

Official Journal

of the European Communities

ISSN 0378-6978

L 152

Volume 44

7 June 2001

English edition

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II

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COMMISSION

COMMISSION DECISION

of 1 December 1999

declaring a concentration compatible with the common market and the functioning of the EEA Agreement

(Case COMP/M.1601 — AlliedSignal/Honeywell)

Council Regulation (EEC) No 4064/89

(notified under document number C(1999) 4057)

(Only the English text is authentic)

(Text with EEA relevance)

(2001/417/EC)

THE COMMISSION OF THE EUROPEAN COMMUNITIES,

Having regard to the opinion of the Advisory Committee on Concentrations ⁽⁴⁾,

Having regard to the Treaty establishing the European Community,

Whereas:

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

(1) On 15 July 1999, the Commission received a notification of a proposed concentration pursuant to Article 4 of Regulation (EEC) No 4064/89 (hereinafter referred to as 'the Merger Regulation') by which AlliedSignal (US) Inc. (Allied Signal) and Honeywell (US) Inc. (Honeywell) proposed to enter into a full merger within the meaning of Article 3(1)(a) of the Merger Regulation.

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(2) thereof,

(2) On 30 August 1999 the Commission decided in accordance with Article 6(1)(c) of the Merger Regulation to initiate proceedings in this case.

Having regard to the Agreement between the European Communities and the Government of the United States of America regarding the application of their competition law ⁽³⁾, and in particular Articles II and VI thereof,

(3) The proposed operation does not qualify for cooperation with the EFTA Surveillance Authority under the EEA Agreement.

Having regard to the Commission Decision of 30 August 1999 to initiate proceedings in this case,

(4) AlliedSignal (US) is a manufacturing company with operations in the businesses of aerospace, automotive products and engineered materials (polymers, specialised chemicals and electronic materials).

I. THE PARTIES

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

⁽²⁾ OJ L 180, 9.7.1997, p. 1.

⁽³⁾ OJ L 95, 27.4.1995, p. 47.

⁽⁴⁾ OJ C 164, 7.6.2001.

- (5) Honeywell (US) is an international controls company that develops and supplies advanced technology products, systems and services to homes and buildings, industry, aviation and space.

II. THE OPERATION

- (6) Pursuant to an agreement entered into on 4 June 1999, Honeywell and AlliedSignal will merge into AlliedSignal, but the latter's name will be changed into Honeywell International Inc. Each share of Honeywell common stock will be exchanged for 1,875 shares of AlliedSignal common stock. The Board of Directors of the combined company will comprise nine members from the current AlliedSignal board and six members from the current Honeywell board.

III. CONCENTRATION

- (7) The operation whereby AlliedSignal and Honeywell merge into AlliedSignal is a full merger within the meaning of Article 3(1)(a) of the Merger Regulation.

IV. COMMUNITY DIMENSION

- (8) The undertakings concerned have a combined aggregate worldwide turnover of more than EUR 5 000 million ⁽⁵⁾. (AlliedSignal EUR 14 100 million, Honeywell EUR 7 500 million). AlliedSignal and Honeywell each have a Community-wide turnover in excess of EUR 250 million (AlliedSignal EUR [...] ^(*), million, Honeywell EUR [...], million), but 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.

V. COMPATIBILITY WITH THE COMMON MARKET

- (9) This operation creates a company that will be active in the following sectors: aerospace, automotive products, engineered materials and home and industrial controls. The parties' activities overlap in the area of avionics. Even though the parties have important sales in the military and space avionics markets, these latter sales in

the EEA are of a limited nature. It appears that effective competition within the EEA would not be significantly impeded as a result of the operation on any of the potential markets for avionics for military or space applications. Therefore, the effects of the operation are assessed only in relation to avionics having commercial applications.

A. PRODUCT MARKET

- (10) Avionics products consist of a range of equipment, the controls of which are installed in the cockpit, and which are used for the control of the aircraft, for navigation and communication, and also for the assessment of flying conditions. AlliedSignal also manufactures other aerospace equipment (that is to say, non-avionics) such as auxiliary power units (APU), environmental control systems (ECS) aircraft lighting, landing systems (wheels and brakes) and engines for small business aircraft. (A full glossary of the technical terms and abbreviations used is given at Annex II).

1. General market characteristics

1.1. Different segments

- (11) The avionics sector is generally divided into six demand segments that are defined by types of aircraft: air transport, regional transport, business aviation, general aviation, helicopters and military/space applications. The reason for this division lies in the non-homogeneous structure of supply and demand across these segments (integrated versus federated cockpit), in dissimilarities of technical interchangeability and prices of the products, and in the nature of the customers (airlines, original equipment manufacturers (OEMs) or individual owners) as well as in differentiation for the applicable regulatory safety requirements.
- (12) The Commission's market investigation has confirmed that there are different segments defined by the types of aircraft, that the avionics products/(or sub-)systems for each segment are different according to their price, their size and their capabilities, and that the players in each segment are different. However, there is no clear segmentation between the regional transport and the business aviation segments with regard to the avionics products/(sub-)systems that are offered, since the latter are the same in terms of price, size and capabilities.

⁽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). Where figures include turnover for the period before 1 January 1999, they are calculated on the basis of average ecu exchange rates and converted into euro on a one-for-one basis.

^(*) 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.

Therefore, no further distinction will be drawn between the regional transport and business aviation segments (regional/business segment).

products/(sub-)systems, such as AlliedSignal. (Some surveillance products, such as ACAS processors, which are currently not part of the core avionics suite, are purchased by the aircraft owners, mainly as retro-fit.) As regards retro-fit, the avionics suppliers (such as AlliedSignal, Universal Avionics, and BF Goodrich) provide stand-alone avionics products/(sub-)systems to their customers, the aircraft owners.

(13) Air transport includes large commercial planes (greater than 100 passengers) which cost between USD 35 million and USD 140 million, regional transport covers medium commercial planes that are worth between USD 5 million and USD 25 million, whereas business aviation includes small jets costing in general between USD 3 million and USD 35 million. General aviation is composed of light planes ranging in cost between USD 150 000 and USD 500 000. The cost of avionics sold for these aircraft follows similar cost patterns. Helicopters consist of civil airborne vehicles with rotary wings. Military and space applications include every airborne military application as well as satellites, international space stations and space shuttles.

(16) In the general aviation segment, the cockpit is federated and the customers are OEMs and distributors. The avionics products/(sub-)systems used for forward-fit and for retro-fit are supplied by the same avionics suppliers.

1.2. *Buyer furnished equipment (BFE)/supplier furnished equipment (SFE)*

(14) In the air transport segment, the customers of the avionics suppliers are two OEMs, namely Airbus Industry (Airbus) and Boeing, and the airlines. The products/(sub-)systems supplied in this segment are in general stand-alone products/(sub-)systems that are federated into an avionics cockpit suite by the OEMs (as forward-fit products) or are installed on existing aeroplanes by service 'shops' or the OEMs as retro-fit items (that is, as replacement parts or entirely novel products). The same avionics suppliers supply the same products/(sub-)systems used for forward-fit in new aeroplanes and for retro-fit of existing aeroplanes.

(17) A further distinction often referred to in the industry is that between 'buyer furnished equipment' (BFE) and 'supplier furnished equipment' (SFE), referring respectively to the buyer and the supplier of the airframe.

(15) In the regional and business segments, a somewhat clearer distinction can be drawn between forward-fit and retro-fit (even though this would not justify their designation as 'separate product markets'), because of the fact that more products are sold as part of an integrated (forward-fitted) cockpit. With respect to forward-fit, it is noted that the avionics suppliers provide integrated avionics suites to the OEMs (such as Aerospatiale Matra ATR, Bombardier, Embraer, Dassault, Raytheon, Gulfstream, British Aerospace, Fairchild Dornier). The latter do not integrate the avionics products/(sub-)systems themselves, but rely on the 'system integration' capabilities of the avionics suppliers (such as Honeywell, Rockwell Collins and Sextant Avionique (Sextant)). If such a system integrator does not dispose of an avionics product, he will purchase the missing product from a supplier of stand-alone avionics

(18) In the case of BFE, an airframe manufacturer will, in general, obtain certification for two or three substitutable avionics products/(sub-)systems between which the airline can choose. The commercial terms are then set between the airline and the avionics supplier. The only role of the airframe manufacturer with regard to BFE relates to the certification of that product/(sub-)system.

(19) Furthermore, SFE can either be SFE-standard or SFE-option. In the latter case, an airframe manufacturer will obtain certification for more than one (and in general two) substitutable avionics products/(sub-)systems for that aircraft type and will leave it to the buyer of that aircraft, the airline, to choose one or other product/(sub-)system. The difference with BFE is that SFE-option (and SFE-standard) is purchased by the OEM and not by the airlines. SFE-option is found on Airbus aircraft. On Boeing aircraft, SFE-option does not exist and competition between the SFE-avionics suppliers only

takes place at the design phase of an aircraft. If an avionics product/(sub-)system is SFE-standard, meaning that the airframe manufacturer has only certified one product/(sub-)system, then the airline has no opportunity to choose a substitutable avionics product/(sub-)system from another supplier.

- (20) The market investigation has pointed out that there is a trend towards SFE replacing BFE.
- (21) The market investigation has also shown that for retro-fit SFE, the airlines will negotiate directly with the avionics supplier, such as Honeywell.
- (22) Given the fact that the qualification of a product as BFE or SFE may differ depending on the client and may vary over time, distinct markets for BFE and SFE are not warranted.

1.3. Certification

- (23) Each avionics product/(sub-)system to be installed on an aircraft has to be certified separately for each aircraft type on which it will be installed. Certificates for avionics equipment are granted in the USA by the FAA (Federal Aviation Administration) and in Europe via the JAA (Joint Aviation Authorities) by the national civil aviation authorities. The certification procedure is normally granted on an aircraft-level basis, whereby all components and parts of the aircraft are certified together, known as 'type certification' (TC). For modifications on existing aircraft, a supplemental type certification (STC) will be granted. Both TC and STC are forms of design approval. OEMs apply for TC and occasionally suppliers apply for STC. Production certifications to the supplier are granted only after the issuance of the TC/STC.
- (24) The certification procedure is lengthy (from one to three years for the avionics and other systems in a new aircraft and from one to six months in case of a supplemental certification where only a few components are being changed) and costly (between 5 % and 20 % of the development costs of the avionics for a new platform, that is, up to USD 10 million and between USD 0,1 and USD 1 million in case of a supplemental certification involving a change of a few components).

1.4. Standardisation

- (25) In the air transport segment, there is a considerable degree of standardisation in avionics products, at least for BFE sold to airlines. The airline operators depend on standardised avionics to create interchangeability of avionics in order to promote competition and freedom of choice.
- (26) The standardisation is carried out by the Airlines Electronic Engineering Committee (AEEC). This organisation adopts standards that are formulated by the organisation ARINC (aeronautical radio incorporated) on behalf of the AEEC. The AEEC comprises representatives from, among others, the major US airlines, the European Airlines Electronics Committee (EAEC), and the Oriental Airlines Association. The major avionics suppliers and OEMs usually also take part in discussions on standardisation.
- (27) ARINC standards define the form, fit and function of the avionics products to be inserted in the aeroplane. They cover a range of component characteristics, including interfaces (analogue and digital bus architecture), minimal functionality, interoperability, size, weight, voltage, cooling and even colour.
- (28) ARINC standards apply foremost to BFE in the air transport segment. ARINC standardisation is carried out on a voluntary basis and is not a legal requirement; although it may help to obtain the necessary (FAA) certification, adherence to an ARINC standard is not required for certification purposes. ARINC standards currently exist for most of the avionics (BFE) equipment in air transport, with the notable exception for EGPWS/TAWS (enhanced ground proximity warning system/terrain avoidance warning system) (see below).
- (29) For products sold in other aviation segments, standardisation generally does not apply. The organisation GAMMA (General Aviation Manufacturers Association) has a modest standardisation role in the regional/business and general aviation segments. However, its standards cover a mere four-digit bus specification.

2. Affected product markets

- (30) The market investigation has shown that products that perform the functions necessary to operate an aircraft are constantly evolving as a result of product innovation and integration. Especially in the air transport segment,

there is a trend towards product integration, whereby functions which were, for instance, carried out by two stand-alone avionics products are now being integrated into a single subsystem. The ADIRS/ADIRU (air data inertial reference system/air data inertial reference unit) is an example of such an integrated product: it combines the functions of the IRS (inertial reference system) and the air data computer. In the regional/business segment, the integration process has already led to fully integrated avionics suites, where all avionics functions are integrated into a system. In the general aviation segment the cockpit is federated, which means that different stand-alone avionics products/(sub-)systems are wired together.

aircraft in the air transport and regional/business segments. An ACAS processor is generally BFE.

- (31) The parties have identified five product markets, which, due to the overlapping products of AlliedSignal and Honeywell, would be affected by the merger. In the air transport segment, the affected markets are the market for ACAS (airborne collision avoidance system) processors and mode S transponders and the market for CMU (communication management units) and ACARS (aircraft communication addressing and reporting systems). In the regional/business segment, the affected markets are also the market for ACAS processors and mode S transponders and the weather radar market. In the segment for civil helicopters, the market for weather radar is affected by this operation.

- (33) The mode S transponder sends and receives signals to and from other aircraft, including unique identification and altitude and speed information. Mode S transponders function together with ACAS processors for the identification of other planes and their bearing, as well as determining the appropriate response to a threat of collision. However, a mode S transponder also has functions other than working with the ACAS processor, such as communication with the air traffic control (ATC) system and for usage in the new FMS (flight management system). The anti-collision avoidance system further consists of antennae, control heads and a display.

- (34) The parties further submit that ACAS processors and mode S transponders are generally bought together from the same avionics supplier. This has not been confirmed by the market investigation. It has become apparent that ACAS processors and mode S transponders have different functions, although operating together. Moreover, the only suppliers of mode S transponders in this segment are the suppliers of ACAS processors.

- (35) On the basis of the above, it could be concluded that ACAS processors and mode S transponders belong to different product markets. However, given that the assessment of the case would not be different if ACAS processors and mode S transponders were considered as belonging to one market, the definition of the relevant product market can be left open.

2.1. ACAS processor and mode S transponder

Air transport

Regional/business aviation

- (32) An ACAS processor is considered to be the brain of the collision avoidance system. It provides pilots with information on surrounding traffic and provides alerts when nearby traffic is (or has the potential to become) a hazard. An ACAS processor is mandatory in Europe and in the USA for certain types of aircraft ⁽⁶⁾, mainly, all

- (36) In this segment, ACAS processors and mode S transponders do not only have different functions; they are generally not sold together. The mode S transponder is in general integrated in the avionics suite, whereas the ACAS processor is supplied on a stand-alone basis.

⁽⁶⁾ Europe: an ACAS is mandatory by 1 January 2000 for all aircraft with more than 30 seats or weighing more than 15 000 kg cargo and by 1 January 2005 for all aircraft with more than 19 seats or carrying more than 5 700 kg.

USA: an ACAS (called TCAS II), which provides audible resolution guidance, has been mandatory for all passenger aircraft in excess of 30 seats since 1993. A TCAS I (i.e. an ACAS without audible resolution guidance) has been mandatory since 1995 for passenger aircraft with more than 10 seats.

- (37) On the basis of the above, it could be concluded that ACAS processors and mode S transponders belong to different product markets. However, given that the assessment of the case would not be different if ACAS processors and mode S transponders were considered as belonging to one market, the definition of the relevant product market can be left open.

2.2. CMU and ACARS

(38) CMU provide the two-way communication link between an aircraft and the ground control centres. The system transmits and receives text and data messages. According to the information provided by the parties, ACARS provide the same functionality as CMU, but a CMU has additional functions that allow for routing and prioritisation of incoming information. The parties have submitted that prices of both products, at least of those provided by AlliedSignal, are identical.

(39) The results of the market investigation have indicated that CMU are largely viewed as an evolution of ACARS, since the former have a higher level of functionality. According to others, the current version of ACARS now implements the CMU protocols and the costs of both systems would be similar.

(40) One of the major airframe manufacturers (Airbus) is installing the ATSU (air traffic services unit) system supplied by Aerospatiale Matra (which includes CMU/ACARS functions) on new aircraft. The parties claim that this product competes directly with their own CMU/ACARS products, which has been confirmed by the investigation.

(41) On the basis of the above, it can therefore be concluded that CMU and ACARS belong to the same product market.

2.3. Weather radar

Regional/business aviation

(42) Weather radar provides pilots with detailed visual information on the weather surrounding and ahead of the aircraft, permitting the pilot to avoid dangerous weather conditions. It displays rainfall, turbulence and, in certain models, windshear. In the regional/business segment most weather radar is supplied as part of an integrated cockpit.

(43) The market investigation has shown that weather radar in the different aviation segments clearly constitutes a different product in terms of size, functions and price. Weather radar in air transport is supplied as BFE, generally includes predictive windshear and has a much larger, heavier and more expensive antenna than in the

other aviation segments. Weather radar in the general aviation segment offers fewer features and lower performance.

(44) On the basis of the above, it can therefore be concluded that weather radar in the regional/business segment constitutes a different product market from weather radar in the other aviation segments.

Civil helicopters

(45) Weather radar for civil helicopters includes specialised search and surveillance features (used in search and rescue operations and to identify destinations, particularly off-shore oil platforms). These products have historically been installed principally in helicopters. The weather detection capability plays only a secondary role. Weather radar used in other aviation segments does not have these search and rescue characteristics.

(46) On the basis of the above, it can therefore be concluded that weather radar for civil helicopters constitutes a distinct product market.

3. Other avionics and non-avionics products for commercial aviation

(47) Within the avionics sector, a number of other product markets can be identified which, according to the parties and the market investigation, would constitute separate product markets, but on which the parties have no directly overlapping activities (see also the table preceding recital 62). Some of the products listed below are in fact (sub-)systems that could be further distinguished into single products. However, the decision whether they constitute different product markets or not can be left open (with the exception of TAWS), since the assessment would not be different if such a further distinction were made.

(48) Based on their functionality, these avionics products/(sub-)systems can be grouped into four categories: equipment for surveillance, communication, navigation and a last category containing all other remaining avionics.

