position in PET equipment and in particular SBM machines would be enhanced in all the new PET product segments (LDPs, juices, still drinks and tea/coffee drinks).

3.3.2.6. Effects of leveraging

- (366) The notifying party argues that the above leveraging practices will not have any anti-competitive or foreclosure effects⁽¹⁷⁰⁾. Tetra's claims focus only on two possible practices, 'mixed bundling' and 'forced bundling or tying' and claims they will not have any effect in the packaging market. As regards 'mixed bundling', Tetra claims that this should not be a concern as 'the amount of SBM sales that a strategy of mixed bundling could divert away from competitors is very small relative to the entire SBM demand' as competitors could continue to sell their SBM machines to the majority of customers that only need SBM machines such as CSD and water producers. As regards 'tying', Tetra claims that such a strategy would amount to a commitment to sell the two machines (carton-SBM) only together. Such a strategy would be unprofitable as many customers not interested in PET would not want to buy the bundle and turn to competitors. In addition, competitors could not be harmed as, again, they could continue to sell their SBM machines in other end-use segments (where carton is not used) such as CSDs and water.
- (367) The Commission cannot accept Tetra's arguments. It is not clear why the merged entity would need to choose exclusively between 'mixed bundling' and the limited type of 'tying' put forward by the notifying party's economic experts. Given its ability to price-discriminate, it is indeed most unlikely that the merged entity would decide to offer carton packaging machines and PET packaging equipment exclusively as a bundle. Instead, it would be more rational for the merged entity to continue to offer its PET packaging equipment independently to those customers not able to use carton (e.g. CSD or beer producers) and vice versa.

⁽¹⁶⁹⁾ Tetra follows a similar approach in its PET preforms business.

⁽¹⁷⁰⁾ Reply, paragraphs 93-107 and submission of the notifying party dated 26 September 2001, pp. 14-17.

(368) The notifying party maintains that leveraging cannot have anti-competitive effects because competitors cannot be harmed or foreclosed. This contention, which is based on the argument that competitors will continue to have outlets for their SBM machines in end-use product segments (water, CSDs) where carton is not a main packaging material, ignores a key point. Quite independently of whether or not competitors are foreclosed in the water, CSDs or beer segments, the fact remains that, if Tetra manages to exclude them or marginalise them from the juice and LDPs segment, Tetra will be in a position to exploit customers in these markets.

(369) In any event, competitors are likely to be foreclosed for the following reasons: (a) whether competitors can continue to sell in the untied product segments (e.g. water or CSDs) is not relevant. This is due to the ability to price-discriminate and target specific customer groups which results in a segmentation of the relevant markets by end-use; (b) the 'sensitive' product segments consist of very complex liquids which require very specific PET lines including barrier technologies and aseptic filling machines or aseptic Combi SBM machines. Competitors would not have sufficient incentive to invest and compete in these high technology areas of PET equipment. Competitors, Sipa and SIG, explained at the oral hearing that their ability and incentive to conduct R & D and compete in the 'new era' PET markets (i.e. 'sensitive' beverages) would be curtailed as a result of the merger. Competitors would thus be foreclosed from the 'second era' ⁽¹⁷¹⁾ markets of PET.

(370) In addition to their foreclosure from these relevant markets, competitors may be foreclosed from the rest of the SBM machine market. Even under current more competitive conditions, Sidel has a leading position with [60 to 70 %]* of the SBM machine market (regardless of end-use). This leaves a smaller part of the market available to competitors. In addition, the traditional non-sensitive product markets are saturated and much less growth is expected in these markets. This view is

espoused by Sidel in its annual 1999 accounts where it states that PET is now entering its 'second era'. BNP Paribas states that given that the traditional non-sensitive markets of PET are close to saturation, '... to keep selling lots of blow-moulding machines, Sidel is now targeting "sensitive" beverages'⁽¹⁷²⁾ Competitors are therefore likely to be foreclosed from the higher-growth, higher margin part of the market.

3.3.2.7. Weak position of competitors

(371) In addition, competitors of the merged entity in both the carton equipment market and SBM machine market are already significantly smaller than the merged entity. Just comparing the annual turnover of a merged Tetra/Sidel and its largest competitor, the SIG group, shows that Tetra/Sidel would be almost 10 times larger.

(372) Most importantly, Tetra's contention that Sidel's three high capacity competitors can match Sidel's offerings disregards a crucial point: these competitors will lack the merged entity's dominant position in carton packaging. The SIG group, the only one of the three competitors which will have both carton and PET activities, will have market shares of no more than [10 to 20 %]* in carton packaging machines and SBM machines. SIG lacks the full range of the merged entity in PET equipment as it currently lacks an essential element, barrier technology, for any future penetration in PET's new product segments. No other supplier of packaging equipment will be able to offer both carton and PET packaging equipment.

3.3.2.7.1. Market shares of competitors

(373) Tetra/Sidel would have by far the largest share of the market in both low and high-capacity SBM machines regardless of possible end-use segmentations. Tetra/Sidel would have more than [60 to 70 %]* of the high-capacity market and around 60 % of the low-capacity market. Sidel estimates that its share of the high-capacity SBM machine market by end-use segmentation gives it a market share of [60 to 70 %]* in the milk sector and [60 to 70 %]* in the juice sector.

⁽¹⁷¹⁾ Sidel explains in its annual accounts 1999 that, the traditional markets for CSD and water having matured, PET is now entering its second era which focuses on 'sensitive' products.

⁽¹⁷²⁾ Equity research of BNP Paribas on Sidel 9 October 2000, page 3.

(374) The second largest competitor will be far smaller by comparison with a market share of [10 to 20 %]* (SIG and Kronos in the high-capacity market and ADS in the low-capacity market). It is also important to note that the merged entity's market share has remained relatively stable and consistently very high (in the region of 60 %) over a long period of time.

(375) The merged entity would also enjoy a dominant position in aseptic carton packaging machines and aseptic cartons (with consistently high market shares [of 80 to 90 %]*) and a leading position in non-aseptic carton packaging which confers on it a dominant position in the overall market for carton packaging equipment and carton consumables.