(49) These avionics products/(sub-)systems are supplied in the air transport segment, in the regional/business segment and some also in the general aviation segment. However, as mentioned in recital 12, the products and

systems belonging to different aviation segments constitute different product markets.

3.1. Surveillance products

(50) TAWS (terrain avoidance warning system) is a system that provides the flight crew with a map-like display of nearby terrain and sounds an audible alert about a minute's flight time or more away from the terrain (such as the ground, a mountain, etc.). AlliedSignal is the only supplier of a certified TAWS, with its EGPWS (enhanced ground proximity warning system). TAWS is SFE. However, as there will be a mandate for TAWS, many airlines are buying TAWS as retro-fit. The predecessor of AlliedSignal's EGPWS is the GPWS (ground proximity warning system).

(51) On the basis of the above, it can be concluded that there is a market for TAWS.

(52) Other surveillance products are ACAS processors and weather radar, respectively at recitals 32 to 37 and 42 to 46.

3.2. Communication equipment

(53) Communication systems are a combination of avionics products that allow the flight crew to communicate with ground and air resources and to identify the aircraft to air traffic control systems and other aircraft. They include many products such as radios, satellite communication systems (SatCom), CMU/ACARS, multimode radio/receiver (MMR, which provides precision approach guidance to airports and non-precision approach guidance using its built-in GPS, meaning global positioning system) and others.

3.3. Navigation equipment

(54) This equipment navigates the aircraft to the appropriate destination and includes many products such as global positioning systems (GPS), the air data computer, which computes aircraft airspeed, altitude and vertical speed, IRS (inertial reference systems) which are the primary airframe motion sensors and navigation sensors used by a multitude of avionics systems, ADIRS/ADIRU (air data

inertial reference system/air data inertial reference unit) which combine the air data computer with the IRS, fly-by-wire, flight controls (automatic pilots) and flight management system (FMS). The latter consists of a central processor, display and keyboard and is connected to the aircraft's sensors. Based on data received from those sensors and the pilot, the FMS calculates the most fuel-efficient route, controls speed and thrust for optimum fuel economy, automatically complies with speed and altitude restrictions, advises the pilot of proper landing speed and makes other calculations for a safe and efficient flight.

3.4. Other avionics products

(55) These are, *inter alia*, display, head-up displays, cockpit voice recorders (CVR) and flight data recorders (FDR). CVR and FDR are the 'black boxes' which safety investigators look for to determine the cause of an aircraft accident. Furthermore, there are still some other products, which the parties do not deal with (mainly controls).

3.5. Other non-avionics aerospace products

(56) These include in-flight entertainment products, APUs and wheels and brakes.

4. New integrated products in surveillance avionics

IHAS (integrated hazard awareness system)

(57) The market investigation has pointed out that the trend towards further product integration in avionics is general, but that the area of hazard surveillance is particularly suited to further product integration. The product integration could be limited to ensuring a better interoperability of the stand-alone hazard surveillance products. (Examples of such improved interoperability already exist since it is currently possible to show

weather radar and EGPWS information on a single display; also, with the assistance of Boeing, AlliedSignal has developed a system that prioritises alerts in the cockpit). The integration of hazard surveillance products is actually expected to go much further, as far as the development of a new integrated black box which integrates the functionalities of the ACAS processor, weather radar and TAWS. AlliedSignal has announced its commitment to developing a complete integrated hazard awareness system (IHAS) which they would like to have as standard equipment on the new Airbus 3XX. It has set up a business unit especially for IHAS development.

- (58) Market investigation has shown that there would be a clear demand for such a product, as it would lead to increased flight safety. Therefore, it can be concluded that a future market for an integrated hazard awareness system exists.

B. GEOGRAPHIC MARKET DEFINITION

- (59) The relevant geographic market for avionics products is, according to the parties, worldwide. This has been recognised by the Commission in prior decisions relating to the equipment for civil aircraft ⁽⁷⁾ and has been confirmed by the investigation.

C. COMPETITIVE ASSESSMENT

1. General

- (60) This operation will lead to the combination of the first- and third-largest worldwide suppliers of commercial avionics, namely Honeywell and AlliedSignal. The parties' main competitors are Rockwell Collins and Sextant, but there are also smaller players such as Litton and Smiths Industries, who do not produce a range of avionics products. The parties' turnover in commercial avionics would account for 40 % to 50 % of the overall turnover in commercial avionics, whereas Rockwell Collins and Sextant would have a share of 20 % to 30 % and 10 % to 20 % respectively.
- (61) The new entity will be present in all aviation segments: air transport, regional/business aviation and general aviation. The air transport segment represents [between 50 % and 60 %]* of all sales of commercial avionics, whereas the regional/business segment and the general aviation segment represent [between 30 % and 40 %]* and [less than 10 %]* respectively.

1.1. Air transport

Table 1: Presence in the air transport segment

	Product	AlliedSignal	Honeywell	Rockwell Collins	Sextant	Others
Surveillance	Weather radar (BFE)	X	—	X	—	—
	ACAS processor/mode S transponder (BFE)	X	X	X	—	—
	TAWS (SFE)	X	—	—	—	—
Communication	Com/Nav (BFE)	X	—	X	X	—
	SatCom (BFE)	— ⁽¹⁾	X	X	—	—
	MMR (BFE)	X	—	X	X	—
	CMU/ACARS (BFE)	X	—	X	—	Teledyne/ Aerospatiale Matra

⁽⁷⁾ For example Case IV/M. 697 — Lockheed Martin/Loral Corporation, Commission Decision of 27 March 1996 (OJ C 314, 24.10.1996, p. 9); Case IV/M.290 — Sextant/BGT-VDO, Commission Decision of 21 December 1992 OJ C 9, 14.1.1993, p. 3).

	Product	AlliedSignal	Honeywell	Rockwell Collins	Sextant	Others
Navigation	GPS (stand-alone) (BFE)	—	X	—	—	Litton
	IRS and ADIRS/ADIRU (SFE-option on Airbus)	—	X	—	X ⁽²⁾	Litton
	Air data computer (SFE)	—	X	—	—	Smiths
	FMS (SFE-option on Airbus)	—	X	—	X ⁽³⁾	Smiths
	Flight controls (SFE)	—	X	X	X	GEC
Other avionics	Head-up displays (SFE)	—	—	X	X	—
	Displays (SFE)	—	X	X	X	—
	Recorders (BFE)	X	—	—	—	L3Communications, Universal, SFIM
	Controls, monitoring, measurement and warning systems	—	—	X	X	BECO, Smiths, Eldec
Non-avionics	In-flight entertainment	—	—	X	X	Sony, Matsushita
	APUs	X	—	—	—	UTC
	Wheels and brakes	X	—	—	—	ABS, BF Goodrich, Dunlop, Snecma/Messier-Bugatti

⁽¹⁾ Although AlliedSignal has been a distributor of an antenna (made by Dassault), this agreement has now come to an end and AlliedSignal is no longer active with regard to SatCom.

⁽²⁾ Sextant is developing an ADIRU with Litton. This is a SFE-option on Airbus aircraft. Sextant/Litton have obtained half of the orders on new Airbus aircraft.

⁽³⁾ Sextant is developing an FMS with Smiths. This is a SFE-option on Airbus aircraft. Sextant/Smiths have obtained two thirds of the orders on new Airbus aircraft.

- (62) The merged entity will be able to provide a broader range of avionics products to the airlines (BFE) and to the two OEMs, Boeing and Airbus (SFE-avionics). As can already be seen from this Table (and as will be explained further), in comparison with its competitors, the parties will be particularly strong in safety avionics, namely products used for surveillance (ACAS processor, TAWS and weather radar). AlliedSignal and Honeywell are both strong suppliers of ACAS processors and mode S transponders. AlliedSignal is one of the two suppliers of weather radar and is the only company with TAWS. On Airbus aircraft AlliedSignal's former product range offered to the airlines is extended with SatCom (BFE) and with FMS and ADIRS (both SFE-option). Honeywell's SFE product range is enlarged with TAWS (SFE). However, even after the merger there will be no

company that can supply aeroplanes to the airlines and to the OEMs all the avionics necessary to operate an air transport service.

1.2. Regional and business aviation

- (63) As has already been mentioned, in this segment a further segmentation between forward-fit and retro-fit can be made. The system integrators supplying the forward-fit sub-segment, do not provide stand-alone products, whereas the suppliers of stand-alone products do not supply integrated avionics suites. The parties

therefore submit that there is no competitive overlap between them. As regards forward-fit, there are only three system integrators: Honeywell and Rockwell Collins, each having a similar share of sales, with Sextant as an emerging player. AlliedSignal is an important provider of stand-alone products to airlines for retro-fit, but also to system integrators.

1.3. General aviation

- (64) Only AlliedSignal is present in this aviation segment and is an important supplier for many products.

2. Effects of the operation on the affected markets

2.1. General

- (65) The market data referred to below are generally based on the market investigation and on the parties' best estimates, acquired through their own market research. The parties have had to rely on such estimates owing to the absence of publicly available market research data. The parties have principally based their evaluation of the market on deliveries made of the product referred to, rather than on orders placed. The notifying parties submit that data based on orders are not reliable in determining actual future sales, since customers frequently reduce or eliminate (or sometimes expand) orders after they have been placed. For the products of the affected product markets there is only a short time lag between the purchase order and the delivery, and therefore the parties are of the opinion that data based on purchase orders would not probably differ significantly from deliveries. In order to properly evaluate the market strength of the competitors in the market, the Commission considers it appropriate to look also at orders placed, given that these would better indicate the current competitive potential of the producers. However, the market investigation did not allow an adequate picture to be drawn on the basis of orders, one of the reasons being the apparent discrepancies in what market operators consider 'orders' (only fixed orders or those inclusive of options). For the above reasons (and especially because there is only a short time lag between purchase orders and deliveries) the data used in the assessment are based on deliveries. Nevertheless, the assessment (recitals 66 et seq.) is also based on orders where appropriate.

2.2. ACAS processors and mode S transponders

Air transport

- (66) The total worldwide market for ACAS processors and mode S transponders has expanded, following a European mandate for these products, from USD [between 50 and 60]* million in 1996 to USD [between 130 and 140]* million in 1998. On this market the notifying parties would have a combined market share of [between 65 % and 75 %]* (AlliedSignal [between 30 % and 40 %]*; Honeywell [between 30 % and 40 %]*). The only competitor is Rockwell Collins, with an estimated market share of [between 30 % and 40 %]*. Since 1996 AlliedSignal's market share has remained stable, whereas the market share of Honeywell has risen from [between 15 % and 25 %]* to [between 30 % and 40 %]*, leading to a decline of Rockwell Collins' share from [between 40 % and 50 %]* in 1996 to [between 25 % and 35 %]* in 1998.
- (67) The parties submit that Sextant has announced that it has, in conjunction with Dassault and Thomson-CSF, Sextant's parent company, the technology to produce ACAS. According to the parties, BF Goodrich, which already has a TCAS I product, and GEC Marconi are also likely potential entrants. However, third parties have indicated that it is not clear whether these projects mentioned by the parties will materialise, especially if the present merger were to be completed.
- (68) The parties argue that the large combined market share will not give them the chance to behave to any significant degree independently from competitors and customers, for the following reasons: (a) the shares of demand for ACAS fluctuate substantially between the world's regions and are not an indicator of market power; (b) the ACAS market volume is decreasing; (c) customers exercise great buyer-power; (d) the barriers to entry are low and (e) ACAS is susceptible to technology leap-frogging.
- (69) With regard to the parties' first argument, it has to be noted that the geographic scope of the market to be taken into account is worldwide and not regional. Furthermore, following the transaction the market structure in each region will be very similar: the parties will have a market share of [more than two thirds]*.
- (70) The parties submit as a second argument that the ACAS market volume is decreasing, since almost all passenger aircraft in the USA are equipped with ACAS and that approximately 90 % of the potential retro-fitting orders for air transport in Europe have already been placed. Since there is no aftermarket for ACAS, as the system has an extremely long lifecycle, the future market for

ACAS for air transport will accordingly be limited to new aircraft estimated to be 600 to 800 air transport aircraft per year worldwide. The parties submit that with decreasing demand, competition between the remaining suppliers is expected to become even more ferocious.

Furthermore, the market investigation has shown that ACAS processors and mode S transponders are sophisticated high-technology products that have to match the environment in which they operate.

(71) With regard to this argument it has to be noted that, given the decreasing volume, the likelihood that new suppliers will enter this market diminishes, since they will not be able to spread their development costs over a sufficient product volume.

(75) Moreover, in order to enter the market and acquire a position on the market, the new entrant could offer the products at lower prices. However, this requires the new entrant to be able to sell at least large quantities of the products in order to amortise R & D costs. Given the presence of the combined entity, the new entrant may, however, be precluded from benefiting from the required economies of scale.

(72) With regard to buying power, the parties have submitted that there is a high degree of purchasing power in the market. The parties submit that should they seek to exercise any market power, customers are strong enough to retaliate. In fact, the parties submit that their large product range makes them more vulnerable to such retaliation than smaller suppliers, since the effects of retaliation would have much greater consequences, by affecting the sale of all products in their range.

(76) With regard to the parties' argument that the ACAS processor will be susceptible to technological leap-frogging, it has to be noted that the market investigation has shown that it will take some 10 years before ADS-B (automatic dependent surveillance-broadcast), a satellite-based situational awareness tool, could be extended to include collision-avoidance functions and be certified by the civil aviation authorities. Therefore, this last argument cannot be accepted.

(73) The Commission has considered whether the purchasing power is such that no competition concerns would arise, in spite of the high market share resulting from the merger. Demand in the air transport avionics market is indeed concentrated, as far as the OEMs are concerned. They undoubtedly have strong buying power. However, at the level of airlines this is much less the case, the group of customers being much larger and including many smaller (national) airlines. On the other side, the structure of supply in avionics is highly concentrated. That level of concentration will further increase following the merger. Consequently, the Commission has come to the conclusion that the purchasing power of the customers with regard to ACAS, which is bought by the airlines, would not outweigh the position of the new entity.

(77) Furthermore, it has to be noted that the parties' strong position on the market for ACAS processors also has an effect on the future market for IHAS, since the ACAS processor is one of the key elements of this system (see recitals 93 et seq.).

(74) As regards barriers to entry, these are in general considered to be very high in the field of avionics, owing to the complex technical nature of the products. The market investigation has pointed out that market entry is not to be expected. With particular regard to ACAS processors and mode S transponders, the parties themselves submit that it takes some two years and around USD 10 million to develop an ACAS processor.

(78) On the basis of the above, there are serious doubts about the compatibility of the operation with the common market and the EEA Agreement, on the grounds that the operation would lead to the creation of a dominant position with regard to ACAS processors and mode S transponders in the air transport segment. However, the remedies described (see recitals 125 et seq.) address this specific issue.

Regional/business aviation

(79) The total worldwide market for ACAS processors and mode S transponders in this segment has expanded, following the European mandate, from USD [45 to 55]* million in 1996 to USD [95 to 105]* million in 1998. On this market the notifying parties have a combined market share of [70 % to 80 %]* (AlliedSignal [25 % to 35 %]* and Honeywell [40 % to 50 %]*). The competitors are Rockwell Collins with a market share of [20 % to 30 %]* and BF Goodrich with a [0 % to 5 %]* market share. The latter however, has no ACAS conforming to the European mandate, but only has a

TCAS I product (see recital 67). Since 1996 AlliedSignal's and Honeywell's market share has been increasing from [10 % to 20 %]* and [10 % to 20 %]* respectively, to [25 % to 35 %]* and [40 % to 50 %]*, leading to a decline in Rockwell Collins' share from [60 % to 70 %]* in 1996 to [20 % to 30 %]* in 1998.

- (80) The parties submit that after the execution of the European mandate the market volume for ACAS in regional and business aviation will decrease and will consist only of 150 to 250 new aircraft annually worldwide. The parties submit that with decreasing demand, competition between the remaining suppliers is expected to become even more ferocious.

- (81) With regard to this argument, it has to be noted that, given the decreasing volume, the likelihood that new suppliers will enter this market diminishes, since they will not be able to spread their development costs over a sufficient product volume.

- (82) Further reference must also be made to the section on ACAS processors and mode S transponders in air transport, since the same reasons as regards barriers to entry and buying power apply to this aviation segment.

- (83) On the basis of the above, there are serious doubts about the compatibility of the operation with the common market and the EEA Agreement, on the grounds that the operation would lead to the creation of a dominant position with regard to ACAS and mode S transponders in the regional/business segment. However, the remedies described below (at recital 125 et seq.) address this specific issue.

2.3. CMU/ACARS

- (84) CMU is generally BFE. In 1998 the market was worth USD [15 to 25]* million. According to the information provided by the parties, AlliedSignal had a share of sales of [45 % to 55 %]* worldwide in 1998. Honeywell has not yet started to supply its stand-alone CMU, but has already been able to secure orders for it. Rockwell Collins has a [30 % to 40 %]* and Teledyne a [5 % to 15 %]* estimated market share. This information has been largely confirmed by the market investigation, although the share of the new entity is even smaller.

- (85) Aerospatiale Matra is offering the ATSU on Airbus aircraft. The parties expect that by the beginning of 2000 over 95 % of the Airbus aircraft with datalink will have the ATSU system and will therefore no longer need a CMU or ACARS.

- (86) The proposed operation will have the effect that AlliedSignal's position will be reinforced, since Honeywell has already been able to secure orders for its stand-alone CMU. However, given the fact that Rockwell Collins and Teledyne are now also offering a stand-alone CMU and that Aerospatiale Matra has launched the ATSU, the operation will not lead to the creation or strengthening of a dominant position with regard to CMU and ACARS.

2.4. Weather radar

Regional/business aviation

- (87) The total worldwide market for weather radar for regional/business aviation has grown from USD [25 to 35]* million in 1996 to USD [35 to 45]* million in 1998. On this market, the notifying parties have a combined market share of [35 % to 45 %]* (AlliedSignal [0 % to 10 %]*, Honeywell [30 % to 40 %]*). The only competitor is Rockwell Collins, with an estimated market share of [55 % to 65 %]* in 1998.