3.3.2.7.2. Technological lead

(376) Tetra/Sidel would also have a clear technological advantage over their competitors. Sidel is a pioneer in the SBM machine market. The Commission's market investigation has confirmed that the majority of customers rate Sidel extremely highly for the technological quality of its machines to the extent that some large customers have a Sidel-exclusive policy for their PET bottle production needs.

(377) Sidel naturally takes great pride in its technological prowess. In its 1999 accounts Sidel states: 'Sidel derives its leading edge from unique technological prowess in high-output machines, in-depth knowledge of packaging materials and consistently rapid service throughout the world. Sidel's complete command of PET blow-moulding technology enables it to meet this rising demand.' According to Sidel, 'the technical advances brought by the SBO series 2 have driven up machine productivity by 25 %. It is precisely this ability to innovate ...together with its comprehensive offerings and services that allow Sidel to strengthen its global leadership: 65 % of PET packaging produced worldwide comes from Sidel machines' ⁽¹⁷³⁾.

(378) The merged entity would have a far greater range of products in the PET packaging sector than any of its competitors. The merged entity would have an unparalleled SBM machine range covering the full existing range from very low-capacity linear technology machines (Dynaplast) or low-capacity rotary machines (Sidel) to the highest-capacity machines available in the

world (Sidel's SBO 50 000 bph). The merged entity would also be able to offer leading, innovative products such as the Combi machine, hot-fill SBM machines, and preferential heating machines. Independent analyst Pictet concluded in its report of the industry in September 2000: 'With this unmatched range, Sidel has a machine for every manufacturing objective, with output rates that correspond precisely to clients' production goals' ⁽¹⁷⁴⁾.

(379) The merged entity would also be at the forefront of new technologies with the combination of the parties' two plasma-barrier technologies Actis (Sidel) and Glaskin. There is no doubt that the combination of the two leading plasma technologies together with unique aseptic filling technology (Combi) would provide the merged entity with an extremely strong position in PET packaging equipment for oxygen-sensitive products, one of the areas for particular growth for PET to the possible detriment of carton.

(380) The merged entity would also be the only wholly integrated PET equipment manufacturer able to offer a full range of PET products and equipment from preforms to the finished bottle including plastic closures. This together with Sidel's unparalleled expertise in mould and bottle design, preform and feasibility testing at its dedicated testing centres in France would place the merged entity in a position that its competitors would not be able to match.

3.3.2.7.3. Aseptic know-how

(381) For a PET equipment company to profit from what Sidel calls the 'second era in PET packaging' ⁽¹⁷⁵⁾, that is packaging of 'sensitive' products like juice, liquid dairy products and isotonic drinks (all drinks traditionally packaged in cartons), it is important to have a viable barrier technology, but even more so a viable aseptic filling solution. This is acknowledged widely in the industry. An independent analyst concludes: 'As consumers are increasingly insisting on PET packaging for milk, juices and sauces, it is of the utmost importance to have an aseptic-filling solution for PET bottles' ⁽¹⁷⁶⁾.

(382) The merged entity would combine the two leading names in aseptic filling with one third of the installed aseptic PET filling machines in the EEA: TetraPak (Tetra) and Remy (Sidel). Aseptic know-how and proven track record is of paramount importance to customers because of the grave consequences of any kind of unsterility in

⁽¹⁷³⁾ Sidel Annual Accounts 1999, page 38.

⁽¹⁷⁴⁾ Pictet Report, page 31.

⁽¹⁷⁵⁾ Sidel Annual Accounts 1999, page 5.

⁽¹⁷⁶⁾ Pictet Report, page 5.

the final product. The majority of beverage companies responding to the Commission's market investigation stressed the importance of guaranteed sterility through proven track record and aseptic expertise.

- (383) The merged entity would have activities in aseptic filling in carton, PET and HDPE. It would benefit from Tetra's unique aseptic expertise and reputation which includes a full range of processing equipment such as separators, heat exchangers, homogenisers, evaporators, aseptic processing systems and flow equipment. Major competitors such as the SIG group lack the necessary PET or HDPE aseptic presence and have much more limited activities in aseptic carton packaging especially for the most 'sensitive' LDP products. No other packaging equipment company has aseptic processing expertise. Thus, the merged entity's reputation in aseptic packaging, its proven track record and its ability to 'guarantee' sterility of the final product would constitute a high barrier for existing competitor and new market entrants.

3.3.2.7.4. Service and sales force

- (384) The Commission's market investigation confirmed that the ability to offer quick and effective support anywhere in the world requires local presence and is a key factor for those clients which depend on the reliability of their own in-house packaging operations. Already, Tetra and Sidel have the most extensive worldwide network of sales and service organisations many times larger than their largest competitor in either the carton or PET sector. After the merger, the lead of the merged entity would be unassailable. Potential competition between the two leading players would be lost.

3.3.2.7.5. R & D

- (385) The merged entity's research and development (R & D) capabilities would also be enhanced and would place the merged entity in a position that no competitor could match. The merged entity would have at least twice as many employees and at least twice the available capital dedicated to R & D activities as its closest competitor, the SIG group. Tetra has [...] R & D centres around the world employing [...] people engaged in numerous R & D projects⁽¹⁷⁷⁾.

- (386) The massive, merged R & D capabilities of the merged entity would ensure the continuation of its clear lead over its competitors and result in a loss of future competition between Tetra and Sidel in innovation and R & D which would have taken place without the merger. Tetra puts it succinctly in its 2000 annual report: 'Tetra Pak regards research that focuses on the needs of customers and market, and the continued development of systems for processing, packaging and distribution, as the best way to ensure that it will retain its leading position in the world market'⁽¹⁷⁸⁾.

3.3.2.7.6. Financial strength and size

- (387) The notifying party claims that it would not have any significantly higher financial strength than its competitors⁽¹⁷⁹⁾. The Commission's data does not support Tetra's contention. The merged entity would be far larger in terms of employees, employees active in R & D, sales force, international presence, turnover and profitability than its competitors. For example, the turnover of the merged entity would be almost 10 times larger than that of its next largest competitor.

3.3.2.8. Lack of buyer power

- (388) Customers of the merged entity in the common product segments (LDPs, juices, FFDs, tea/coffee drinks) would not have the ability to exercise significant countervailing buyer power. The customer base in the LDP and juice segment is fragmented with the majority of customers being small and medium-size enterprises. In any event, it is important to note that Sidel's largest customer in the EEA (a converter) accounts for approximately [...] of sales and the largest non-converter customer (a multinational beverage company) accounts for less than [...] of Sidel's sales. Tetra's customer base is similarly fragmented.

3.3.2.9. Conclusion

- (389) In the light of the foregoing, it is concluded that, by combining the dominant company in carton packaging, Tetra, and the leading company in PET packaging equipment, Sidel, the proposed transaction would create a market structure which would provide the merged entity with the incentives and tools to turn its leading position in PET packaging equipment, in particular SBM

⁽¹⁷⁷⁾ Tetra's Annual Accounts 2000, page 17.

⁽¹⁷⁸⁾ Tetra's Annual Accounts 2000, page 17.

⁽¹⁷⁹⁾ Reply, paragraph 92.

machines (low and high-capacity) used for the 'sensitive' product segments into a dominant position. This is also likely to enhance the merged entity's position and have anti-competitive effects on the overall SBM machine market.

3.3.3. Effects on carton: strengthening of a dominant position

(390) The proposed transaction would create a market structure which would enable Tetra to strengthen its current dominant position in carton packaging by eliminating a source of significant competitive constraint.

(391) This could have serious negative consequences in the carton packaging sector. As the Commission stated in its 1991 decision concerning TetraPak's merger with Alfa Laval⁽¹⁸⁰⁾, 'TetraPak holds a position of great market power. ... When faced with such a high degree of dominance, the Commission must be particularly vigilant, because in such circumstances even a very small increase in market power can have a disproportionately large negative effect on the competitive conditions on the market place.'

3.3.3.1. PET as a competitive constraint: loss of competitive pressure from a closely neighbouring market

(392) The results of the Commission's market investigation appear to establish that as a packaging material carton has traditionally dominated the milk and juice market, in particular as regards aseptic packaging. More than 80 % of aseptically filled products were put in carton packages in 1999. This is due to the risk of contamination related to the packaging of these products requiring established aseptic technology and ultra-clean or aseptic filling which is well established in carton packaging.

(393) However, as explained in the market definition section, PET has already challenged some smaller carton end-use segments such as FFDs and tea/coffee drinks and is expected to grow significantly in the larger end-use product segments such as LDPs and juices which traditionally have been packaged in carton. Growth of PET in LDPs, juices, FFDs and tea/coffee drinks will inevitably be to some extent at the expense of carton.

(394) Companies active in PET packaging, especially Sidel and converters, are clearly engaged in business strategies aimed at increasing the use of PET in order to take market share from carton. The Commission's market investigation has revealed a number of independent studies as well as business analyses of the parties which speak about this competitive growth of PET. The Paris

stock exchange, CDC Bourse, gave the following information on Sidel: 'Brick packaging is currently losing market share to PET packaging'⁽¹⁸¹⁾ In its publication 'The Sidel Saga 1961-1998+', Sidel states 'now that the TetraPak brick package is losing steam, there are new opportunities for plastic bottles to win market share'⁽¹⁸²⁾. Sidel's new target markets would be 'fruit juices and new age drinks... plastic is taking some of the market share away from the cardboard brick pack...'. In fact, Sidel was planning to enter the markets for 'sensitive' products and take market share away from carton. JP Morgan, in an analysis of Sidel, states that Sidel made acquisitions to enter the milk and fruit juice market. 'Sidel wanted to gain greater expertise in the aseptic packaging of milk and fruit juices... the packaging choice for these products has historically been paper-board cartons, supplied by TetraPak or SIG. In Remy Sidel intends to develop equipment that can introduce the use of PET to these markets ...'.

(395) Third parties maintained that, without the merger, the major company in PET packaging equipment (Sidel) in conjunction with converters would compete in a closely neighbouring market which would exert some significant competitive pressure on the carton packaging market by bringing innovative solutions to the market and forcing Tetra to innovate and lower prices in carton packaging. Following the proposed merger, this competitive pressure would be lost.

(396) In its reply, Tetra claimed that the merged entity would not have the ability to control consumer demand in this way. Tetra bases its argument on the fact that PET packaging equipment, and SBM machines in particular, constitute an extremely small part of the retail price of the final end-use product. As a result, Tetra claims that the merged entity would need to put SBM machine prices up by 2 000 % to effect a 10 % increase in the final retail price and hence to cause some consumers to switch from PET to carton packaging. According to Tetra this is clearly unrealistic.

(397) Tetra has failed to address the Commission's concerns which focused on the effect on carton prices, not SBM machine prices. As Tetra points out the Commission has concluded that carton and PET packaging systems form distinct albeit closely neighbouring product markets that exert some competitive constraint on one another. Carton and PET are technical substitutes in the sense that they can package the same end-use products and can also be considered 'weak substitutes' in an economic sense. The realities of the market dictate that any shift

⁽¹⁸¹⁾ CDC Bourse on Sidel 30 November 2000, page 1.

⁽¹⁸²⁾ 'The Sidel Saga 1961-1998+', Sidel Communication, pp. 2 and 3.