- (88) Given that the increment in market share is very small, that AlliedSignal is mainly a supplier of weather radar for retro-fit whereas Honeywell is a supplier of weather radar for forward-fit, and that the parties' only competitor has a market share of more than 50 %, it can be concluded that no dominant position will be created or strengthened on the market for weather radar for regional/business aviation.

Civil helicopters

- (89) The total worldwide market for weather radar for civil helicopters amounts to USD [5 to 15]* million in 1998. On this market, the notifying parties have a combined market share of 100 % (AlliedSignal [75 % to 85 %]*; Honeywell [15 % to 25 %]*), whereby AlliedSignal is supplying a stand-alone weather radar for retro-fit and federated cockpits and Honeywell focuses on forward-fit integrated cockpits.

- (90) The parties submit that Fiar is competing for new programs and that Rockwell Collins has a weather radar product designed for military aviation that could be certified for use in civil helicopters.

- (91) The parties further submit that as the beaconing capabilities of weather radar will no longer be needed on account of the elimination of beacon technology and its replacement by GPS, weather radar in civil helicopters can be replaced by weather radar for general aviation or by higher-end avionics suites.
- (92) However, given the fact that there are no other actual suppliers of weather radar for civil helicopters, there are serious doubts about the compatibility of the operation with the common market and the EEA Agreement, on the grounds that the operation would lead to a strengthening of a dominant position on the market for weather radar for civil helicopters. However, the remedies described below (at recital 125 et seq.) address this specific issue.

3. Effects of the operation on other markets

TAWS and IHAS

- (93) The merger raises serious doubts about the compatibility of the operation with the common market and the EEA Agreement, on the grounds that a dominant position would be strengthened on the market for TAWS and would be created on the future market for integrated hazard awareness systems (IHAS), for the reasons set out below. Although, as explained in the section on product market definition, one may distinguish the TAWS market according to the aviation segment in which it is sold, the analysis below covers all aviation segments where AlliedSignal is currently active.

The new entity currently has a dominant position on the market for TAWS

- (94) With its enhanced ground proximity warning system (EGPWS), AlliedSignal currently has a 100 % market share.
- (95) The parties have submitted, however, that some five companies have TAWS products in development. These are Sextant, Universal Avionics, BF Goodrich, EuroTelematik GmbH (ETG) and British Aerospace.
- (96) The market investigation has pointed out that, although these companies have competing TAWS products in development and are anticipating their market entry, currently none of them has an established TAWS

product on the market. Certification procedures are underway for Sextant's and Universal Avionics' TAWS products ⁽⁸⁾. BF Goodrich is developing a product that will be suited to a smaller number of business aircraft. ETG has a TAWS product available, although it is only suited for the general aviation segment. British Aerospace's TAWS only has applications on military aircraft, so it is questionable how far their product would be suited for commercial applications.

- (97) The above shows that although currently AlliedSignal has a dominant position in TAWS, and any market entry will not be immediate, several companies may attempt to enter the market in the coming years and challenge the position of the new entity as the sole supplier. The expected growth in the market for TAWS (see below) makes such market entry attractive. However, as explained below, the merger will have the effect of increasing barriers to entry for such new entrants.

The anticipated growth in the market for TAWS leaves significant scope for market entry

- (98) Considerable market growth is anticipated for TAWS. That growth will be supported by the fact that mandates for TAWS will come into place. The earlier generation ground-proximity warning systems (GPWS) are currently mandated in the USA and Europe for all turbine-powered commercial aircraft and for turbine powered aircraft for 10 passengers or more. For TAWS (EGPWS), currently no mandate exists but there is a proposed FAA mandate which will make TAWS mandatory in 2002/2003 for new aircraft and by 2005 for existing aircraft respectively (for aircraft with a minimum of six passengers). In anticipation of those mandates, and because of the safety improvement which the product confers, the number of orders is expected to increase strongly. Currently, AlliedSignal has already taken orders for some 8 000 EGPWS. The parties have submitted that the current market for TAWS may cover as many as [10 000 to 20 000]* aircraft. The size of the market may be expected to attract new entrants. A further driver for market entry is that AlliedSignal has been until now the only supplier of TAWS, and market operators (including the parties) are expecting new

⁽⁸⁾ The parties have provided information that Universal has in fact already sold its TAWS to an Indonesian (regional) airline company. However, type certification still has to be obtained.

TAWS suppliers to push market prices downwards, to the benefit of customers. However, in spite of (future) demand, new entrants, which already have to face certain hurdles in entering the market, are confronted with additional barriers to entry created by the merger.

equipment, it would have to have access to the technical interface information of that other equipment, so as to be able to make its TAWS interoperable. The new entity could deprive any newcomer of such essential information (to the advantage of its own EGPWS), and thereby significantly limit the scope for market entry, both for retro-fit and for for-wardfit TAWS.

As a result of the merger market entry barriers for competing TAWS are increased

(99) As described in recitals 97 and 98, a number of potential entrants exist on the market for TAWS. Even without the merger, these potential competitors would have a number of hurdles to overcome in order to enter the market. For instance, new entrants face the problem that they do not have a reputation with an established TAWS product. Moreover, not all of the potential suppliers mentioned above have an established position both in air transport and in the regional/business aviation segment. For example, Universal Avionics is historically not a supplier of avionics in the air transport segment. In addition, in contrast with AlliedSignal, newcomers do not have an installed base of an earlier-generation product (i.e. the GPWS), which, apart from the reputation that it provides, can be beneficial for retro-fit sales with existing customers. Finally, a new supplier would face (initially at least) disadvantages relating to economies of scale.

(100) From the fact that the abovementioned suppliers are indeed working towards market entry, it may be concluded that although certain obstacles already existed prior to the merger, these are not considered insurmountable. However, the investigation has pointed out that as a result of the merger, further obstacles are created, to the detriment of new entrants.

(101) The new entity will be able technically to link its EGPWS to other avionics equipment, so as to reduce (potential) competition on the TAWS market. Indeed, Honeywell has a considerable market share for products with which a TAWS must interoperate (on the input as well as on the output side), both in air transport and in the regional/business segment. Those products are, among others, the GPS, FMC (flight management computer), flight controls and displays. In the regional/business segment, Honeywell has delivered around half of the integrated cockpits, into which a TAWS is to be retro-fitted. If a new TAWS competitor were to wish to connect its product to such Honeywell

(102) The requisite interface information not only involves hardware specifications (for example, as regards the size of the LRU (line replaceable unit) and form of the connections), but also data, such as data on the electrical signals and the software specifications. Although a piece of the interface data may be defined in a public format, a large part of the interface information may be of a proprietary nature. It is noted that in the regional/business segments ARINC standards that would ensure an open infrastructure do not apply and that the interface data are completely of a proprietary nature ⁽⁹⁾.

(103) Therefore, whereas, in general, the technical bundling of avionics products would not be detrimental to competition (owing to the role of the OEMs and ARINC standardisation: see (at recital 112 et seq.) under technical integration), in the area of surveillance products, and notably as regards TAWS, such negative effects could indeed occur. However, the undertakings submitted by the parties will provide adequate safeguards in the sense that they will ensure that Honeywell products and systems will have open standards so that future TAWS providers will not be further hampered in their attempts to enter the market. These undertakings are further described (at recital 125 et seq.).

⁽⁹⁾ In this regard, an example provided by the parties may serve as an illustration: the parties have submitted a contract which shows that for previous integration of the EGPWS with a Honeywell display-product (EFIS-display), AlliedSignal had to pay a considerable amount of money to Honeywell to obtain the technical specification of the EFIS, so that it could make the EGPWS compatible. Now, these costs would fall away, to the detriment of competitors of EGPWS, which either would not obtain the specifications or would have to pay large amounts of money for them.

In the absence of alternative TAWS suppliers, the merged entity will be in a position to foreclose competition on the future market for IHAS (integrated hazard awareness surveillance system)

- (104) As was described in recitals 97 and 98, a number of companies are expected to try to enter the market with a competing TAWS technology. However, it is not certain that their entry will be successful. It may be, for example, that their technology proves to be inferior to the EGPWS. For the time being, there is no alternative TAWS available. In the investigation, market operators have stated that they feel that market entry may still take several years. They have expressed the view that if EGPWS technology remains the only established TAWS technology available, the new entity would, as a result of the merger, be able to foreclose competition for IHAS.
- (105) Although AlliedSignal already had available in-house the three products necessary for an integrated hazard surveillance system, Honeywell's engineering know-how will permit the new entity to develop an IHAS successfully for the following reasons. According to its statements, AlliedSignal is primarily a provider of stand-alone products. Until now, AlliedSignal, although it has already announced the IHAS development, has had to rely on third parties (Boeing and Airbus) for further product integration. The fact that in the negotiations with Rockwell Collins for the supply of the EGPWS, AlliedSignal has insisted on a development in cooperative form and has insisted on obtaining a grant-back licence for newly developed integration technology, is an illustration of the more limited engineering capacity of AlliedSignal. Honeywell is a company that has long experience in integrating products and even supplying fully integrated cockpits. That experience is regarded as essential in designing an IHAS [reference to internal document]*.
- (106) As has been stated, a systems integration potential (engineering know-how) is required to further develop an integrated hazard surveillance system. That integration capability, in the general sense, is available with at least two other suppliers on the market, Sextant and Rockwell Collins, and, to a considerable degree, also with the air transport OEMs. Rockwell Collins has shown its interest in obtaining the EGPWS functionality for further product integration and product development.
- (107) At present, the EGPWS of AlliedSignal is an essential element of an IHAS. Therefore the new entity will be able to control the future IHAS market. The parties have

submitted that there are already a number of alternative suppliers of TAWS technology on the market. However, as explained in recital 96, there is, as yet, no established alternative for the EGPWS, and any third party wishing to develop an IHAS currently has to rely on AlliedSignal's EGPWS technology. That technology is protected by several hundreds of patents, some of which are considered 'key patents', especially for further product development.

- (108) Before the merger, AlliedSignal has shown a willingness to provide the EGPWS to third parties with a system integration capacity (see above as regards the Memorandum of Understanding negotiated with Rockwell Collins), which would allow such product development. After the merger, the new entity will have no incentive to supply such an essential input to its competitors. The product development of IHAS in a more competitive environment will therefore be restricted, and as a result the new entity would have the capacity and capability to become dominant on the future market for IHAS.

Conclusion for the TAWS market and the future market for IHAS

- (109) For the above reasons, the Commission considers that there are serious doubts as to the compatibility of the operation with the common market and the EEA Agreement, on the grounds that the merger will lead to the strengthening of a dominant position for TAWS and to the creation of a dominant position on the future market for IHAS. However, the undertakings provided by the parties discussed below (at recital 125 et seq.) will provide an adequate remedy.

4. Range-effects

- (110) Third parties, and in particular competitors, have complained that the merger would harm competition because of foreclosure effects that would occur. Such effects would be due to the fact that the new entity would be in a position to offer a broader product range (of avionics as well as non-avionics products) than any other competitor. That broader product range would give the new entity an increased ability to technically integrate products and to offer packages of avionics

products (multi-product bids). According to those third parties, the consequence would be that competitors who offer (stand-alone) products in competition with the new entity, but who cannot benefit from a similar product range, would be put at such a competitive disadvantage that clients would no longer consider buying products from them. In the end, this would lead to a loss of competitors, which, in an industry which is already highly concentrated, would work to the detriment of customers of avionics.

- (111) Given these allegations, the Commission has investigated how far the merger would offer the new entity such competitive advantages and if these would result in the creation or strengthening of a dominant position.

4.1. *Technical integration*

- (112) The market investigation has shown that, in general, it is considered an advantage that a company is able to supply a larger range of products. A supplier can thereby ensure a certain common core in its product range and ensure an enhanced interoperability of such products, especially where these products are within the same category of avionics products (communication, navigation, and surveillance). From internal documents supplied by the parties it appears that they themselves see improved interfaces between their respective avionics products as a particular opportunity resulting from the merger. As long as such technical integration does not lead to foreclosure effects, improved technical interoperability may generally be considered to be in the interest of customers (although OEMs in the air transport segment in many instances prefer to carry out technical integration themselves and therefore do not necessarily see this as a benefit).

- (113) The investigation has shown it to be unlikely that the potential of the new post-merger entity to technically bundle products will significantly impede competition. First, this is because, in the air transport segment, the OEMs have a considerable engineering capability themselves and would only allow the technical bundling of avionics to take place if it was to their own advantage. Secondly, ARINC standardisation is widespread in air transport, so that the potential to link products through proprietary interface technology is very limited. Thirdly, there are third-party suppliers available for all the products which the new entity

would supply, (with the exception of TAWS; see recital 114), so that there is scope for customers to retaliate in the event of any unwanted technical bundling. Lastly, for the regional/business segment the technical bundling issue would not manifest itself to the same extent, since competition already takes place for complete integrated cockpits, and in the general aviation segment, cockpits are federated (non-integrated) and there are no indications that this will change subsequent to the merger.

- (114) A notable exception to the above, however, is the area of TAWS and surveillance equipment, where the new entity would be the only supplier with a TAWS. Also it will be in a strong position for weather radar and ACAS processors and mode S transponders. The above description of TAWS and IHAS makes clear that, in the absence of the undertakings discussed below, foreclosure effects might occur as a result of technical bundling practices, in both the air transport and the regional/business segments. The remedies described below (at recital 125 et seq.) will serve to prevent such a situation from occurring.

4.2. *Commercial aspects*

Range-effect in relation to the OEMs in air transport

- (115) The market investigation has indicated that any range-effect relating to multi-product bids is not likely to arise in relation to the OEMs, who are the customers for SFE and SFE-option. In developing a new aircraft, the OEMs request separate bids for non-avionics and avionics products, which take place at different stages in the development phase of an aircraft, as well as separate bids for the individual avionics products.

Range-effect in relation to the airlines

- (116) As was mentioned in recitals 17 to 21, airlines buy BFE avionics and choose SFE-option avionics, which are in fact purchased by the OEMs. Following the merger, the product range that the new entity will have on offer to airlines will not be significantly extended. The focus of Honeywell's activities has been on the OEMs (SFE sales), with the exception of ACAS/mode S transponders and

SatCom. Following implementation of the undertakings described below, Honeywell's ACAS/mode S transponders will be divested, while SatCom represents a relatively modest value, the overall worldwide market representing a value of some USD [30 to 40]* million.

and matching is facilitated by the fact that ARINC standards make products interchangeable. The parties have provided data, which show that only [20 % to 30 %]* of AlliedSignal's multi-product bids (representing [less than 10 %]* of the total bid value) are not broken — that is, where airlines have decided to buy the whole package from the same supplier.

(117) The new entity will have a larger product range than its competitors. However, Rockwell Collins has an almost equivalent product range to be sold to airlines, and in fact the value of all BFE avionics sold by Rockwell Collins is higher. Sextant also has a product range that is sold to airlines and it has a growing presence for SFE-option avionics (FMS and IRS/ADIRS/ADIRU ⁽¹⁰⁾).

(118) In addition, there is scope for competitors to extend their product range, either via internal development of products or by 'teaming' with other competitors. Although competitors have pointed out that teaming is not an alternative, on account of the extra cost and organisation involved, it is considered that teaming can still be a realistic alternative. This is for instance the case for technical teaming, if an OEM asks avionics suppliers to cooperate in order to develop a new product (for example: Airbus has requested Sextant and Smiths to develop a new FMS and Sextant and Litton to make an ADIRU). With regard to commercial teaming it is true that disadvantages exist, but there are several examples where commercial teaming has been successful.

(119) In relation to the airline customers, the investigation has shown that the practice of negotiating packages of avionics products is relatively common in the industry, although data obtained from the parties show that such bids occur only in a minority of cases. Where such packaging has occurred, it has mostly taken place for forward-fit on new aircraft.

(120) Moreover, the investigation has shown that customers can and do break the packages by 'mixing and matching' products from various suppliers. That mixing

(121) As to the option the new entity will have, just as AlliedSignal does at present, of offering packages of avionics and non-avionics, it must be noted that although packages of non-avionics and avionics have existed, they nevertheless are rare. In this respect the merger does not change the situation to any great degree. Moreover, there is no natural link between avionics and non-avionics. The airlines are sophisticated buyers who seek to purchase the best products from the various suppliers. It is therefore not likely that their choice of avionics products will be determined by the non-avionics products. In addition, Rockwell Collins and Sextant are both engaged in the rapidly growing market of in-flight entertainment, which are high-value products, whereas the new entity is not active in this respect. The annual market value of in-flight entertainment is estimated to be USD [1 000 to 2 000]* million, whereas the annual market value of APUs and wheels and brakes is estimated to be USD [150 to 250]* million and USD [800 to 1 300]* million respectively. In terms of the ability to supply avionics and non-avionics, these competitors would therefore be able to offer significant competition to the new entity. In any event, the Commission notes that the parties have undertaken that they will not bundle avionics and non-avionics products in a single proposal to any aerospace customer unless (i) the customer to whom the proposal is submitted has requested this or (ii) a competitor has offered a similar bundle of products and the offer is intended to meet competition. If a customer requests alternative sources for any avionics product included in the bundle of products the parties will include alternative sources for that product in its offering.

(122) In addition, the packages sold to airlines are likely to decrease in importance, given the increasing trend for supplies to be made on an SFE-basis rather than on a BFE-basis. This trend, which has been widely confirmed by the investigation, will have the effect that the OEMs, which already enjoy buying power, will be able to ensure the availability of choice.

(123) As regards the airlines, therefore, it can be concluded that the proposed operation will not give the new entity the scope to create or strengthen a dominant position.

⁽¹⁰⁾ The ADIRU developed jointly by Sextant and Litton has obtained half of the orders on new Airbus aircraft. On FMS, Sextant is developing, together with Smiths, a new FMS for Airbus aircraft and they have secured two thirds of the orders for new aircraft.

Regional/Business Aviation

- (124) The market investigation also made it clear that in this segment Honeywell's product range is extended with TAWS, for which AlliedSignal is currently the only supplier. Consequently, Honeywell will have a commercial advantage over Rockwell Collins and Sextant, the only two competitors supplying integrated avionics suites. Indeed, the latter are dependent on supplies of AlliedSignal/Honeywell in order to be able to supply an avionics suite, which includes TAWS. However, the remedies described below address this specific issue.