⁽¹⁸⁰⁾ See *Tetra Pak/Alfa-Laval* (cited in footnote 11).

between the two materials is likely to take place primarily for marketing considerations and that it will be primarily a one-way shift from carton (the old, traditional technology) to PET (the new, modern technology). As explained in the section on market definition, many respondents clearly stated that they have already switched or would switch from carton to PET despite PET being more expensive or despite no change at all in carton prices. This shows that some customers would switch from carton to PET even at 0 % carton price increases. However, other more price-sensitive customers indicated that they would only consider a switch from carton to PET if carton prices rose by a significant amount of 20 % or more. These same price-sensitive customers would presumably be dissuaded from making a switch from carton to PET if a carton price reduction increased the price difference between a carton and PET packaging line. In addition, Tetra's argument that Sidel is only able to influence the price of equipment (SBM machines) which forms a very small proportion of the total packaging cost does not apply to Tetra's ability to influence the cost of carton packaging. Tetra has the ability to influence the price of both carton packaging machines and cartons.

(398) Without the merger, PET companies would be expected to compete vigorously to gain market share from carton. Tetra would also be expected to defend its position fiercely by seeking to improve its carton packaging solutions by innovating, bringing better carton technology, new carton shapes and closures and, in some cases, lowering carton prices to defend its position. Indeed, Tetra has been active in this field and has produced new carton packages with more user-friendly features such as the carton gable top package with screw-top closure.

(399) Following the proposed transaction, Tetra would not need to compete as vigorously. Tetra/Sidel would be placed in a situation where it effectively has the ability to control significantly the shift from carton to PET. Tetra/Sidel could keep its carton package prices at the current high levels for those customers or that part of customers' production unable or unlikely to switch totally or partially to PET due to consumer preferences, switching costs and long-term contracts. For those customers keen to switch to PET, Tetra/Sidel would be in a position to influence its customers' choice of packaging machines, for example, through the timing of the shift, and to offer its timely and tailor-made solutions, thus increasing its PET equipment market share. [...]*(¹⁸³). Thus, by eliminating Sidel as a growing

competitive constraint in a closely neighbouring market, Tetra's position in carton packaging would be strengthened.

(400) At the same time Tetra would pre-empt the major advantage of its main competitor, the SIG group which is the only other company in the world that manufactures and sells both carton and PET packaging equipment.

3.3.3.2. Conclusion

(401) On the basis of the foregoing, the Commission has reached the conclusion that Tetra's already quasi-monopolistic aseptic carton position in the EEA could be strengthened further by the proposed transaction.

3.3.4. The merged entity's dominant position in carton and PET packaging equipment as well as its presence in HDPE would reinforce dominance and raise barriers to entry

(402) It is important to emphasise the fact that Tetra currently dominates liquid-food packaging, in particular the aseptic packaging sector due to its particularly strong position in aseptic carton packaging. Tetra has almost 80 % of the aseptic carton market, which amounts to approximately 60 % of the overall aseptic sector (that is all aseptically filled liquids). This is because of carton's past and current strong position in the aseptic sector. In the past carton has faced, and continues to face, very limited competition from other materials in aseptic filling.

(403) Tetra, up to very recently, was a one-product organisation with just carton solutions (the Tetra Brik system). In recent years, Tetra has looked to expand its packaging solutions to become a more complete packaging organisation. In its annual accounts 1999, Tetra presents itself as leading food packaging company with a multi-product solution. 'Tetra Pak's customers now enjoy the advantage of being able to get everything they need from a single source, with matching equipment at every stage. Tetra Pak is the only supplier in the market to assume overall responsibility for uninterrupted production ... Tetra Pak can also offer no fewer than 11 packaging systems [mainly different carton packages] for pasteurised and aseptically packaged products.' A good PET

(¹⁸³) Internal Tetra document provided as Annex 3 to the notification.

capability was the only element missing from Tetra's multi-product offering; Tetra's activities in PET have been limited due to the current limitations of its SBM technology.

(404) Following the merger, the merged entity's equipment would cover all the relevant machinery in carton, PET and HDPE. Tetra/Sidel would be able to offer leading technology in aseptic and non-aseptic carton packaging machines, aseptic and non-aseptic cartons, SBM machines of low and high-capacity including aseptic and non-aseptic Combi machines, aseptic and non-aseptic PET filling machines, aseptic and non-aseptic HDPE filling machines, EBM machines and Combi HDPE machines as well as the necessary secondary equipment such as plastic closures. The fact that the merged entity would hold dominant positions in two closely related neighbouring markets (carton and PET packaging equipment) and a notable presence in a third market (HDPE) would enable the merged entity to have a particularly strong presence in the sectors for the packaging of the relevant end-use products (LDPs, juice, FFDs, tea/coffee drinks).

(405) Carton, PET and HDPE constitute the most important packaging materials for the following product segments: LDPs, juice, FFDs, teas and for all aseptically filled liquids. Approximately 96 % of all aseptically filled liquids were packaged in carton, PET and HDPE in 1999⁽¹⁸⁴⁾. The Commission analysis confirmed that cans and glass have serious limitations as packaging materials for those products: cans are limited in shape and are in general more expensive; glass as a packaging material is limited to premium products and, according to Tetra aseptic filling in glass is 'an outlived technology uncommon in the EEA'⁽¹⁸⁵⁾. Independent analysts forecast that plastic bottles (PET and HDPE) have shown the most rapid growth and are expected to be the fastest-growing type of pack in aseptic packaging in the next three years⁽¹⁸⁶⁾.

(406) Even when taking into account all packaging materials used to package the relevant 'sensitive' products (LDPs, juices, FFDs and tea/coffee drinks), Tetra/Sidel's position would be particularly strong in all end-use sectors. Tetra/Sidel's share in the overall juice sector would be in the region of 50 % and in the overall LDPs sector [50 to 60 %]* and the overall aseptic sector around 60 % with

Sidel representing [0 to 10 %]* in all these end-use sectors⁽¹⁸⁷⁾.

(407) The above figures show that, as a result of the merger, Tetra's already strong position in the sector of packaging of the 'sensitive' products (in particular aseptically filled liquids) would be strengthened. The relatively small increases in the share in the main carton products are due to Sidel's current limited presence in the end-use product segments, milk and juice. However, PET's presence in the common product segments is expected to increase significantly in the future. The merged entity's position in those end-use product sectors would therefore continue to be very strong.

(408) Given this overall strong presence in the relevant sectors, barriers to entry would be likely to increase. Competitors would have to be able to match the overall strength of the merged entity in all relevant segments including the merged entity's wide product offering, superior position in aseptic technology knowledge, barrier technology, access to actual and potential customers and financial strength to compete on equal terms. As a result, it is likely that, through the merger, the merged entity's position in the end-use sectors of 'sensitive' products would marginalise competitors and raise barriers to entry thus reinforcing dominance in the relevant markets for carton packaging equipment and PET packaging equipment in particular SBM machines used for 'sensitive' products.

V. THE COMMITMENTS

(409) On 25 September 2001, Tetra offered commitments with the purpose of removing the competition concerns identified by the Commission in its statement of objections sent to Tetra on 7 September 2001. These commitments included the divestiture of Tetra's SBM

⁽¹⁸⁴⁾ Warrick Report.

⁽¹⁸⁵⁾ Notification, page 65.

⁽¹⁸⁶⁾ Warrick Report.

⁽¹⁸⁷⁾ All calculations are based on figures provided by the notifying party which were supplied by Canadean. In each case, Tetra's share of the relevant market in carton is based on Tetra's share of the market for carton packaging equipment. Calculation of shares in the PET and HDPE sectors is more complicated because, unlike carton which includes a single process, the PET packaging process is fragmented in different segments (blowing-SBM machine; filling-PET filling machine). In the light of the above and given that, when looking at specific equipment, the transaction would be likely to cause concerns in the SBM sector primarily, PET market shares have been based on a conservative calculation of Sidel's share of SBM machine sales which, in terms of capacity, are in the region of 60 % for Sidel and [0 to 10 %]* for Tetra. Sidel's HDPE share is assumed to be [10 to 20 %]* and Tetra's [0 to 10 %]*.

and preform businesses. On 9 October 2001, Tetra submitted a new set of commitments replacing the commitments dated 25 September 2001. These commitments are offered with the understanding that the Commission can accept any or all of them.

(410) The commitments are set out in the Annex. They consist of (i) divestiture of Tetra's SBM business; (ii) divestiture of Tetra's PET preform business; (iii) holding Sidel separate from TetraPak companies and pre-existing behavioural remedies under Article 82 of the Treaty; and (iv) granting a licence of Sidel's SBM business for sale to customers filling 'sensitive' products and for sales to converters.

A. SUMMARY OF THE COMMITMENTS

1. DIVESTITURE OF TETRA'S SBM BUSINESS

(411) Tetra undertakes to divest to an independent third party its SBM machines business (SBM business). The SBM business consists of the following items, unless their divestiture is precluded by applicable law or not required by the SBM purchaser: (a) assets and equipment which are currently used by Tetra principally in the production and development of its SBM business; (b) technical, sales, production and administrative personnel belonging to the SBM business; (c) all contracts for the sale or service of the SBM products produced by the SBM business that exist as of the date of the undertaking and that are concluded by the date of the closing of the sale of the SBM business; (d) all intellectual property rights which are currently used exclusively by the SBM business; and (e) for any intellectual property rights of Tetra which are currently commercially used in the SBM business and other Tetra Laval businesses, a non-transferable, irrevocable, non-exclusive licence.

(412) [...]*.

2. DIVESTITURE OF TETRA'S PREFORM BUSINESS

(413) Tetra undertakes to divest to an independent third party its PET preforms business (PET preform business), consisting of the following: (a) assets and equipment which are currently used by Tetra principally in the production and development of its PET preform business; (b) technical, sales, production and administrative personnel belonging to the PET preform business; (c) all contracts for the sale of the PET preforms produced by the PET preform business that already exist as of the

date of the undertaking and that are concluded by the date of the closing of the sale of the PET preform business; (d) all intellectual property rights which are currently used exclusively by the PET preform business; and (e) for any intellectual property rights of Tetra Laval which are currently commercially used in the PET preform business and other Tetra Laval businesses, a non-transferable, irrevocable, non-exclusive licence.

(414) [...]*

(415) [...]*.

(416) In addition, Tetra has discontinued the use of Sealica barrier technology and has terminated its exclusive rights under the licence agreement of 29 October 1999.

3. SEPARATION OF SIDEL FROM TETRA AND ARTICLE 82 COMMITMENT

(417) Tetra undertakes to hold Sidel structurally separate from all Tetra Pak companies (Tetra Pak) for a period of [...]* years [...]*. Sidel will be maintained as a separate legal entity. Sidel's shares will not be owned by Tetra Pak or any Tetra Pak subsidiary, but by a separate company belonging to the Tetra Laval Group. Tetra may, however, change Sidel's current corporate form.

(418) Sidel will be managed by its executive board subject to certain approval requirements by and reporting obligations to a Sidel supervisory board as well as the Tetra Laval Group board. The chairman of the Tetra Laval Group board will be the chairman of the Sidel supervisory board. No member of the supervisory or executive board or officer or employee of Sidel may serve at the same time as a member of a supervisory or executive board or as officer or be an employee of any Tetra Pak company.

(419) Sidel will perform all marketing, sales, training services, technical support and technical services by means of its own departments or outsourcing agents, which will be separated from the respective departments or outsourcing agents of Tetra Pak companies by effective and reasonable firewall measures. No joint offerings of any of Tetra Pak's carton products together with any of Sidel's SBM machines will be made. Sidel will accept that the trustee appointed participates without any voting rights in the meetings of its supervisory board. According to the undertaking, Tetra has, after [...]* years, the right to request the Commission to review the necessity of the continuation of this undertaking.

(420) In addition, Tetra invites the Commission to take note of Tetra's pre-existing obligations vis-à-vis the Commission resulting from the *Tetra Pak II* decision and, in particular, the obligation set out in Article 3(3) of the Decision which states:

'Tetra Pak shall not practice predatory or discriminatory prices and shall not grant to any customer any form of discount on its products or more favourable payment terms not justified by an objective consideration.'