VI. UNDERTAKINGS SUBMITTED BY THE PARTIES

- (125) In order to remove the serious doubts raised by the operation, on 15 October 1999, AlliedSignal and Honeywell submitted a proposal for modification of the operation in accordance with the terms of Article 8(2) of the Merger Regulation. This proposal involved undertakings related to the worldwide markets for ACAS processors and mode S transponders (for air transport and regional/business aviation) weather radar for civil helicopters and TAWS (all aviation segments) ⁽¹¹⁾.

1. Description of the undertakings

- (126) As regards ACAS processors and mode S transponders, the parties have undertaken to divest Honeywell's entire TCAS business (including mode S transponders) in favour of a viable and independent third party, within six months of the Commission's decision. Once implemented, this will remove the overlap between the parties' activities in ACAS processors and mode S transponders. An independent trustee will be appointed to report to the Commission, on, *inter alia*, the hold-separate obligation, the suitability of the purchaser, the conduct of the negotiations and whether the agreements with the purchaser properly provide for the divestiture of the relevant assets and business.
- (127) With respect to weather radar, the parties undertake to divest AlliedSignal's weather radar business which

consists of the RDR-1400 and RDR-1500 series search and weather radar, in favour of a viable and independent third party within six months of this Decision. Once executed, this will remove the overlap between the parties' activities with regard to weather radar for civil helicopters. As for ACAS processors and mode S transponders, an independent trustee will be appointed to report to the Commission on the issues mentioned above.

- (128) In respect of TAWS, the parties undertake to provide any supplier of TAWS seeking to make its TAWS product interface with any of the parties' other avionics products with all licences and interface specification data necessary to enable the TAWS product to interface with the parties' avionics products. These undertakings will be of unlimited duration. The parties also undertake to supply EGPWS boxes, EGPWS modules (that is, a circuit card assembly module with a standard or a customised interface) and future products with TAWS functionality on a non-discriminatory basis to other (potential) avionics suppliers and aircraft manufacturers. The parties will also provide them with all licences and interface specification data necessary to enable them to interface their products with the EGPWS boxes, EGPWS modules and future products with TAWS functionality supplied by the parties. This undertaking will remain in effect for a period of eight years from the date of the Commission's decision. However, supplies of EGPWS boxes, EGPWS modules or other implementations of TAWS functionality pursuant to the undertakings, as well as interface data, will be provided as long as an aircraft and/or platform in which that product is installed or designed to be installed remains in production. To ensure compliance with the undertaking relating to TAWS, an independent expert will be nominated and an arbitration procedure will be established.
- (129) The Commission conducted a market test to verify that the proposed undertakings were sufficient to remove the competitive concerns raised by this operation. In view of the market test certain modifications to the proposed undertakings were submitted on 27 October 1999. The final divestment proposal is set out in more detail in the text of the modification as accepted, which is annexed hereto and forms an integral part of this Decision.

2. Assessment of the undertakings

- (130) The undertakings have the effect of eliminating the overlap created by the merger for ACAS processors and

⁽¹¹⁾ The parties have also submitted undertakings to the United States Department of Justice (DoJ). These commitments are the same as the ones submitted to the Commission, with two exceptions: the undertakings on TAWS are not included, but a divestiture of the parties' overlapping activities as regards their space and military activities is foreseen. In particular the parties have undertaken to divest AlliedSignal's Teterboro Space and Navigation business (gyroscopes and navigation and pointing systems), its Cheshire Operations (IMU and gyroscopes), and its MicroSCIRAS Technology.

mode S transponders in the air transport and regional/business segments and for weather radar for civil helicopters. With respect to TAWS, the undertakings have the effect of removing the barriers to entry created by the merger and will ensure that further product integration and future product development by third parties remains possible.

the merger. The new entrant will be able to hold, free of charge and for an unlimited period, all the information needed to make its TAWS product interoperate with the merged entity's products.

(131) In the first phase, the parties also submitted undertakings with respect to ACAS processors and mode S transponders and weather radar for civil helicopters. However, these undertakings were not considered to be sufficient to remove serious doubts, for the following reasons. First, with respect to ACAS processors and mode S transponders, the parties undertook to divest AlliedSignal's business. According to the market investigation, AlliedSignal's products were the less-advanced products of the parties' ACAS processors and mode S transponders. Secondly, as regards weather radar for civil helicopters, the parties undertook to divest only one product line, which, according to the market investigation, did not constitute a viable business.

(135) With respect to the parties' commitment to supply EGPWS boxes, EGPWS modules and future products with TAWS functionality to other (potential) avionics suppliers and aircraft manufacturers (including all licences and interface specification data necessary for interface purposes), this undertaking has the effect that (potential) avionics suppliers and aircraft manufacturers desiring to integrate the merged entity's TAWS products into their integrated avionics suite or into a new integrated surveillance system can do so on equal terms. Further product development of more integrated systems, including IHAS, will therefore remain possible, both technically and commercially.

VII. CONCLUSION

(132) The proposed divestment, submitted in the second phase, of Honeywell's TCAS business, including ACAS processors and mode S transponders, which are according to the market investigation the state-of-the-art products, corresponds to a market share of [30 % to 40 %]* in the air transport segment and of [40 % to 50 %]* in the regional/business segment and removes all overlap between the parties on these markets. Moreover, the TCAS divestment, together with the undertakings concerning TAWS, will influence the parties' position in the area of surveillance avionics. This divestment will also allow the purchaser of this business to extend its scope for offering packages of avionics products.

(136) Consequently, the Commission concludes that, subject to full compliance by AlliedSignal and Honeywell, their subsidiaries, successors and assigns, including the new company created by the merger, namely Honeywell International Inc., with the conditions and obligations laid down in Annex I, the proposed concentration will not create or strengthen a dominant position as a result of which effective competition would be significantly impeded in the common market, or in a substantial part of it, or in the EEA,

HAS ADOPTED THIS DECISION:

(133) With respect to the proposed divestment of AlliedSignal's weather radar business for civil helicopters, it has to be noted that this divestment represents a market share of [75 % to 85 %]* and eliminates all overlap between the parties on this market.

Article 1

(134) As regards TAWS, the parties' commitment to provide any supplier of TAWS with all licences and interface specification data necessary to enable its TAWS product to interface with the parties' avionics products, will have the effect of removing the barriers to entry created by

Subject to full compliance by AlliedSignal and Honeywell, their subsidiaries, successors and assigns including the new company created by the merger, Honeywell International Inc., with the conditions and obligations contained in the commitments laid down in Annex I, the concentration by which AlliedSignal and Honeywell propose to enter into a full merger is declared compatible with the common market and the functioning of the EEA Agreement.

Article 2

This Decision is addressed to:

AlliedSignal Inc.
101 Columbia Road
PO Box 1087
Morristown
New Jersey 07962-1087
USA

and

Honeywell Inc.
Honeywell Plaza
PO Box 524
Minneapolis
Minnesota 55440-0524
USA

Done at Brussels, 1 December 1999.

For the Commission

Mario MONTI

Member of the Commission

ANNEX I

The full English text of the commitments referred to in Article 1 may be consulted on the following Commission website:

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

ANNEX II

GLOSSARY

Product	Description
ACARS	aircraft communication addressing and reporting system
ACAS processor	airborne collision avoidance system: helps prevent collisions by identifying and displaying the location of surrounding aircraft providing audible warnings and in advanced versions manoeuvring instructions
ADIRS/ADIRU	air data inertial reference system/unit: device that combines the functions air data computer and inertial reference system
AEEC	Airlines Electronic Engineering Committee
Air data computer	the air data computer computes aircraft 'true' airspeed, altitude and vertical speed
APU	auxiliary power unit: generates the electrical power on the aircraft
ARINC	aeronautical radio incorporated
ATC	air traffic control
BFE	buyer furnished equipment: refers to the buyer of the aircraft
CMU	communication management unit: manages the two-way text and data communication link between an aircraft and ground control centres
Com/Nav	communication/navigation: transmits and receives pilot voice and other communications to/from ground or airborne operation centres
CVR	cockpit voice recorder
Displays	electronic instrument systems that display information from avionics subsystems
EAEC	European Airlines Electronics Committee
ECS	environmental control systems: air-conditioning systems, blend air control systems, cabin-pressure systems and smoke-detection systems
EGPWS/GPWS	(enhanced) ground proximity warning system: displays nearby terrain and warns of potential impact
FAA	Federal Aviation Administration (USA)
FDR	flight data recorder
Flight controls	autopilot systems
FMC	flight management computer

Product	Description
FMS	flight management system: helps flight crews compute the most efficient flight profile and automatically navigates the aircraft
GPS	global positioning system (satellite based)
IHAS	integrated hazard awareness (or avoidance) system
IRS	inertial reference system: are airframe motion sensors and navigation sensors that are used by other navigation systems (autopilot/flight director, attitude/heading display, flight management system weather radar antenna stabilisation and SatCom antenna pointing)
JAA	Joint Aviation Authorities (Europe)
LRU	line replaceable unit: standardised equipment 'black box'
MMR	multimode radio/receiver: provides precision approach guidance to airports that have traditional ground-based instrument landing systems (ILS) and satellite-based non-precision approach guidance using a built-in global positioning system (GPS)
Mode S transponder	functions together with ACAS processors for the identification of other planes and their bearing, as well as determining the appropriate response to a threat of collision
OEM	original equipment manufacturer: the aircraft manufacturer in this industry
Recorders	record flight data information and cockpit voice
SatCom	(satellite communications): sends and receives data and voice telephony to the ground via satellite
SFE	supplier furnished equipment: refers to the seller of the aircraft
STC	supplementary type certification
TAWS	terrain avoidance warning system
TC	type certification
TCAS	traffic alert and collision avoidance system: the American term for ACAS
Weather radar	displays rainfall, turbulence and, in certain models, wind shear

COMMISSION DECISION**of 7 June 2000****relating to a proceeding pursuant to Article 81 of the EC Treaty and Article 53 of the EEA Agreement****(Case COMP/36.545/F3 — Amino Acids)***(notified under document number C(2000) 1565)***(Only the German, English and French texts are authentic)****(Text with EEA relevance)***(2001/418/EC)*

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,

Having regard to Council Regulation No 17 of 6 February 1962, First Regulation implementing Articles 85 and 86 of the Treaty ⁽¹⁾ as last amended by Regulation (EC) No 1216/1999 ⁽²⁾,

Having regard to the Commission decision of 29 October 1998 to open a proceeding in this case,

Having given the undertakings concerned the opportunity to make known their views on the objections raised by the Commission pursuant to Article 19(1) of Regulation No 17, Commission Regulation No 99/63/EEC of 25 July 1963 on the hearings provided for in Article 19(1) and (2) of Council Regulation No 17 ⁽³⁾, and subsequently Commission Regulation (EC) No 2842/98 of 22 December 1998 on the hearing of parties in certain proceedings under Articles 85 and 86 of the EC Treaty ⁽⁴⁾,

After consulting the Advisory Committee on Restrictive Practices and Dominant Positions,

WHEREAS:

I. THE FACTS**A. SUBJECT OF PROCEEDINGS**

- (1) This case concerns agreements on prices, sales volumes and the exchange of firm specific information on sales

volumes of undertakings, producing and offering for sale synthetic lysine to distributors and/or industrial users established in the EEA, for the use in animal feeds. The present Decision covers the period September 1990 to June 1995.

B. THE UNDERTAKINGS AND THE ASSOCIATION CONCERNED**1. Archer Daniels Midland Company**

- (2) Archer Daniels Midland Company (ADM) is the ultimate parent company of a group of companies processing cereals and oil seeds worldwide. Worldwide ADM has over 200 plants including substantial assets in the EEA, among which are the world's largest soya bean processing facility in Europoort, the Netherlands, the world's largest multi-seed complex in Hamburg, Germany, and the world's largest soft-seed crushing plant in Erith, United Kingdom.

- (3) ADM is a manufacturer of starch and starch products and entered into the biochemicals market because they expected higher returns from the production of chemicals based on starch products than on their traditional products. ADM's BioProducts Division was formed in 1989. At about that time, ADM's management decided to start producing lysine when it became aware that two other undertakings were about to set up production facilities in North America (but both undertakings gave up on ADM's expansion announcement). ADM's production facilities for lysine were completed in June 1992.

- (4) Archer Daniels Midland Ingredients Ltd (ADM Ingredients) is a wholly owned subsidiary of ADM, dealing with ADM's European amino acids business during the period covered by the present investigation.

⁽¹⁾ OJ 13, 21.2.1962, p. 204/62.

⁽²⁾ OJ L 148, 15.6.1999, p. 5.

⁽³⁾ OJ 127, 20.8.1963, p. 2268/63.

⁽⁴⁾ OJ L 354, 30.12.1998, p. 18.

- (5) In the year ending 30 June 1995, all companies belonging to the ADM group had a total turnover of approximately USD 12,6 billion (EUR 12,6 billion); in the year ending 30 June 1998, the total turnover was approximately USD 16,1 billion (EUR 16,1 billion). In 1995, ADM's worldwide turnover for lysine was approximately USD 202 million (EUR 202 million), of which approximately USD 41 million (EUR 41 million) was made in the EEA.

2. Ajinomoto Company, Incorporated

- (6) Ajinomoto Company, Inc. (Ajinomoto) is the ultimate parent company of a group of companies manufacturing chemicals, including lysine, and food products. Backed by capabilities in amino acid technology, the group of companies is also engaged in the development and manufacture of pharmaceuticals. Ajinomoto's operations encompass manufacturing and marketing bases in 21 countries.
- (7) Ajinomoto operates amino acid feed grade production plants in Japan, the EEA (Eurolysine SA — 'Eurolysine'), in the United States, Thailand, China, and Brazil.
- (8) In 1974, Eurolysine was established as a joint venture between Ajinomoto and Orsan to manufacture and market feed grade lysine in Europe. In 1976, Eurolysine built a plant in Amiens. Eurolysine also started producing lysine in Italy through its wholly owned subsidiary Bioitalia Biopro Italia SpA. The total number of employees of Eurolysine is currently 338. Eurolysine is the sole producer of feed grade lysine in the EEA.
- (9) Ajinomoto and Orsan each owned 50 % of Eurolysine until September 1994. At that time, Ajinomoto increased its interest to 75 % by purchasing additional shares from Orsan. In 1996, Ajinomoto acquired all of the Eurolysine shares then held by Orsan, and made Eurolysine its wholly owned subsidiary.
- (10) In the year ending 31 March 1995, all companies belonging to the Ajinomoto group had a total turnover of approximately JPY 725,7 billion (EUR 5,1 billion). In the year ending 31 March 1998, the total turnover was approximately JPY 836,0 billion (EUR 5,8 billion). In 1995, Ajinomoto's world-wide turnover for lysine was approximately USD 239 million (EUR 239 million), of which approximately FRF 483 million (EUR 75 million) was made in the EEA.

3. Kyowa Hakko Kogyo Company Limited

- (11) Kyowa Hakko Kogyo Company Limited (Kyowa) is the ultimate parent company of a group of companies established and operating worldwide, and involved in

the development, production and marketing of pharmaceuticals, food, chemicals, agricultural and animal health products, alcohol, and alcoholic beverages. Kyowa has amino acid production plants in Japan, Hungary and Mexico. Kyowa introduced the lysine fermentation process in 1958.

- (12) Kyowa's European subsidiary is Kyowa Hakko Europe GmbH (Kyowa Europe), which is responsible for the marketing of lysine in the EEA.

- (13) In 1995, all companies belonging to the Kyowa group had a turnover of approximately JPY 375 billion (EUR 2,8 billion). In that year, Kyowa's worldwide turnover for lysine was approximately JPY 10 million (EUR 73 million), of which approximately DEM 30 million (EUR 16 million) was made in the EEA. In the year ending 31 March 1998, the total turnover of the Kyowa group was approximately JPY 398 billion (EUR 2,8 billion).

4. Daesang Corporation

- (14) Daesang Corporation is a Korean undertaking and the ultimate parent company of a group operating worldwide, the activities of which include the manufacture of seasonings, animal feeds, and amino acids. It was created through a merger of Daesang Industrial Limited and Miwon Corporation Limited. Daesang Industrial Limited was formerly known as Sewon Corporation Limited and Miwon Foods Corporation Limited (together Sewon). In the first half of 1998, Sewon transferred its worldwide lysine business to an undertaking belonging to a group of companies unrelated to any addressees of this Decision.
- (15) At the beginning of 1992, Miwon Handels GmbH was established and dealt with Sewon's amino acids business in Europe. In November 1994, Miwon Handels GmbH changed its name to Sewon Europe GmbH (together Sewon Europe).
- (16) In 1995, Sewon's worldwide turnover was approximately Korean Won 225 billion (EUR 227 million). In that year, its worldwide turnover for lysine was approximately DEM 125 million (EUR 67 million), of which approximately DEM 28 million (EUR 15 million) was made in the EEA. In 1998, Sewon's worldwide turnover was approximately Korean Won 1,47 trillion (EUR 946 million).

5. Cheil Jedang Corporation

- (17) Cheil Jedang Corporation (Cheil) is the ultimate parent company of a group of companies established and operating worldwide. It was established as the Korean Samsung Group's first manufacturing affiliate in 1953.

In 1993, Cheil became independent. Cheil is a diversified company focusing among other things on pharmaceuticals and foodstuffs.

- (18) Cheil entered the lysine market in 1991. In 1995, Cheil had a turnover of approximately USD 1,9 billion (EUR 1,9 billion). In that year, Cheil's worldwide turnover for lysine was approximately USD 52 million (EUR 52 million), of which approximately EUR 17 million was made in the EEA. In 1997, Cheil had a turnover of approximately USD 1,4 billion (EUR 1,4 billion).

6. Fefana

- (19) The Federation Européenne des Fabricants d'Adjuvants pour la Nutrition Animale (Fefana) has its central office in Brussels. It is a body that represents and promotes the scientific, technical and economic interests of animal feed additive manufacturers.
- (20) Fefana was conceived in order to deal with the numerous Community legislative proposals impacting on the area of animal nutrition. The existing national professional associations dealing with the feed additive industry considered that the industry required a representation at European level and, for this reason, Fefana was founded in 1963.