4. LICENCE OF SIDEL'S SENSITIVE PRODUCTS AND CONVERTER SBM

(421) Tetra undertakes to grant a licence for an indefinite term to an independent third party for Sidel's sensitive products and converter SBM Business (the licence). Under the licence, the licensee shall have the right to manufacture and sell SBM machines to (i) converters for any end-use whatsoever; and to (ii) all other customers subject to the condition that they use these machines for blowing PET bottles for filling 'sensitive' products in the current EEA (sensitive product customers).

(422) The licensee will be able to sell under the following conditions:

- The licence is limited to the 'current' EEA ⁽¹⁸⁸⁾.
- The licensee will be able to sell only the existing range of Sidel SBM machines as defined in Annex 3 to the commitments (existing range) which excludes certain types of existing Sidel SBM machines ⁽¹⁸⁹⁾ or SBM machines of other suppliers (e.g. Dynaplast). The licensee will not be able to sell any new SBM machines Sidel produces. The licensee will not be able to benefit from any improvements Sidel makes to its existing range of SBM machines.
- The licensee will be able to sell only to customers filling 'sensitive' products and to converters for any use.
- For an initial [...] year period, the licence will be exclusive to sensitive product customers by prohibiting Sidel to sell its existing range of SBM machines as defined in Annex 3 to the commit-

ments to sensitive product customers. Sidel will be able to sell to converters. During the [...] year period, Sidel will also be able to sell new ⁽¹⁹⁰⁾ SBM machines to sensitive product customers for whatever purpose.

- The licensee will have to ensure that its customers (except converters) will use the SMB machines only for 'sensitive' products and not for other products and will seek such assurances from its customers. Tetra/Sidel will have the right to determine whether such assurances are satisfactory.
- The licence will not include any transfer of key technical or service personnel or assets. Sidel will provide the licensee with training for the first six months of the licence.
- The licence will prohibit change of control of the licensee (i.e. that another company acquires at least 50 % of the licensee).
- Pricing considerations are not yet clear but appear to involve a licence with no up-front payment or royalty fee but with a lump sum fee payable at a later date, depending on the size of the market for 'sensitive' products.

B. ASSESSMENT OF THE COMMITMENTS

(423) The notifying party maintains that the transaction should be authorised without any commitments and in any event the submitted commitments sufficiently address the competition concerns identified by the Commission. In the view of the notifying party, the divestiture of Dynaplast eliminates any possible horizontal concerns in the low-capacity SBM machines market. The divestiture of Tetra's preform business eliminates any possible vertical concerns arising from the channel conflict between the merged entity and converters. As regards the concerns on leveraging and the strengthening of Tetra's dominant position in carton packaging, the notifying party submits that the package of commitments eliminates any possible competition concerns. In the view of the notifying party, the two divestitures (Dynaplast and preforms) weaken the merged entity's position in the PET equipment market by limiting the

⁽¹⁸⁸⁾ I.e. the current parties to the EEA Agreement.

⁽¹⁸⁹⁾ Annex 3 of the commitments provides a list of Sidel SBM machines, which fall within the scope of the licence. [...].

⁽¹⁹⁰⁾ New machines are defined in the commitments as machines 'manufactured on the basis of a new machine design being more than an improvement of the current technology, by incorporating one or more technologies leading to a fundamental change in a component of, or any of the principal processes in, the machine that in turn leads to improved performance beyond normal adjustments to the present design'.

merged entity's market share in SBM machinery and excluding preforms from its PET offering. By removing Sidel for a period of [...] years from the SBM market for 'sensitive' products, the licence would ensure that Tetra/Sidel could not leverage its dominant position in carton to gain dominance in PET packaging equipment, in particular SBM machines used for 'sensitive' products. In addition, the behavioural undertakings would prevent Tetra/Sidel from engaging in anti-competitive practices. The licence would eliminate concerns regarding the strengthening of Tetra's dominant position in carton packaging as the licensee (especially if it also bought the Dynaplast business) would provide sufficient competition to Tetra's carton business. Finally, the above reduction in the merged entity's offerings would sufficiently reduce the merged entity's position in the overall end-use sectors of 'sensitive' products.

(424) In the view of the Commission the commitments submitted by the notifying party are insufficient to eliminate the major competition concerns identified on the PET packaging equipment and carton packaging markets. The two divestitures will have a minimal impact on the position of the merged entity. The licence will not only be insufficient to remove the Commission's competition concerns but does not appear to be a viable option and may actually introduce complex mechanisms in the market resulting in artificial regulation. Finally, the two behavioural commitments are considered insufficient as such to resolve the concerns arising from the structure of the market following the merger.

(425) Nevertheless, following their submission, the Commission services proceeded with a market test of the structural commitments and the licensing proposal to assess whether these commitments would meet the criteria with regard to the viability and the stand-alone nature of the assets. The result of this verification shows that, quite apart from the overall insufficiency to address the competition concerns raised by the transaction, the proposed structural undertakings do not meet the basic criteria regarding the viability of the businesses to be divested.

1. DIVESTITURE OF TETRA'S SBM BUSINESS (LOW-CAPACITY)

(426) The low-capacity market for SBM machines (< 8 000 bph) would become more concentrated as a result of the operation. Whereas before the merger there

would be no single supplier holding [30 to 40 %]* of the market, after the merger, Tetra Sidel would be by far the largest player with market shares in the region of 60 % ([30 to 40 %]* for Sidel⁽¹⁹¹⁾ and [20 to 30 %]* for Tetra). Several competitors would remain in the market but with small market shares of no more than [10 to 20 %]*.

(427) The proposed divestiture of Tetra's SBM machine business (Dynaplast) will eliminate the horizontal overlap of the parties in the market for low-capacity SBM machines. However, it does not solve the main leveraging concerns arising from the merger. Sidel will continue to be the leader in both low and high-capacity SBM machines with the most extensive range and best quality in the industry. This conclusion was confirmed by the market test which considered the position of Dynaplast in the overall SBM machines market as commercially insignificant. Finally, the divestiture obviously does not affect the reinforcement of Tetra's dominant position in carton packaging.