C. THE PRODUCT

- (21) Lysine is an essential amino acid. Amino acids are building blocks of protein, a major component of body tissues. Animals synthesise body proteins from amino acids released during digestion. Twenty-two different amino acids account for all the proteins found in life. Animals can synthesise only some of these. The others, designated as essential, must be supplied by the diet, either bound naturally to protein or in a chemically pure form. The main sources of amino acids for animals are proteins of vegetal or animal origin: soybean meal, rapeseed meal, corn gluten feed, peas, fishmeal, meat and bonemeal, skimmed milk and other products. Another source of certain amino acids is industrial production. These amino acids are identical to those amino acids found in feed protein.
- (22) In most cases, a single feedstuff or the combination of feedstuffs does not supply each amino acid in the precise amount required by animals to exactly meet their dietary requirements. Hence, certain amino acids end up being supplied in excess of requirements to provide an adequate amount of other amino acids. The addition of amino acids in pure form provides a better balance to the dietary protein.
- (23) Significant progress has been made in defining the precise amino acid requirements of different classes of livestock and nutritionists have long realised the benefits of formulating diets. Supplementing diets with individual amino acids allows for a reduction in crude protein content in the diet while maintaining amino acids at adequate levels. Research has shown that the level of dietary protein in a standard maize soybean meal can be reduced if the diet is adequately fortified with lysine, tryptophan and threonine.
- (24) The availability of synthetic amino acids provides nutritionists with the flexibility to formulate diets with amino acid profiles that more closely resemble those of the animal's requirements than would be the case if only conventional raw materials were available. This has the effect of not only reducing the usage of relatively expensive protein sources, but also animal performance is enhanced.
- (25) There is increasing pressure in European countries to reduce the amount of nitrogen and phosphorous effluent arising from intensive animal production systems. According to Fefana, increased use of amino acids combined with reduced crude protein levels in feeds is estimated to have the potential to reduce nitrogen excretion by up to 20 % to 25 %.
- (26) The removal of government subsidies on cereals in the Community under the common agricultural policy reforms is expected to reduce the cost of cereals in the European countries. This could be expected to increase the proportion of cereals relative to oilcakes in European livestock diets. The net effect of this is that demand for synthetic amino acids will increase, everything being equal, as amino acids are no longer supplied by high levels of oilcakes in these diets.
- (27) The production of synthetic amino acids is one of the oldest and probably the most widely used applications of biotechnology in the animal feed industry. It involves the fermentation of a suitable carbohydrate source, such as sugar and starch, by an organism which has been genetically modified to produce an excess of the amino acid in question.
- (28) Feedgrade lysine has been produced commercially for some 30 years and the growth in the use of this amino acid worldwide has been remarkable. Whereas total world usage was approximately 30 000 t in 1979, consumption is currently in the region of 250 000 t per annum. Although this rise in consumption is partially attributable to the increase in pig and poultry production that has occurred worldwide, it also reflects an increasing sophistication in the formulation of livestock diets.

D. THE MARKET FOR LYSINE

to indirect sales by appointed agents and/or independent distributors established in different Member States.

1. Supply side*(a) Production*

(29) The production process of synthetic amino acids employs a high level of technology whereby a genetically modified bacterium is used to ferment carbohydrates. The major challenges to the process are the creation and maintenance of sterile conditions that allow for growth of the organism while preventing contamination by any other micro-organism. The technology for the production has improved significantly over the years, leading to substantial cost reductions.

(30) The carbohydrate source used in fermentation process constitutes by far the largest production cost. As production requires substantial amounts of electrical energy to agitate and aerate the fermentors, access to cheap electrical power is also crucial. Manufacture of amino acids is highly capital intensive. Production requires heavy investment in equipment for fermentation, extraction and purification, and pollution control.

(31) Before 1991, there were only three lysine producers, these being: Ajinomoto/Eurolysine, Kyowa, and Sewon. Ajinomoto/Eurolysine was the biggest producer, with a manufacturing capacity of around 80 000 t. Kyowa and Sewon had smaller capacities of around 50 000 t and 30 000 t respectively. In 1994, Sewon started to expand its capacity up to 50 000 t.

(32) In 1991, ADM entered the lysine market. ADM's plant essentially doubled the world's lysine production capacity. In addition, it was known that ADM had a very strong financial background and cheap access to raw material resources.

(33) Also in 1991, Cheil entered the lysine market with a production capacity of around 10 000 t. At the end of 1993, Cheil started expansion of its production capacity up to 40 000 t. This continued through the beginning of 1994 and was finally completed in July 1995.

(34) During the period covered by the present proceeding, there was no other significant entry into the lysine market.

(35) Eurolysine is the sole lysine producer in the EEA.

(b) Distribution

(36) In the EEA, the lysine producers concerned by this Decision have operated various distribution systems, ranging from direct sales to industrial users (feed mills)

(37) Until May 1995, ADM Ingredients had two sales agents. One of them, BASF, was then replaced by direct sales and a number of other distributors or sales agents.

(38) Eurolysine sold amino acids through a number of distributors. Ajinomoto's direct involvement in the European lysine market was confined to its interest in Eurolysine (see paragraphs 8 and 9).

(39) Kyowa Europe appointed two Japanese trading houses as sales agents for lysine who had offices and representatives in various EEA Member States.

(40) Sewon Europe sold lysine to distributors and industrial users.

(41) Cheil has no sales subsidiary in the EEA. Its lysine business in this region is run by a sales office selling mainly to industrial users.

2. Demand side

(42) The European compound feed industry turns out more than 150 million tonnes of animal feed every year in thousands of feedmills spread over the continent. Feedmills formulate, mix and, if needed, further process feedstuffs and micro-ingredients into compound feeds that meet quantitative and qualitative nutritional needs at the lowest possible cost per tonne of feed. In particular, the feed formula must ensure adequate content of each essential amino acid.

3. Market information*(a) Factors influencing the determination of lysine prices*

(43) Synthetic lysine is, to a large extent, used to add lysine to feedstuffs that do not, or not sufficiently, contain natural lysine, e.g. cereals. Feedstuffs to which lysine is added are therefore substitutable to feedstuffs which naturally contain sufficient lysine, e.g. soybean. Therefore, the amount of synthetic lysine demanded by the European feed industry and, consequently the price, is influenced in particular by European cereal prices and world soybean prices, the latter being quoted by the Chicago Board of Trade. The price of soybean minus the price of cereals is known as the lysine 'shadow price'.

(44) Nutritionists use computers to optimise feed formulas via a least-cost formulation technique. After inputting

data on available feedstuffs and their current prices, successive substitutions are made between feedstuffs until the cheapest formula is found that supplies all nutritional requirements.

- (45) When a change occurs on the market, the feed industry reacts quickly to movements in the price of ingredients, and immediately recalculates new formulae for the same sets of nutritional constraints. This can prompt swings in the volumes of lysine supplemented to feeds. If the cost of the feedstuff to which synthetic lysine is added exceeds the price of alternative naturally amino acid-rich feedstuffs, synthetic amino acids will only be used in so

far as it is necessary to better balance the diet in general, and in particular to prevent protein excesses.

(b) Average monthly lysine prices

- (46) From the beginning of 1981 until the end of 1988, lysine prices had almost doubled. After this period lysine prices started to fall.
- (47) The average monthly lysine prices which Eurolysine, ADM Ingredients, Kyowa Europe, and Sewon Europe charged their customers from 1991 to 1995 were the following:

	(DEM/kg)				
	1991	1992	1993	1994	1995
January	Eurolysine: 4,80 Kyowa: 4,80 Sewon: 4,41	Eurolysine: 4,13 Kyowa: 4,01 Sewon: 3,67 Cheil: 4,23	Eurolysine: 4,12 Kyowa: 3,95 Sewon: 3,94 Cheil: 3,94 ADM: 4,35	Eurolysine: 5,15 Kyowa: 5,11 Sewon: 4,92/4,98 Cheil: 4,56	Eurolysine: 4,56 Kyowa: 4,61 Sewon: 4,22 Cheil: 4,20
February	Eurolysine: 4,74 Kyowa: 4,81 Sewon: 4,17	Eurolysine: 3,78 Kyowa: 3,78 Sewon: 3,18 Cheil: 3,76	Eurolysine: 4,09 Kyowa: 4,06 Sewon: 4,01 Cheil: 3,79	Eurolysine: 5,12 Kyowa: 5,13 Sewon: 4,93/4,94 Cheil: 4,62	Eurolysine: 4,49 Kyowa: 4,51 Sewon: 4,08 Cheil: 4,06
March	Eurolysine: 4,52 Kyowa: 4,60 Sewon: 3,97 Cheil: 5,15	Eurolysine: 3,51 Kyowa: 3,60 Sewon: 3,01 Cheil: 3,31	Eurolysine: 4,02 Kyowa: 4,03 Sewon: 3,82 Cheil: 3,70	Eurolysine: 5,07 Kyowa: 5,07 Sewon: 4,81 Cheil: 4,57 ADM: 5,30/min. 5,20	Eurolysine: 4,30 Kyowa: 4,33 Sewon: 4,14 Cheil: 3,92
April	Eurolysine: 4,35 Kyowa: 4,30 Sewon: 3,51	Eurolysine: 3,53 Kyowa: 3,54 Sewon: 3,07 Cheil: 2,99	Eurolysine: 3,72 Kyowa: 3,71 Sewon: 3,47 Cheil: 3,26 ADM: 3,15	Eurolysine: 4,96 Kyowa: 5,01 Sewon: 4,83/4,84 Cheil: 4,72	Eurolysine: 4,23 Kyowa: 4,22 Sewon: 3,81 Cheil: 3,75
May	Eurolysine: 4,22 Kyowa: 4,15 Sewon: 3,21 Cheil: 3,83	Eurolysine: 3,52 Kyowa: 3,45 Sewon: 3,08 Cheil: 3,19	Eurolysine: 3,16 Kyowa: 3,03 Sewon: 3,01 Cheil: 2,58	Eurolysine: 4,95 Kyowa: 5,01 Sewon: 4,61 Cheil: 4,70	Eurolysine: 4,07 Kyowa: 4,10 Sewon: 3,81 Cheil: 3,83
June	Eurolysine: 4,12 Kyowa: 3,75 Sewon: 3,20 Cheil: 3,76	Eurolysine: 3,18 Kyowa: 3,18 Sewon: 2,97 Cheil: 2,81	Eurolysine: 2,88 Kyowa: 2,82 Sewon: 2,87 Cheil: 2,41	Eurolysine: 4,84 Kyowa: 4,87 Sewon: 4,54/4,55 Cheil: 4,67	
July	Eurolysine: 4,04 Kyowa: 4,25 Sewon: 3,47 Cheil: 3,58	Eurolysine: 2,69 Kyowa: 2,72 Sewon: 2,49 Cheil: 2,05 ADM: 2,80/3,00/3,15/3,40	Eurolysine: 3,08 Kyowa: 3,10 Sewon: 2,81 Cheil: 3,04 ADM: 4,00/4,80/5,60	Eurolysine: 4,83 Kyowa: 4,83 Sewon: 4,49/4,56 Cheil: 4,32 ADM: 5,10	
August	Eurolysine: 4,20 Kyowa: 4,50 Sewon: 3,79 Cheil: 4,78	Eurolysine: 2,74 Kyowa: 2,84 Sewon: 2,55 Cheil: 2,70 ADM: 3,50	Eurolysine: 3,57 Kyowa: 3,38 Sewon: 3,45 Cheil: 3,77	Eurolysine: 4,79 Kyowa: 4,79 Sewon: 4,53/4,54 Cheil: 4,41	
September	Eurolysine: 4,56 Kyowa: 5,10 Sewon: 4,01 Cheil: 4,52	Eurolysine: 3,00 Kyowa: 2,90 Sewon: 2,66 Cheil: 3,41	Eurolysine: 4,05 Kyowa: 4,01 Sewon: 3,94 Cheil: 3,95	Eurolysine: 4,81 Kyowa: 4,78 Sewon: 4,53 Cheil: 4,41 ADM: 5,10/minimum 5,00	

	(DEM/kg)				
	1991	1992	1993	1994	1995
October	Eurolysine: 4,70 Kyowa: 4,90 Sewon: 4,08 Cheil: 4,61	Eurolysine: 3,26 Kyowa: 3,01 Sewon: 3,11 Cheil: 3,33	Eurolysine: 4,55 Kyowa: 4,48 Sewon: 4,55 Cheil: 4,23	Eurolysine: 4,75 Kyowa: 4,79 Sewon: 4,55/4,50 Cheil: 4,48	
November	Eurolysine: 4,63 Kyowa: 4,65 Sewon: 4,08 Cheil: 4,20	Eurolysine: 3,42 Kyowa: 3,35 Sewon: 3,41 Cheil: 3,63 ADM: 3,75/4,35	Eurolysine: 4,93 Kyowa: 4,79 Sewon: 4,78 Cheil: 4,33	Eurolysine: 4,69 Kyowa: 4,68 Sewon: 4,22/4,24 Cheil: 4,26	
December	Eurolysine: 4,53 Kyowa: 4,60 Sewon: 4,04 Cheil: 4,01	Eurolysine: 3,64 Kyowa: 3,40 Sewon: 3,31 Cheil: 3,71	Eurolysine: 5,01 Kyowa: 4,92 Sewon: 4,87 Cheil: 4,49 ADM: 5,50	Eurolysine: 4,55 Kyowa: 4,64 Sewon: 4,21/4,22 Cheil: 4,36	

(c) Annual lysine sales

(48) The quantities of lysine which the undertakings concerned by this Decision sold each year were as follows (in tonnes):

1991					
	Ajinomoto	Kyowa	Sewon	Cheil	ADM
EEC	30 378	4 475	3 505	1 115	2 000
World	81 812	38 590	32 429	5 480	15 000
1992					
	Ajinomoto	Kyowa	Sewon	Cheil	ADM
EEC	31 529	6 455	3 998	3 352	12 000
World	83 737	46 003	33 515	12 782	54 000
1993					
	Ajinomoto	Kyowa	Sewon	Cheil	ADM
EEC, EU	31 808	6 223	4 802	8 294	14 000
World	80 517	43 777	34 516	16 570	70 000
1994					
	Ajinomoto	Kyowa	Sewon	Cheil	ADM
EU	30 772	6 847	4 815	8 425	12 000
EEA (excluding EU)		838	994	763	
World	94 687	47 638	36 698	17 806	75 000
1995					
	Ajinomoto	Kyowa	Sewon	Cheil	ADM
EU	38 947	8 704	8 056	8 943	16 000
EEA (excluding EU)		21		186	
World	99 607	45 688	42 583	22 216	87 000

E. DESCRIPTION OF EVENTS

- (49) Until the early 1990s Ajinomoto/Eurolysine, Kyowa and Sewon were the only producers of synthetic lysine. Ajinomoto/Eurolysine was the market leader worldwide and also in Europe. At the beginning of the 1990s, ADM and Cheil were investing in lysine production capacity and prepared for their entry into the lysine market.

1. Asian/European cartel

- (50) The Commission has indications, that in the 1970s and 1980s, the incumbent Asian lysine producers, Ajinomoto, Kyowa and Sewon, in one form or the other cooperated with the aim of fixing prices and volumes in Europe.
- (51) The first collusion the Commission is able to prove took place in July 1990. Moreover, when it became apparent that ADM and Cheil were investing in lysine production capacity in order to enter the lysine market, the Asian/European cartel was the forum used to monitor closely the development of the new entrants' potential to influence the competitive situation on the market.

(a) The beginning

- (52) In a letter to Ajinomoto dated 6 December 1990, Sewon refers to a meeting between these two undertakings, which took place in July 1990. In this letter Sewon stated that, after the meeting, it was able to raise sharply the price of lysine, 'with the help of (Ajinomoto)'. In the light of the cooperation between the two companies on lysine prices and sales volumes, which followed the meeting of July 1990, the Commission takes the view that Ajinomoto and Sewon during this meeting agreed on lysine prices to be applied in the world market.
- (53) On 20 September 1990, Ajinomoto and Sewon met in Seoul. Ajinomoto informed Sewon that, the day before, its US subsidiary had announced a price increase, and that the new price would be the worldwide standard price (the European price was DEM 4,60/kg). Ajinomoto also referred to Kyowa's intention to announce, on 24 September 1990 and in the USA, a corresponding price increase. Ajinomoto, Kyowa and Sewon had discussed the new prices by telephone prior to meeting and reached a tentative agreement. It was Sewon's understanding that Ajinomoto requested Sewon to follow the price move. Sewon agreed to follow the prices indicated by Ajinomoto.
- (54) In December 1990 Ajinomoto and Sewon discussed the possibility for a further price increase. On 12 December 1990 Sewon informed Ajinomoto that it agreed to the worldwide increase of the lysine price.

- (55) From the events concerning the price fixing of 20 September 1990 it is clear that Kyowa also participated in price agreements concerning Europe, as the American price was considered the standard world price. Moreover, the Commission takes the view that the price agreements reached between Ajinomoto and Sewon in July and December 1990 were not limited to these two companies. Firstly, the sharp raise of the lysine price in July 1990, to which Sewon's letter of 6 December 1990 referred, would not have been possible without the involvement of the second largest lysine producer. Secondly, the operation of the Asian/European cartel demonstrates that Kyowa's participation in the cartel was essential. Finally, in an internal document setting out the market allocation within the Ajinomoto/Orsan Group as discussed during the 23 June 1992 Mexico meeting, which Ajinomoto prepared in view of the 10 July 1992 Tokyo meeting, Kyowa is included under the title Old Club along with Ajinomoto, Sewon and Cheil. This is consistent with Ajinomoto's suggestion that in the period prior to mid-1992 the initiative for discussions of the European market did not come from Ajinomoto but rather from Sewon and Kyowa.

(b) Meeting of 18 February 1991

- (56) On 18 February 1991, representatives of Ajinomoto, Kyowa and Sewon met and fixed the world market price for lysine, and in particular the price for Europe, being the then current Eurolysine sales price (i.e. DEM 4,70/kg).
- (57) As to quantities, Sewon agreed to limit its sales to the level of the previous year until ADM achieved full-scale production and sales, which was expected to happen in April or May 1991, in order to maintain the price. Kyowa insisted on the home-market principle. The participants agreed to sell, in 1991, within the export quantities of 1990.