2. DIVESTITURE OF TETRA'S PREFORM BUSINESS

(428) The divestiture of Tetra's preform business and the discontinuation of Seolica as announced by Tetra would eliminate Tetra's activities in the preforms market. The divestiture may therefore solve concerns expressed by converters regarding a possible channel conflict between them and the merged entity. However, the divestiture does not resolve the Commission's concerns on leveraging or strengthening of dominance in carton packaging which do not rest on the ability of the merged entity to provide preforms. The merged entity's position will not be reduced in either SBM machines or carton packaging. Indeed, by eliminating the channel conflict, the divestiture is likely to ensure the continuation of Sidel's strong position as regards sales of SBM machines to converters as converters would have no longer the concerns that might prevent them from purchasing machinery from the merged entity. This conclusion was confirmed by the market test.

⁽¹⁹¹⁾ According to Sidel's most recent estimates (August 2001), its market share in the low-capacity SBM machine market was higher: [40 to 50 %]* on the basis of sales in 2001. According to Tetra's estimates and the Commission's own analysis, Tetra's market share remains [at 20 to 30 %]* (and could be [40 to 50 %]*) on the basis of sales in the year 2001.

3. SEPARATION OF SIDEL FROM TETRA AND ARTICLE 82 COMMITMENTS

- (429) The behavioural commitment, namely the separation of Sidel from Tetra Pak, together with the confirmation of pre-existing Article 82 undertakings, are submitted in particular with regard to the concerns on the ability of the merged entity to leverage its dominant position in carton packaging to gain a dominant position in PET packaging equipment. This commitment and the pre-existing Article 82 commitments are, however, purely behavioural. As such, they are not suitable to restore conditions of effective competition on a permanent basis⁽¹⁹²⁾, since they do not address the permanent change in the market structure created by the notified operation that causes these concerns.
- (430) The 'separation' of Sidel from Tetra Pak companies does not alter the fact that, as expressly acknowledged in the commitment itself, Sidel's board will 'be held responsible directly by the Tetra Laval Group board'. It cannot be expected that such separation will prevent Sidel from implementing the commercial strategy of the Tetra Laval Group. In addition Sidel's legal status could be changed, i.e. Sidel might be de-listed and turned into a private company like Tetra Laval which would make monitoring of 'firewalls' virtually impossible.
- (431) The commitment not to 'bundle' as well as the confirmation of the pre-existing Article 82 commitments, constitute pure promises not to act in a certain manner, indeed not to act in contravention of Community law. Such behavioural promises are in contrast with the Commission's stated policy on remedies and with the purpose of the Merger Regulation itself⁽¹⁹³⁾ and are extremely difficult if not impossible to monitor effectively.
- (432) Overall, in addition to being complex in their implementation and in their monitoring, these commitments cannot be considered as capable of removing effectively the competition problems identified.

4. LICENCE FOR SIDEL'S SBM MACHINES FOR SENSITIVE PRODUCT CUSTOMERS AND CONVERTERS

- (433) The notifying party maintains that the proposed licence would resolve the concerns identified by the Commission by: (a) eliminating Tetra's incentive and ability

to leverage its dominant position in carton to gain dominance in PET; (b) creating a new force to compete with Tetra thus eliminating any strengthening of Tetra's dominant position in carton; (c) by weakening the merged entity's overall position in packaging of 'sensitive' products.

- (434) It is the view of the Commission that the proposed licence arrangement does not resolve the Commission's concerns either on its own or together with the divestiture of the Dynaplast business and preforms business. The Commission concludes that the proposed licensing arrangement is not sufficient to resolve the competition concerns identified and that it is not likely to be a viable, workable arrangement.

4.1. *No elimination of competition concerns*

- (435) In the view of the Commission the proposed commitment is not sufficient to address the competition concerns identified, in particular the concerns regarding leveraging and strengthening of Tetra's existing dominant position in carton packaging.
- (436) The merged entity's position in carton packaging and SBM machines will not be sufficiently reduced by the licence on its own or together with the Dynaplast and preforms divestitures. Tetra will continue to be dominant in carton packaging and Sidel leading in SBM machines and the merged entity will continue to have the ability and incentives to engage in leveraging practices.
- (437) It is important to note that the licence will not ensure the exit of the merged entity from the relevant market. Even if the licensing arrangement were viable, the licence will not preclude Sidel from selling its existing range of SBM machines to sensitive product customers outside the EEA or to converters within or outside the EEA. In addition, Sidel will not be precluded from selling certain types of SBM machines, which are not included in the licence, [...]*.
- (438) Moreover, the licence will not preclude Sidel from selling a new range of SBM machines to any customers or from entering into leasing or possibly hole-through-the-wall arrangements. As regards the introduction of a new range of machines, innovation is an essential element of the business of manufacturing SBM machines and Sidel, given its strength in R & D and successfulness in innovation in the past, is expected at some point in the near future to launch new or significantly improved SBM machines. Such new or improved machines may fall within the meaning of 'new' machines as defined in the licence. The definition of 'new' machines in the licence would make it difficult for the Commission or the licensee to assess whether Sidel adheres to the terms of the licence and would entail complex and constant monitoring. This would undermine the effectiveness of the licence arrangement.

⁽¹⁹²⁾ Commission Notice on remedies acceptable pursuant to Council Regulation (EEC) No 4064/89 and pursuant to Commission Regulation (EC) No 447/98 (OJ C 68, 2.3.2001, pp. 3-11), paragraph 6.

⁽¹⁹³⁾ Court of First Instance, Judgment of 25 March 1999, in case T-102/96 *Gencor v Commission* [1999] ECR II-753, paragraph 316; Commission notice on remedies, paragraph 9.