(c) Meeting of 12 March 1991 in Tokyo

- (58) The meeting took place in the Okura Hotel. The participants included representatives of Ajinomoto, Kyowa, and Sewon. The agenda for the meeting was prepared by Ajinomoto who also arranged the meeting.
- (59) At this meeting, Kyowa disclosed the following information on ADM: ADM's 24 fermentors would be running normally by the middle of April; ADM would start to sell at around the beginning of May; ADM's production plan was 27 000 t in the first year, 45 000 t the second year, and 60 000 t the third year; ADM planned to sell one half of its production on the US market leaving the other half for export. Kyowa reported that ADM intended to sell its product by following the other manufacturers' selling prices.

(60) Ajinomoto disclosed information on Cheil's production plant in Indonesia, gathered during a business trip to Indonesia.

(61) Thereafter, the participants discussed their own market behaviour. Sewon informed the other participants, that it wanted to sell, in the USA in 1991, the same quantity as in 1990, and that they would definitely maintain the base price. As to Europe, the other participants complained about Sewon selling under the agreed price, i.e. DEM 4,70/kg. Sewon was requested not to sell under the agreed price and to maintain last year's sales volume. It was noted that European local meetings dealt with the European price. The participants promised to keep the agreements on sales quantity and price made at this meeting until ADM and Cheil began significant market sales. In case of violations of the agreement, each company agreed to immediately contact the other parties by a 'hotline', proposed by Ajinomoto.

(d) Meeting of 4 July 1991 in Tokyo

(62) The meeting took place at the premises of Ajinomoto. The participants included representatives of Ajinomoto, Kyowa, and Sewon.

(63) The participants exchanged information on ADM's and Cheil's production capacity and sales volumes. Some days before the meeting Cheil communicated the information on its production capacity and sales volumes to Ajinomoto by telephone.

(64) The participants then exchanged information on their own prices and sales volumes. In relation to Europe they referred to a regional meeting of 3 July 1991 where a price of DEM 4,30/kg was announced. The participants fixed the price for the USA and for Europe (DEM 4,30/kg). The price for Asia and Oceania was to be discussed at a later stage. As to quantities, the participants concluded that 'controlling volume will be a very tough issue'.

(e) Follow-up

(65) After ADM had commenced significant sales at low prices, Ajinomoto, Kyowa and Sewon met in Seoul, on 11 February 1992. They discussed ADM's and Cheil's market potential and prices. On 10 March 1992, Ajinomoto and Kyowa agreed to follow ADM's prices,

so as to maintain market shares. On 12 March 1992 the Asian producers met again to discuss ADM's impending full entry into the lysine market. Prices were also discussed by telephone during this period.

(66) On 30 March 1992 Sewon Europe reported to the Sewon headquarters in Korea on a 'trilateral meeting' which apparently took place some days before. During this meeting Ajinomoto, Kyowa and Sewon evaluated the then current European lysine market. In particular, it was noted that the price increased by 5 % for Germany, Great Britain, the Netherlands, Luxembourg, and France, where prices were relatively lower (around DEM 3,25/kg) than in other countries. The participants agreed that the price for the European market should be maintained at DEM 3,76/kg. The next meeting was scheduled to be held on 30 April 1992 in Basel. In its report to its headquarters, Sewon Europe expressed doubts as to the likelihood that the discussed prices would be kept, 'because the opinions of the participating companies were different, and ADM and Cheil were not attending'.

(67) On 5 May 1992 Sewon Europe reported to the Sewon headquarters in Korea on another trilateral meeting (probably held on 30 April 1992 in Basel) where Ajinomoto, Kyowa and Sewon had evaluated the then current European lysine market. In particular, the participants confirmed that the price for the European market should be maintained at DEM 3,76/kg. The next meeting was scheduled to be held on 3 June 1992 at a location to be chosen by Sewon. In its report to its headquarters, it apparently seemed meaningless to Sewon Europe to discuss price increases in meetings that ADM and Cheil did not attend.

(68) On 19 June 1992 Ajinomoto, Kyowa and Sewon met. They concluded that the possibility of increasing prices by reducing the sales volumes of each company should be reviewed. In particular, the participants agreed that the problem of raising the price could be solved by having ADM agree to operate at only 80 % capacity. Moreover, Ajinomoto and Kyowa requested Sewon to reduce substantially its sales to the USA and Europe on the principle that the local producer should sell as much as possible in its region.

2. Global cartel

(a) Background

(69) ADM's plant essentially doubled the world's lysine production capacity. Already before and shortly after its market entry, ADM sent signals to the incumbent producers that, though it intended to be a big player in

the lysine market, it preferred to achieve its part of the market by coordination, rather than by a price war. In this context, ADM met Ajinomoto on 12 December, and Kyowa on 13 December 1991. On 11 February 1992, Ajinomoto and Kyowa informed Sewon of their respective meetings with ADM.

- (70) In order to convince the incumbent producers of the seriousness of its intentions and the penalties of not agreeing, ADM granted Ajinomoto, Kyowa, and Sewon the possibility of inspecting its production plant, and commenced significant sales at low prices. This caused the incumbent lysine producers, as of the beginning of 1992, to drastically lower lysine prices in an attempt to keep market shares. In response to this situation, Ajinomoto and Kyowa agreed on 10 March 1992 that they should cooperate with ADM and begin meeting with ADM in order to prepare an agreement on prices and sales quantities (meetings of 14 April 1992 between ADM and Ajinomoto in Tokyo, of 16 and 17 April 1992 between ADM and Kyowa in Hawaii, and of 19 June 1992 — the same day that Ajinomoto, Kyowa and Sewon met — between ADM and Sewon in Decatur).

- (71) These discussions led to the 23 June 1992 meeting in Mexico, which constitutes the beginning of ADM's collusion with the members of the Asian/European cartel.

(b) Meeting of 23 June 1992 in Mexico

- (72) The meeting was attended by ADM, Ajinomoto/Eurolysine and Kyowa representatives. Kyowa arranged and chaired the meeting. The participants decided that the Ajinomoto and Kyowa representatives would convey any results of the meeting to Sewon and Cheil after the meeting.
- (73) ADM's primary goal was to have the same production share as that of the largest competitor, which would result in one third of total world demand for ADM, one third for the Ajinomoto group and, one third for Kyowa and the Korean producers. Kyowa and Ajinomoto expressed their disagreement with this proposal at least as far as the timing was concerned. ADM then suggested that it would implement its quota proposal over the second year, by allocating to it all extra market growth until it has reached Ajinomoto's market share. For 1992, the proposed quota scheme was: Ajinomoto 66 000 t; ADM 48 000 t; Kyowa 34 000 t; Sewon 18 000 t and Cheil 6 000 t. Ajinomoto was prepared to accept 48 000 t for ADM in 1992 with the prospect of growth over time. ADM indicated that it would, in any event, implement the proposal on quantity as from 1 October 1992.

- (74) The participants also discussed what mechanism could be used to allocate quantities. ADM explained that competitors in the citric acid industry used both formal and informal means for keeping track of sales figures.

- (75) The participants agreed on the lysine price levels until October: USD 1,05/lb delivered (at the time USD 0,70/lb) with regard to North America (concerning Europe the participants considered that the price could be 'a little higher' than in North America). Conditional on final agreement to the sales allocation proposal, the price was fixed at USD 1,20/lb for the end of the year. For the other territories, the target price was USD 2,30 cif (at that time below USD 2,00/kg cif).

— Follow-up

- (76) On 2 July 1992 Kyowa received a telephone call from ADM which indicated that it agreed to a production quota of 48 000 t for 1992, provided it achieved parity with Ajinomoto in three years.
- (77) On 10 July 1992, Ajinomoto and Kyowa met with the two Korean lysine producers in Tokyo at Ajinomoto's premises. Ajinomoto informed the Korean producers on the sales allocation discussions with ADM of 23 June 1992. Ajinomoto and Kyowa presented an allocation plan based on every supplier's market power and level of investment. It was proposed that Ajinomoto should have 73 500 t, Kyowa 37 000 t, ADM 48 000 t, Sewon 20 500 t, and Cheil 6 000 t for the first year. As to Europe, the allocation proposal was (out of 58 000 t): Ajinomoto 34 000 t; Kyowa 8 000 t; ADM 5 000 t; Sewon 13 500 t, and Cheil 5 000 t. If the demand in North America increased, the increased sales volume would belong to ADM, and any future increased sales in Europe would belong to Eurolysine. Ajinomoto said that if agreement between participants was reached, the final allocations would be agreed upon with ADM at the end of July. For quantity control purposes, all the companies should have quarterly meetings together to review and collect information concerning the production volume and sales figures of each company. Sewon was against a local quota system based on competitiveness. It proposed that each party's future allocation should be based on each party's proportion of last year's sales. Cheil requested a worldwide quantity allocation of 15 000 t. As no agreement was reached, each participant was to return to headquarters to reconsider the subject and inform Ajinomoto of the results of their reconsideration by 17 July. Ajinomoto then explained the details of the meeting with ADM concerning prices, in particular to adjust the price to USD 1,05/lb in both Europe and America by 30 September 1992, and then further adjusting it to USD 1,20/lb by 30 December 1992.

- (78) On 7 August 1992, the Asian producers met again in Tokyo at Ajinomoto's premises. They continued the discussion in order to reach agreement on the reduction of lysine production volume. Ajinomoto informed the other participants that ADM was prepared to invite employees of its competitors to its production plant in Decatur in order to prove its production capacity. Sewon proposed a general reduction of production of 20 %. It suggested a revised quantity allocation plan as follows: Ajinomoto 64 800 t, ADM 48 000 t, Kyowa 33 600 t, Sewon 26 600 t, and Cheil 12 000 t. This revised plan was not agreed either, because Ajinomoto was not happy with the amount proposed for itself, and because Cheil insisted on 15 000 t. The participants nevertheless agreed to continue the discussion as to reduction of production. The proposed price increase was favourably received, but it was decided to discuss this matter further at the next meeting with ADM. Ajinomoto suggested that before the five companies met, it would be better to formulate a plan with different scenarios, and all the participating companies readily accepted this suggestion. Ajinomoto suggested that a further meeting should take place in Seoul.
- (79) On 27 August 1992, the Asian producers met again, this time in Seoul at Cheil's premises. They continued the discussions of 10 July and 7 August 1992. The participants could not reach a conclusion on the next steps in the discussion with ADM concerning the sales quota allocation for lysine. The participants set out what in their view should be the purpose of the meeting with ADM: it is not the decision of the quantity allocation, but the confirmation of the price increase and the discussion of how, practically, to implement the price increase. Regarding the price, the participants agreed to the ADM plan to increase the American price to USD 1,05/lb as of 31 August 1992. The participants noted that ADM had already offered this price to customers. Ajinomoto's and Kyowa's US subsidiaries intended to announce the new price as from the middle of September. A price adjustment for Europe was to be decided by a Europe meeting.
- (80) On 8 September 1992 ADM and Ajinomoto met in Chicago. Ajinomoto suggested the allocation of lysine sales quotas not on a worldwide basis, but to restrict production according to the local market situation. ADM agreed but insisted on a total production quota of 48 000 t. Both participants confirmed the price increase to USD 1,05/lb, initially agreed by ADM and the Japanese producers at the Mexico meeting of 23 June 1992 and accepted by the Korean producers at the Seoul meeting of 27 August 1992.
- (c) *Meeting of 1 October 1992 in Paris*
- (81) The meeting was held in the Pullman Windsor Hotel, in Paris. The participants included representatives of ADM, Ajinomoto/Eurolysine, Kyowa, Sewon, and Cheil. The meeting was arranged by Ajinomoto/Eurolysine, which prepared a fake Fefana agenda. The participants discussed only prices. The five companies evaluated the impact of the agreed price levels and exchanged information on the acceptance of the price increases in the different regions.
- (82) The participants referred to the price increases in Europe, which had been fixed, first, at DEM 3,50/kg, and then at DEM 3,75/kg in the context of the Seoul meeting (27 August 1992). At the time of the meeting, the price announced by the producers was DEM 4,00/kg. All participants, however, admitted that this price was not yet applied in practice. The participants considered in particular that the European price at that time was 22 % higher than the US price. They were concerned that parallel importers would be attracted if the price differential increased and concluded that it was not possible to increase the European price further at that moment. Therefore the participants agreed to keep the price at DEM 4,00/kg, and to discuss a possible further increase at the next meeting.
- (83) ADM wanted to have fewer people in the price meetings for Europe, so ADM proposed that it would not attend the European local meeting. Ajinomoto/Eurolysine considered the local manager meetings the most effective forums. Therefore, these meetings would continue, and the President of Eurolysine would himself report to ADM directly.
- (84) The participants fixed the prices for the other regions, too.
- (85) The participants also discussed the possibility of the formation of an amino acid working group within Fefana. Ajinomoto was asked to find out how to set this up.
- Follow-up
- (86) On 29 October 1992 Kyowa discussed with Ajinomoto/Eurolysine the prices for lysine in Europe.
- (87) On 2 November 1992 Ajinomoto/Eurolysine and Sewon met in Seoul. The participants discussed ADM's behaviour in the lysine market. Ajinomoto informed Sewon that ADM would try to increase the price to the point where market demand started to shrink, and that at that time ADM was happy with the allocation of 48 000 t sales volume. This was the reason why ADM did not mention quantity allocation in the Paris meeting of 1 October 1992. Ajinomoto expected that ADM would ask for a maximum quantity in 1993 and even more at the end of 1993. The absence of a comprehensive agreement on production quotas was felt

- to be a destabilising factor in terms of the relationship between the producers. However, this was attenuated by the fact that everybody including ADM exercised self-restraint in its sales. Nevertheless the participants agree that more cooperation on quota would be necessary. Sewon was prepared to give in even to a 40 % reduction.
- (88) At this meeting Ajinomoto/Eurolysine requested Sewon to stop sales in Europe for the next two weeks, to keep the price at DEM 4,25, and to limit sales quantity to 6 000 t per year. Unless Sewon reduced its sales volume in Europe, Eurolysine would institute an anti-dumping action against Sewon. Sewon confirmed its willingness to stick to the agreed prices, and agreed to limit its sales to Europe to 6 000 t per year. The participants agreed to have open and direct communication at the highest level if staff broke the agreement.
- (89) On 4 November 1992, ADM and Ajinomoto discussed their lysine sales policies by telephone. The prices for Asia, North America and Oceania were confirmed in accordance with the Paris meeting of 1 October 1992. The price for Europe was set at DEM 4,25/kg. The participants noted that Sewon deviated from the agreed price levels in some respect. They considered that ADM should sell lysine in Korea 'so that Sewon will behave elsewhere'.
- (90) On 2 and 5 November 1992 Ajinomoto met Cheil in Seoul. Cheil informed Ajinomoto that in terms of cooperation, the lysine price increase was a substantial success and expressed their intention to continue the cooperation with regard to lysine prices. Concerning lysine quotas, however, the companies continued to disagree.
- (91) After the Mexico and Paris meetings, prices increased in some places, and in particular in the USA and in Europe, but not everywhere. Accordingly, the undertakings concerned by this Decision blamed each other for not respecting the price agreements. Consequently, the relationships among the producers deteriorated.
- (92) On 30 November 1992, Ajinomoto, Kyowa, Sewon and Cheil met at Cheil's premises in Seoul. They noted that ADM was offering very low prices. However, the communication with ADM was interrupted due to a FBI search at ADM (which caused the then President of ADM's Bioproducts Division to cooperate with the FBI in the US lysine investigation). The participants noted that they had no other choice than to wait until ADM re-established the communication.
- (93) Because the producers believed their inability to come to a comprehensive volume agreement helped initiate and prolong the return to low prices, talks on sales quantity allocation resumed. It was ADM's and Ajinomoto's intention to have a meeting on the 'global (lysine) market' around mid-January 1993. On 21 January 1993, ADM proposed to Kyowa a regional volume allocation.
- (94) On 26 February 1993, Ajinomoto, Kyowa, Sewon and Cheil met at Ajinomoto's premises in Tokyo. As there was no specific agenda, Ajinomoto proposed exchanging ideas about the lysine price decline on the world market and how prices could be raised again. Concerning Europe, the participants noted that the price was maintained, because Ajinomoto and Sewon restricted their sales volumes. As to the global situation, the participants concluded that no progress could be made.
- (95) In order to revive the quota discussion, ADM's and Ajinomoto's upper management arranged to meet to enhance the relationship between the two market leaders and accelerate the process of developing a comprehensive volume agreement. Since Kyowa and Eurolysine wanted to express their views prior to the intended meeting between ADM and Ajinomoto, meetings were arranged between ADM and Kyowa on 15 April 1993, and among ADM and Eurolysine on 28 April 1993.
- (96) In the course of its meeting with ADM on 15 April 1993, Kyowa argued that the volume should be cut by all competitors.
- (97) At their meeting on 28 April 1993, Eurolysine raised the possibility with ADM of dividing sales volumes only in those regions in which the price-fixing agreement had effectively raised prices in 1992. Concerning Europe, ADM and Eurolysine agreed that if the prices went up in Europe, it was because of the price agreement concluded in Mexico (23 June 1992), and that the only place where it was fully implemented was this region.
- (98) On 30 April 1993, Ajinomoto and ADM met at ADM's premises in Decatur. The purpose of the meeting was to enable the top executives from the two biggest lysine producers to restore the relationship between the two companies and begin the process of developing a comprehensive volume agreement. During this meeting, ADM alluded to the importance of a company controlling its sales force in order to maintain high prices, and explained that its sales people have the general tendency to be very competitive and that, unless the producers had very firm control of their sales people, there would be a price-cutting problem.

Ajinomoto indicated that everybody now understood it is necessary to adjust supply. ADM and Ajinomoto representatives arranged for another meeting which occurred on 14 May 1993 in Tokyo.

(99) Both ADM and Ajinomoto informed Kyowa on their Decatur meeting.

(100) On 14 May 1993 ADM and Ajinomoto/Eurolysine met in Tokyo in order to continue the discussion commenced in Decatur. The participants argued over the size of the current market and ADM's share of that market. ADM requested 65 000 t for 1993. They again discussed the mechanism needed to obtain and police a sales volume agreement. ADM stated that the way for them to communicate is through a trade association. ADM explained by way of example that ADM reported its citric acid sales every month to a trade association, and every year, Swiss accountants audited those figures. ADM said lysine sales could likewise be reported to, e.g. Ajinomoto, which could then report back to each member every member's results. ADM stated this reporting must be very confidential.

(101) Ajinomoto reported to Kyowa on its Tokyo meeting with ADM. Both producers agreed that ADM's 1993 volume allocation request was unacceptable and that Sewon should be involved in the volume discussion.

(102) On 27 May 1993 Ajinomoto and Kyowa met Sewon and informed Sewon of ADM's volume request for 1993. Ajinomoto referred to the good results of cooperation in the past, but ADM's entrance in the market has complicated matters. Sewon confirmed that it always was ready to negotiate and to proceed by discussion with Ajinomoto and Kyowa. The participants felt the need to convene a meeting between the five producers in order to adjust volume. Ajinomoto wanted to take initiative in negotiating with ADM, whilst Sewon should persuade Cheil.

(103) On 1 June 1993 ADM informed Kyowa that it had decided to stop the decrease of the lysine price in Europe, and that it had announced the day before a price increase to USD 0,81/lb.

(104) On 18 June 1993 Ajinomoto, Kyowa, Sewon and Cheil met in the Sankei-Kaikan Hotel in Tokyo to discuss the tactics to be followed in the next five producers' meeting scheduled to take place in Vancouver on 24 June 1993. The participants exchanged price and volume information by region. On that basis, they discussed different sales allocation schemes on the basis of Ajinomoto's first proposal (54 000 t for ADM) and ADM's request (65 000 t). The plan for the meeting with ADM was to insist on 54 000 t in order to reach an agreement on 60 000 t. The final allocation would

then be the following: Ajinomoto 81 200 t, ADM 60 000 t, Kyowa 44 400 t, Sewon 32 900 t, and Cheil 13 500 t. Ajinomoto proposed to hold quarterly meetings by each region and to have a communication system. The participants confirmed the price increases in the different regions. In relation to Europe, the price was set at DEM 3,20/kg (on the basis of the confirmed price of USD 0,81/lb) and at DEM 4,20/kg when the US price rose to USD 1,05/lb.

(d) Meeting of 24 June 1993 in Vancouver

(105) The meeting was held in the Hyatt Regency Hotel in Vancouver. The participants included representatives of ADM, Ajinomoto/Eurolysine, Kyowa, Sewon, and Cheil.

(106) The following points were on the agenda: 1. examination of recent market conditions, 2. production/sales volume adjustment for each company, 3. price increase schedule, 4. communication system (especially regional meetings), and 5. establishing the lysine cooperative organisation.

(107) The participants noted that the price increases in the USA and in Europe were successful, but that the agreements for South and Central America, as well as for Asia were not properly executed. Participants envisaged having a stepped increase in prices from USD 0,81/lb, to USD 0,95/lb, to USD 1,10/lb, and, if possible, finally to USD 1,20/lb.

(108) Ajinomoto presented a table on volume allocation on the basis of 54 000 t allocation for ADM. ADM insisted on maintaining its current production volume, i.e. 65 000 t. Cheil insisted on 15 000 t, instead of the 14 000 t proposed by Ajinomoto. It was agreed to have a president's meeting to solve the problem.

(109) Concerning the communication system, the Japanese wanted to have local meetings; ADM was opposed and requested direct communication to its headquarters.

(110) All except Cheil agreed to form an official lysine corporation, to be managed by Ajinomoto and ADM.

— Follow-up

(111) Ajinomoto and ADM agreed to have a meeting on 5 October, in Paris, to be arranged by Ajinomoto. The main agenda points were to be price/quantity and association. ADM informed Ajinomoto that its production levels in the past nine months were the equivalent of 65 000 t per annum, which was an

acceptable minimum quantity for ADM. ADM stated that parity in market shares with Ajinomoto, which ADM wanted to achieve, could be delayed for another two or three years.

(e) Meeting of 5 October 1993 in Paris

- (112) The meeting was held in the Grand Hotel in Paris. The participants included representatives of Ajinomoto/Eurolysine, ADM, Kyowa, Sewon, and Cheil. The meeting was arranged by Ajinomoto, which also prepared the agenda and chaired the meeting. The subjects of the meeting were the establishment of an amino acid producers' association under the umbrella of Fefana, agreement on prices for the fourth quarter of 1993, and sales volume allocation for the next year.
- (113) Ajinomoto reported the progress made in creating a producers' association.
- (114) Concerning market trends, the participants noted that the Mississippi flood in the summer of 1993, which destroyed the US soybean crop, caused an increase in grain prices but resulted at the same time in excessive lysine stocks. They therefore expected a decrease in orders, and in order to prevent a price decrease, supplies had to be reduced. Concerning Europe, the participants envisaged a 40 % to 50 % reduction.
- (115) In the framework of the price review by region, the participants realised that the European price agreed at a regional meeting, i.e. DEM 5,30/kg, was much higher than the price in other regions. It was agreed to keep the European price at this level.
- (116) For the period October 1993 to September 1994 each company claimed its production volume. It was noted that Cheil claimed 22 000 t, which was different from the quantity that this company alluded to at the Vancouver meeting (24 June 1993). ADM could not decide at that time on a reduction of production volume, so it was determined that top management at ADM and Ajinomoto would become directly involved in the quantity discussion.

— Follow-up

- (117) On 25 October 1993, the top management of ADM and Ajinomoto met in Irvine. The participants discussed how to allocate 1994 sales volumes for each lysine producer. They analysed the volume of lysine each producer would sell by the end of 1993, and then ADM proposed using those figures to calculate 1994 sales volume allocations for each lysine producer. They discussed how much the market would grow in 1994 and how much of the growth in the market each

producer would be allocated. ADM stated that the other lysine producers could each sell 2 000 t more than they sold in 1993, and that ADM and Ajinomoto would share the remaining growth in worldwide lysine sales in 1994. ADM agreed to this plan and was charged to get the other producers to agree to this allocation scheme.

- (118) After the Irvine meeting, the Asian producers discussed the volume proposal reached in Irvine. Both Cheil and Sewon wanted more volume. As a result, Cheil did not attend the next meeting, which took place on 8 December 1993 in Tokyo.

(f) Meeting of 8 December 1993 in Tokyo

- (119) The meeting was held in the Palace Hotel in Tokyo and included representatives of Ajinomoto/Eurolysine, ADM, Kyowa, and Sewon.
- (120) The participants reviewed lysine prices region by region. They noted that the prices agreed at the Paris meeting (5 October 1993) were not fully implemented. Concerning Europe, the current price was DEM 5,00/kg instead of DEM 5,30/kg as agreed, and this in spite of the fact that each producer had limited its sales. It was agreed to keep the European price at DEM 5,30/kg for the first quarter of 1994.
- (121) During the meeting, the producers fine-tuned the volume allocation plan developed by ADM and Ajinomoto in Irvine. Sales quantities were allocated by supplier worldwide and by region, including Europe. Worldwide, ADM was allocated 67 000 t (plus a portion of 1994 growth); Ajinomoto, 84 000 t; and Kyowa 46 000 t. ADM, Ajinomoto and Kyowa each agreed to the volume allocation scheme. Sewon was to receive either 34 000 t or 37 000 t, depending on whether Ajinomoto and Kyowa agreed to an audit of their 1992 sales volumes. Sewon agreed to this proposal.
- (122) ADM named Ajinomoto as the office to which each lysine producer would provide monthly sales figures. Ajinomoto's job would be to keep track of the figures so that the producers could make adjustments in their sales to limit the overall annual sales to the agreed maximums. Regarding the submission of monthly sales numbers, ADM told the others that they had 'to watch their telephones and to be very careful'. ADM further proposed that the producers attend trade association meetings quarterly to adjust their price and sales volumes according to their agreements. It explained how forming an industry association could provide a

seemingly legitimate, but artificial, reason to meet, and thus conceal the fact that purported competitors were secretly meeting to discuss prices and sales volumes. ADM described how to have 'official' and 'unofficial' meetings. ADM explained that while attending an official industry association meeting, one person would book a hotel suite and quietly notify the others, and then they would secretly meet to discuss prices and sales volumes away from the official meeting. The participants agreed to proceed in this way.

— Follow-up

(123) There was discussion between the Asian producers about the audit of sales figures.

(124) On 1 February 1994 ADM Ingredients met with Eurolysine. They discussed the price level at that time and decided to slow down deliveries in order to maintain the price. This was the first meeting between European representatives of lysine producers after the 'trilateral meetings' in the first half of 1992 (paragraphs 75 and 76), of which the Commission possesses direct evidence. However, it is clear from the evidence directly concerning other meetings (27 August 1992; 1 October 1992; 5 October 1993), that during the whole period covered by the present investigation European representatives of the lysine producers fine-tuned the decisions taken at world level.

(125) On 26 January 1994 the first official meeting of the Fefana amino acid working party was held in the Fefana offices in Brussels. On 15 February 1994, Eurolysine invited the other lysine producers to a fake Fefana 'task force meeting' in Honolulu.

(g) Meeting of 10 March 1994 in Honolulu

(126) The meeting was held in the Sheraton Makaha Resort Hotel. The participants were representatives of Ajinomoto/Eurolysine, ADM, Kyowa, Sewon and Cheil, Kyowa chaired the meeting.

(127) The meeting in Hawaii was the first meeting held since Ajinomoto/Eurolysine, ADM, Kyowa and Sewon had decided to submit their sales volume numbers to Ajinomoto. During the morning Ajinomoto/Eurolysine, ADM, Kyowa and Sewon discussed and analysed their sales figures in relation to the target sales figures established at the Tokyo meeting (8 December 1993). They then discussed whether or not to submit their figures for verification through an audit. Since there was no progress on this issue, the participants agreed that

the upper management of the Asian companies would decide the audit issue at a later meeting.

(128) In the afternoon Cheil, which had not participated in the morning meeting because Cheil wanted a larger sales volume allocation as previously agreed by the other producers, was offered a quota of 17 000 t. Cheil agreed on this offer and the report of sales figures.

(129) The participants (including Cheil) then discussed and agreed upon prices to charge for lysine for the second quarter of 1994 on a country-by-country basis within each of the following regions: North America, Central and South America, Europe, the Middle East, Africa and Asia.

(130) In the European market, it was noted that the current price was below DEM 5,00/kg and end-users seemed to be waiting for it to drop further. Furthermore, stock levels seemed to have dropped, apparently due to manipulation by traders. The participants agreed, with immediate effect, that the price for Europe was to be DEM 5,20/kg.

(131) ADM and Ajinomoto suggested that the next official amino acid working party meetings could be used as a 'cover' for the producers' conspiratorial meetings.

— Follow-up

(132) On 15 March 1994, Ajinomoto, Kyowa and Sewon met in the Royal Hotel in Tokyo. The participants discussed the selection of accounting firms to verify the sales volumes. The Japanese companies wanted each company to use their own accounting firms, Sewon proposed the appointment of one accounting firm to examine each company. They agreed to continue the discussion at the next meeting. Sewon's sales allocation quantity for 1994 was once again discussed. The Japanese companies referred to 34 000 t, based on Sewon's actual sales volume of 1992. Sewon claimed 37 000 t. If, however, the accounting firm's auditing results indicated Ajinomoto and Kyowa's 1992 sales result to be 84 000 t and 46 000 t respectively, then Sewon would agree to sell 34 000 t in 1994, but over 37 000 t in 1995.

(h) Meeting of 19 May 1994, in Paris

(133) On 19 May 1994 at the occasion of the second official Fefana amino acids working party meeting, which took place in Paris, the five lysine producers met unofficially at the Grand Hotel.

(134) The participants discussed and analysed their sales figures, which they had reported to Ajinomoto, in relation to the target sales figures established at the

Tokyo meeting (8 December 1993). Ajinomoto stated that Sewon had exceeded the proportionate quantity of the annual total of 34 000 t and that they must buy from other companies the exceeding quantity at the end of the year. Sewon stated that it had only agreed to 34 000 t, on condition of an independent audit of the 1992 sales figures of each of the other producers. Given that ADM, Ajinomoto and Kyowa claimed that any accounting firm other than the ones currently used by these producers was not acceptable, Sewon insisted on 37 000 t. ADM warned Sewon to reduce its sales or there would be pressure on price.

- (135) The participants then discussed prices by region. In relation to Europe, the participants agreed on a minimum price of DEM 5,10/kg starting from the 25 May of that year. The participants expected these prices to hold until the next time they met.

— Follow-up

- (136) At the end of May/beginning of June 1994 ADM set its sales targets and target prices in an internal meeting held in St Louis. The European sales organisation was disciplined to stay at the target price of DEM 5,10/kg.
- (137) On 16 June 1994 at the occasion of an official Fefana meeting in Düsseldorf, ADM Ingredients, Eurolysine, Kyowa Europe and Cheil met unofficially. Eurolysine commented on the current European market situation, including prices country by country. The participants noted that prices were dropping below DEM 4,70/kg. Everyone agreed to keep the price at DEM 5,10/kg.
- (138) On 30 June 1994 Eurolysine met Sewon Europe. Eurolysine gave explanations concerning the Düsseldorf meeting of 16 June. Sewon noted that actual market prices had always dropped after the announcement of price increases, because Eurolysine announced a price increase after securing orders from big customers at the old price. It concluded that the actual price could not be increased. The participants also exchanged their views concerning the market situation in different countries.
- (139) On 19 July 1994 at the invitation of Eurolysine, which prepared a fake Fefana agenda, ADM Ingredients, Eurolysine, Sewon Europe and Cheil met at the Hyatt Regency Hotel. The participants agreed to keep the following prices (per kg) until the end of the year: Germany DEM 5,10, France FRF 17,50, Belgium BEF 105, the Netherlands NLG 5,70, the United Kingdom GBP 2,10, Spain and Portugal ESP 430 (minimum 425), Italy ITL 5 200, Austria ATS 36. They agreed to coordinate their attitudes toward certain clients, which were difficult to approach individually by each supplier.

There was some discussion of US cargo entering Europe at about DEM 4,60 and the impact of the weak US dollar.

(i) Meeting of 23 August 1994 in Sapporo

- (140) The meeting was held in the Hiroshima Prince Hotel in Sapporo. The participants were representatives of Ajinomoto/Eurolysine, ADM, Kyowa, Sewon and Cheil. Eurolysine had invited the other lysine producers to a fake Fefana 'task force meeting'.
- (141) The participants discussed and analysed their sales figures, which they had reported to Ajinomoto, in relation to the target sales figures established at the Tokyo meeting (8 December 1993).
- (142) Sewon's sales allocation quantity for 1994 was once again discussed. Ajinomoto understood that Sewon's quota of 37 000 t was limited to 1994 and not the basis for the 1995 allocation. Sewon replied that unless its 1995 sales volume allocation was 50 000 t, it had no intention to further negotiate any sales quantities. Because the quantity Sewon demanded was beyond the expectations of the other companies the meeting was discontinued for consultation purposes.
- (143) After the meeting resumed ADM threatened the other participants with a new price war and predicted that Sewon would be severely damaged not only in the overseas markets but in the Korean market too. Kyowa reminded the others that it was possible to maintain high prices based on cooperation and mutual efforts. Kyowa asked Sewon if they were going to instigate another price war. Sewon responded that it could not cooperate with the other companies on production quantities but it could cooperate on pricing. It was concluded that Sewon's future status could be that of an observer and not a participant in the quota allocation scheme. It was decided to leave this question to a top management meeting.
- (144) The participants further discussed actual and future price strategies and market developments for each region. In relation to Europe the participants decided not to increase the price due to the German mark's appreciation compared to the US dollar.

— Follow-up

- (145) On 7 September 1994 ADM Ingredients, Eurolysine, Sewon Europe and Cheil met at the Hotel Frankfurter Hof in Frankfurt. The participants reviewed the results

of the Sapporo meeting (23 August 1994). ADM Ingredients, Eurolysine and Cheil expressed concerns regarding Sewon's sales quantity claim. The participants then discussed and analysed their sales figures in relation to the agreed sales quotas. ADM Ingredients proposed that the total 1994 sales quantity in Europe should be reduced from 91 400 t to 80 000 t. Eurolysine supported the proposal, saying that demand in Europe was down (largely due to the cheap availability of soybean meal). However, both Cheil and Sewon Europe disagreed with the proposal, on the basis that 80 000 t was far too little for the European market. The participants finally decided on the lysine price (per kg): the United Kingdom GBP 2,10 to 2,25; Spain at least DEM 5,10 to 5,20; other countries around the DEM 5,00 to 5,10 level.

- (146) On 13 October 1994 ADM met with Ajinomoto at the Four Seasons Hotel in Chicago. The participants discussed the problems they were facing because Sewon was now insisting on expanding its lysine plant capacity in 1995. Ajinomoto informed ADM that Sewon had stopped submitting its sales volume figures.

(j) Meeting of 26 October 1994 in Zurich

- (147) The meeting was held in the Dolder Grand Hotel in Zurich. The participants were representatives of Ajinomoto/Eurolysine, ADM, Kyowa, Sewon and Cheil.
- (148) Deviating from the initial agenda, Ajinomoto asked Sewon, at the beginning of the meeting, whether its volume policy announced at the Sapporo meeting (23 August 1994) had changed and what its 1995 sales target would be. Sewon answered that its policy had not changed and that its sales target was 50 000 t. Ajinomoto then made a quantity allocation proposal that was accepted by all participants except Sewon. Sewon claimed that it could not agree to that proposal because its priorities for 1995 were 50 000 t and 20 % market share. Sewon informed the other participants that its 1995 budget price was USD 2,20/kg. The other participants said that if Sewon persisted in implementing its increase, then they would all increase their sales as well. Moreover, ADM threatened to increase its sales on the Korean market from 1 000 t per year to 5 000 t per year if Sewon persisted in raising its worldwide sales to 50 000 t. ADM also said that it could force the standard price of lysine down to USD 1,30/kg in order to force Sewon back to the negotiating table. ADM referred to the fact that Sewon was financially the weakest company, implying that it could be the target of a take-over. Kyowa also suggested buying out Sewon if the latter insisted on a 50 000 t capacity. It directly inquired as to who was the second largest shareholder in the company. Sewon proposed to

discuss prices without further quantity negotiations. The other participants rejected this on grounds that price negotiations were meaningless without having a quantity agreement first. The meeting was dissolved after ADM had left the meeting.