- (439) Even if the commitment were viable, the licensee will not be able to exert the same amount of competitive pressure on Tetra's carton business that Sidel could have exerted without the merger. The licensee will be a smaller entity without Sidel's reputation, experience, sales force and R & D capabilities.
- (440) Even if the licence arrangement were workable, the commitment would merely be a postponement of the Commission's concerns by [...] years. In [...] years' time, the commitment will have done nothing to reduce Tetra's carton dominance and Tetra will then have the ability and incentives to engage in leveraging practices. In addition, by that time, the common pool of customers will be even larger as more and more customers will be converting to PET. Having remained active in this market outside the EEA, the merged entity would find it easy to re-enter the market in the EEA.
- (441) Finally, the commitment focuses on SBM machines. The commitment does not include a licence of other key PET equipment such as aseptic filling machines and barrier technology which the merged entity will be able to offer to sensitive product customers following the merger.

4.2. Commitment entails severe limitations and is likely to be unworkable

- (442) It is the view of the Commission that the commitment entails major limitations which, in all likelihood, would not result in a viable new entity. This was largely confirmed by the market test which included responses from customers, converters and competitors.
- (443) The licence is limited to the EEA. Thus, the licensee could not exploit economies of scale by having a larger available pool of customers. In addition, a few customers operating on a global scale considered the geographic scope of the licence a limitation as, in the event they purchased SBM machines from the licensee they would be restricted to the EEA. Exclusivity is for a period of [...] years and only as regards sensitive product customers. This may not be sufficient for any licensee to take the risk to develop the business. The imposed field of use restriction, i.e. that the licensee will only be able to sell to sensitive product customers together with the fact that the market will be relatively limited immediately following the transaction, may impact on the viability of the licensee. Other businesses will be able to sell to traditional and new markets whereas the licensee will be limited to the new markets only except when selling other (non-Sidel) SBM machines, for example its own pre-existing SBM machines or, if it also purchases the Dynaplast business, the Dynaplast SBM machines.
- (444) The licence does not include a transfer of technical or service personnel but merely a course of 54 man-weeks during the first six months of the licence. Given that customers maintained that service and personnel is a critical feature of SBM machine sales, this would be a great limitation. Market participants doubted in particular whether the licensee could even manufacture the machines under such an arrangement and confirmed that they would be reluctant to trust its servicing abilities. It was thought that Sidel's long experience in manufacturing such machines could not be replicated by a licensee.
- (445) Sidel is only prevented from selling its existing range of machines to sensitive product customers. If Sidel produces a new range of SBM machines as explained above, it can sell the new machines in competition with the licensee. The licensee has no right to benefit from such technological improvements. In addition, given that Sidel will be free to continue to sell to converters, the licensee is unlikely to have any success with converters given their need for service and design/testing services.
- (446) The licensee is obliged to seek assurances from its customers that they will use the SBM machines only for filling of 'sensitive' products in the EEA. The licensee will also need to ensure that the confidentiality of the licensed technology is not violated and will need to seek appropriate guarantees to this respect. If any of these conditions is breached the licensee faces penalties. Tetra/Sidel will have the right to judge whether conditions have been breached.
- (447) The licence does not cover aseptic filling machines or barrier technologies, i.e. key offerings for 'sensitive' beverages. The licensee may be severely limited by this inability to offer full lines (unless the licensee were a company with both aseptic and barrier-technology capability).
- (448) A number of market participants also expressed concerns as to the viability of the proposed pricing mechanism with no up-front payment or royalty fee but a lump sum fee payable depending on the size of the market for 'sensitive' products.
- (449) Given the above limitations, most respondents to the market test stated that they would not be interested in entering into the proposed licence arrangement. One respondent expressed a tentative interest in the proposed licensing arrangement. However, its tentative interest was contingent on further examination of the conditions and limitations in the proposed arrangement.

(450) Finally, the Commission is of the opinion that the proposed commitment could result in artificial and continuing market regulation. The licence may remove Sidel from the market for 'sensitive' products for an initial period of time causing difficulties to customers wishing to purchase machinery from Sidel. Sale of SBM machines under the licence would take place under various artificial field of use restrictions and would entail constant monitoring. Instead of creating a credible new competitor in the market, the commitment, if successful, could lead de facto to the temporal assignment of a certain category of Sidel's current or future customers (namely those using Sidel technology for 'sensitive' products within the EEA) and, thus, to an artificial division of the market. The implementation of the merger with the proposed commitments could therefore introduce a significant degree of artificial market regulation in this already highly concentrated industry.

5. CONCLUSION ON THE COMMITMENTS

(451) In view of the above, the Commission concludes that, given both the lack of viability of the proposed commitments and their overall insufficiency in addressing the competition concerns raised by the transaction, the proposed commitments are not sufficient to remove the identified competition concerns and thus cannot form the basis for an authorisation decision.

VI. CONCLUSION

(452) For all the above reasons, the Commission concludes that the notified concentration would create a dominant position in the market for PET packaging equipment, in particular SBM machines used for the 'sensitive' product segments, and strengthen a dominant position in aseptic carton packaging equipment and aseptic cartons in the EEA, as a result of which effective competition would be

significantly impeded in the common market and in the EEA. The proposed commitments are not sufficient to render the concentration compatible with the common market and the EEA Agreement and thus cannot form the basis for an authorisation decision. The concentration is therefore to be declared incompatible with the common market pursuant to Article 8(3) of the Merger Regulation, and with the EEA Agreement, pursuant to Article 57 thereof,

HAS ADOPTED THIS DECISION:

Article 1

The concentration, notified to the Commission by Tetra Laval BV (Tetra) on 18 May 2001, whereby Tetra would acquire sole control of the undertaking Sidel SA is declared incompatible with the common market and the functioning of the EEA Agreement.

Article 2

This decision is addressed to:

Tetra Laval BV
Amsteldijk 166
1071 LH Amsterdam
The Netherlands

Done at Brussels, 30 October 2001.

For the Commission

Mario MONTI

Member of the Commission

ANNEX

The full original text of the conditions and obligations may be consulted on the following Commission website:

http://europa.eu.int/comm/competition/index_en.html.