— Follow-up

- (149) On 23 and 24 November 1994 Ajinomoto met Sewon in Seoul in order to clarify the situation after the Zurich meeting (26 October 1994) and to prepare for the next meeting. Sewon indicated that a new plant was being built for the Chinese market and that it intended to increase its capacity to 50 000 t by 1995/96 as the 39 000 t proposed in Zurich was not acceptable considering its level of investment. However, it was agreed that Sewon should continue to cooperate on prices with its competitors. Moreover, it was agreed that Sewon should maintain its production at 37 000 t for 1994, and continue to send monthly sales reports over the next year (at this point Ajinomoto had received the August and September reports). Ajinomoto reported the results of the meeting to ADM, Kyowa and Cheil.
- (150) On 1 December 1994, at the occasion of an official Fefana meeting in Amsterdam, ADM Ingredients, Eurolysine, Kyowa Europe and Cheil met unofficially. They exchanged information on prices and quantities. It was suggested that there was no reason to have a lower price in Europe than in the USA and that therefore a European price of DEM 4,90/kg was justified. The participants agreed to set DEM 4,90/kg as the offer price and DEM 4,80 as the minimum price. They furthermore agreed to minimise supplies at the existing price of DEM 4,40 to 4,50.
- (151) On 6 December 1994 ADM Ingredients and Eurolysine met Sewon Europe in Frankfurt. The purpose of the meeting was in particular to explain to Sewon the price discussion that took place at the Amsterdam meeting (1 December 1994). The participants also compared the actual sales (January to September), the expected sales (by end of December), and the allocated quantities for Europe. Sewon Europe stated that basically it did not want price decreases and wanted to maintain the agreed prices, but that such agreed prices had been rendered meaningless due to the fact that Eurolysine was selling quantities in advance at a price lower than the agreed price. If this situation continued, Sewon would sell at whatever prices it could. It would keep the agreed price levels only if they were in line with market conditions. As a model case, Sewon Europe suggested that producers should stop selling for two weeks in Spain, and resume selling when the agreed price was reached in the market. Eurolysine and ADM Ingredients

informed Sewon Europe that they had announced the agreed new price that day.

for the first quarter of 1995. Kyowa was informed of the results by phone.

(152) On 12 December 1994, Ajinomoto and Sewon met again in order to continue their discussions started on 23 November 1994 in Seoul. Ajinomoto stated that that year, all lysine producers maintained communications and were happy with the achieved prices. It warned Sewon that, if companies started a price war, it was certain that everyone would suffer losses. Therefore, they urged Sewon to find points that all could agree on. Sewon stated that, in 1995, its policy was to achieve 20 % market share and to sell 50 000 t. However, Sewon was willing to reduce its sales to 46 000 t. Ajinomoto proposed a sales volume for Sewon of 40 000 t and to purchase the extra quantity of 6 000 t from Sewon in order to sell it under Ajinomoto's brand. Sewon rejected that proposal and insisted on 46 000 t own sales. It, nevertheless, promised to keep the price at Ajinomoto's level.

(158) On 9 March 1995, at the occasion of an official Fefana meeting in Basle ADM Ingredients, Eurolysine, Sewon Europe, and Cheil met unofficially in the Hilton Hotel. The purpose of the meeting was a price adjustment for the second quarter of 1995 with the weakening US dollar and stronger German mark. The participants expected continuous price weakening due to the traders' activities of importing the product from the USA where the price was at USD 2,64/kg. Taking this into account, the participants agreed on the following prices/kg: the United Kingdom GBP 1,95 to 2,00; Spain DEM 4,10; Italy ITL 5 200 to 5 300; France FRF 15,70 to 16,00; other European markets DEM 4,40 to 4,50. There was a discussion between Sewon and ADM concerning the supply to each other's customers in the United Kingdom.

(k) Meeting of 18 January 1995 in Atlanta

(l) Meeting of 21 April 1995 in Hong Kong

(153) On 18 January 1995, representatives of Ajinomoto/Eurolysine, ADM, Kyowa, Sewon and Cheil met in Atlanta.

(159) The meeting was held in the Regent Hotel in Hong Kong. The participants included representatives of Ajinomoto/Eurolysine, ADM, Kyowa, Sewon and Cheil.

(154) The participants compared the allocated production quotas for 1994 with the actual sales figures realised during the same year. They concluded that the difference between allocated quota and actual sales of each company was not excessive and that therefore the price level could be maintained. Furthermore the participants resolved to allocate sales quotas on the basis of the estimated market size for 1995. All participants, except Sewon, which requested a higher market share, agreed to maintain the market share, allocated for 1994, i.e. Ajinomoto 33 %, ADM 27 %, Kyowa 19 %, Sewon 14 %, Cheil 7 %.

(160) The participants compared the allocated production quotas for 1994 and January to March 1995 with the actual sales figures realised during the same period. Because Sewon had increased sales volume beyond its 1995 share, there were strong protests from the other companies. Sewon reconfirmed that its target volume was unalterable. Ajinomoto and Kyowa urged Sewon to reduce sales volume because the market price would suffer. Sewon pointed out that the market price had fallen despite their increased sales volumes.

(155) All participants, including Sewon, agreed to continue to report monthly sales results to Ajinomoto.

(161) Furthermore, the participants discussed sales prices region by region. Concerning Europe, the participants agreed to decrease the previously agreed price of DEM 4,80/kg (meeting of 18 January 1995) to DEM 4,50/kg. The plan was to discuss the price again at a meeting between the people in charge of sales in Europe.

(156) With regard to prices, the participants agreed, *inter alia*, to increase the European price from DEM 4,50/kg to DEM 4,90/kg, with an exceptional minimum price of DEM 4,80/kg.

(162) The participants noted that in Europe the premix companies resold lysine causing a price drop. Ajinomoto requested that traders' activities of re-exporting the product originally imported from other regions should be blocked. He also requested Sewon to stop Sewon's distributor in Canada from selling to regions other than Canada.

— Follow-up

(157) On 30 January 1995 European representatives of amino acid producers met, apparently in order to review prices

(163) It was finally agreed that Kyowa would be the host for the next meeting in the Cayman Islands, which was scheduled for 7 July 1995.

— Follow-up

(164) On 27 April 1995 ADM Ingredients, Eurolysine, Kyowa Europe, Sewon Europe and Cheil met in the Sofitel Hotel in Brussels. The participants compared their sales volumes in Europe (including Africa and the Middle East) during the first quarter of 1995. Sewon's sales volume was estimated, and this company was asked to submit actual data. The other participants complained about Sewon's sales volume increase. The participants then reviewed the price discussion that had taken place at the Hong Kong meeting (21 April 1995). After this, they entered into a detailed price discussion concerning Europe. They decided a minimum of DEM 4,25/kg as the European price, and set the prices by each currency. These prices were to be applied for deliveries from 27 April to late June. Afterwards, a price of DEM 4,50 was to be announced. The participants agreed on the explanation to be given to buyers. It was also agreed not to include in the contract a clause on most favourable treatment. The next meeting of the European representatives was scheduled for 19 May 1995, in Utrecht.

(165) On 23 May 1995, apparently at the occasion of the official Fefana task force meeting on environmental pollution, ADM Ingredients, Eurolysine, Kyowa Europe, Sewon Europe and Cheil met. The participants exchanged detailed information on prices and quantities applied by each producer in different European countries. The new European price valid from the Monday following the meeting was set at DEM 4,25/kg. The participants then set the price by each European currency. All participants agreed to firmly respect that level. The idea of dividing customers amongst producers was put forward.

(166) On 27 June 1995 the FBI searches of the offices of ADM, Ajinomoto's Heartland Lysine and Sewon America took place.

F. THE COMMISSION'S PROCEDURE

(167) In July 1996, immediately after the publication of the Commission notice on the non-imposition or reduction of fines in cartel cases ⁽⁵⁾ (leniency notice), Ajinomoto offered to the Commission, on the basis of that notice, its full cooperation in establishing the existence of a cartel in the lysine market and its effect in the EEA. It later submitted evidence in this respect and continued to supplement this information.

(168) On 11 and 12 June 1997 the Commission carried out investigations ordered by decision at two European subsidiaries of ADM and the offices of Kyowa Europe.

ADM issued a press release on the investigations which took place at its subsidiaries.

(169) Immediately after the investigations at ADM and Kyowa, Sewon Europe and the European sales office of Cheil were informed by the Commission, by telephone, that the Commission had opened a proceeding under Article 81 of the EC Treaty and Article 53 of the EEA Agreement.

(170) A few days after the investigation at their premises, Kyowa indicated its possible willingness to cooperate with the Commission. After discussion with the Commission on the terms of reference concerning its possible cooperation, Kyowa submitted business records and subsequently its representatives gave an oral chronology of meetings and other contacts between lysine producers. Thereafter, it continued to supplement this information.

(171) On 28 July 1997 the Commission addressed requests for information in accordance with Article 11 of Regulation No 17 to ADM, ADM Ingredients, Sewon, Sewon Europe and Cheil concerning their behaviour in certain amino acid markets, and in particular business records of the cartel meetings which were identified in the request.

(172) After having received the request for information, Sewon indicated its willingness to cooperate with the Commission. It provided minutes of meetings between lysine producers. Sewon also provided details of meetings for which the Commission had made no request. It continued to supplement this information.

(173) Cheil replied that there were no complete or accurate records of the meetings identified in the Commission's request. It had, however, interviewed each and every member of staff who participated in the meetings in order to obtain a detailed account of what was actually discussed. Cheil also provided details of meetings for which the Commission had made no request.

(174) As ADM and ADM Ingredients did not respond to the Commission's request within the time limit fixed by it for providing the requested information, the Commission, by registered letter of 14 October 1997, reminded both companies that it had not received any, or part, of the information requested. In this letter the Commission expressly stated that the delay in replying to the request for information hindered the conduct of this case.

(175) Eventually, on 24 October 1997 ADM Ingredients answered the Commission's request in relation to lysine, but submitted no information concerning other amino acids. ADM did not answer at all.

⁽⁵⁾ OJ C 207, 18.7.1996, p. 4.

- (176) On 29 October 1998 the Commission initiated proceedings in the present case and adopted a statement of objections against companies to which this Decision is addressed. All parties submitted written observations in response to the Commission's objections. An oral hearing took place on 1 March 1999. On 16 August 1999 the Commission issued a supplementary statement of objections.

G. THE LYSINE INVESTIGATION IN THE USA

- (177) On 27 June 1995, after more than two years of secret investigation, the FBI searched the offices of ADM, Ajinomoto's Heartland Lysine and Sewon America.
- (178) In August and October 1996 the parties were charged by the US authorities with engaging in a conspiracy to suppress and eliminate competition by fixing the price and allocating the sales volumes of lysine. The defendants signed plea agreements to pay fines. ADM paid a then record fine of USD 70 million (out of USD 100 million including a citric acid conspiracy). Ajinomoto and Kyowa agreed in their plea agreements to pay fines of USD 10 million each and Cheil agreed to pay USD 1,25 million. As to Sewon, the US Government prosecuted only Sewon's US subsidiary, Sewon America.
- (179) On 4 November 1992 the former President of ADM's Bioproducts Division, who served this undertaking during the relevant period, began working with the FBI. He agreed to follow all directions given by FBI agents. Currently, the former President of ADM's Bioproducts Division is serving a nine-year prison term for the theft of nearly USD 10 million from ADM.
- (180) On 9 July 1999 a US judge sentenced the former vice chairman of ADM and two former executives to prison and to pay fines for their roles in the conspiracy which is the subject of the present proceeding.

H. THE LYSINE INVESTIGATION IN CANADA

- (181) On 27 May 1998 the Canadian authorities announced that ADM pleaded guilty to having participated in price-fixing and market-sharing conspiracies and were fined CAD 16 million. The fine imposed on Ajinomoto was CAD 3,5 million, while the fine imposed on Sewon was CAD 70 000. Cheil was not prosecuted in Canada because during the conspiracy period Cheil did not sell any lysine in Canada. Kyowa was granted immunity.

II. ASSESSMENT

A. JURISDICTION

- (182) These proceedings concern agreements concluded inside and outside the EEA by companies established inside and outside this region. According to established case-law of the Court of Justice and the Court of First Instance of the European Communities, where producers established outside the EEA region sell directly to purchasers established in the EEA region and engage in price competition in order to win orders from those customers, that constitutes competition within the common market. It follows that where those producers agree on the prices and on the allocation of sales volumes, and put that coordination into effect in the EEA region, they are taking part in agreements which have the object and effect of restricting competition within the common market, within the meaning of Article 81(1) of the EC Treaty and Article 53 of the EEA Agreement. (Judgment in Joined Cases 89, 104, 114, 116, 117 and 125 to 129/85 *Ahlström*) ⁽⁶⁾.

B. ARTICLE 81 OF THE EC TREATY AND ARTICLE 53 OF THE EEA AGREEMENT

- (183) The Commission considers that the companies concerned by this Decision infringed Article 81 of the EC Treaty and Article 53 of the EEA Agreement in that they, in the EEA and by agreement, fixed lysine prices, controlled the supply and allocated sales volumes to each other, and exchanged information on their sales volumes in order to monitor the sales volume allocations they agreed upon.

1. Article 81(1) of the EC Treaty and Article 53(1) of the EEA Agreement

(a) Undertakings

- (184) The companies concerned by this Decision are undertakings within the meaning of Article 81(1) of the EC Treaty and Article 53(1) of the EEA Agreement.

(b) Agreements

- (185) According to the case-law of the Court of Justice, in order for there to be an agreement within the meaning of Article 81(1) of the EC Treaty and Article 53 of the EEA Agreement, it is sufficient that the undertakings in question should have expressed their joint intention to conduct themselves on the market in a specific way (judgments in Case 41/69 *ACF Chemiefarma* ⁽⁷⁾, and in Joined Cases 209/78 to 215/78 and 218/78 *Heintz van Landewyck* ⁽⁸⁾). Attendance by an undertaking at meetings

⁽⁶⁾ [1988] ECR 5193.

⁽⁷⁾ [1970] ECR 661, paragraph 112.

⁽⁸⁾ [1980] ECR 3125, paragraph 86.

involving anti-competitive activities suffices to establish its participation in those activities, in the absence of proof capable of establishing the contrary (Judgments in Cases T-14/89 *Montedipe* ⁽⁹⁾ and in T-141/94 *Thyssen* ⁽¹⁰⁾).

— Price agreements

- (186) In July 1990 Ajinomoto, Kyowa and Sewon agreed to raise the worldwide lysine price (see paragraph 52). In September 1990, Ajinomoto, Kyowa and Sewon fixed, *inter alia*, the European price at DEM 4,60/kg (see paragraph 53).
- (187) In the first half of December 1990 Ajinomoto, Kyowa and Sewon set the European price at DEM 4,80/kg (see paragraph 54).
- (188) On 18 February 1991 Ajinomoto, Kyowa and Sewon fixed the price in Europe at DEM 4,70/kg (see paragraph 56).
- (189) On 12 March 1991 Ajinomoto, Kyowa and Sewon agreed to maintain the lysine price in Europe at DEM 4,70/kg (see paragraph 61).
- (190) On 4 July 1991 Ajinomoto, Kyowa and Sewon fixed the price in Europe at DEM 4,30/kg (see paragraph 64).
- (191) Thereafter, Ajinomoto, Kyowa and Sewon continued to discuss lysine prices.
- (192) Ajinomoto and Kyowa agreed, on 10 March 1992, to follow ADM's prices, so as to maintain market shares (see paragraph 65).
- (193) During a meeting apparently at the end of March 1992, on which Sewon Europe reported on 30 March 1992 to its headquarters in Korea, Ajinomoto, Kyowa and Sewon agreed to maintain the European price at DEM 3,76/kg (see paragraph 66).
- (194) At the end of April/beginning of May 1992 Ajinomoto, Kyowa and Sewon confirmed their price agreement reached at the end of March 1992 (see paragraph 67).
- (195) On 23 June 1992, ADM, Ajinomoto and Kyowa fixed the worldwide lysine price at a level they intended to maintain until the end of that year. The participants agreed that the European lysine price could be a little higher than the North American price, i.e. USD 1,05/lb until October and USD 1,20/lb for the end of the year (apparently fixed at DEM 3,50/kg and DEM 3,75/kg mentioned during the meeting of 1 October 1992). This agreement was conditional on an agreement on ADM's sales quantities. ADM's request was 48 000 t to for 1992 (see paragraph 73). Ajinomoto, Kyowa and Sewon accepted ADM's sales quantities request (meetings of 10 July and 7 August 1992), with which ADM was satisfied (as mentioned during the meetings of 2 November 1992 between Ajinomoto and Sewon). Cheil and Sewon adhered to this price agreement on 27 August 1992 (see paragraph 79).
- (196) On 1 October 1992, the five lysine producers fixed the price at DEM 4,00/kg (see paragraph 82).
- (197) On 2, 4 and 5 November 1992 ADM, Ajinomoto, Sewon and Cheil agreed to set the lysine price in Europe at DEM 4,25/kg (see paragraphs 87, 89 and 90). The price fixing was prepared by Ajinomoto's and Kyowa's discussion of 29 October 1992; Kyowa was therefore also involved in this agreement (see paragraph 86).
- (198) On 1 June 1993 ADM informed Kyowa that it had stopped decreasing the lysine price. The new standard price was USD 0,81/lb. On the basis of that price, the Asian producers, on 18 June 1993, set the European price at DEM 3,20/kg (see paragraph 104). On 24 June 1993, all five lysine producers confirmed this price agreement, and a new step increase in prices was envisaged (see paragraph 107).
- (199) On 5 October 1993, apparently due to flooding of the Mississippi river, which destroyed the US soybean crop, the five producers set the European price at DEM 5,30/kg (see paragraph 114). At their meeting of 8 December 1993, this price was confirmed (see paragraph 120).
- (200) On 10 March 1994 all five producers fixed the European lysine price at DEM 5,20/kg (paragraph 130).
- (201) On 19 May 1994 the five lysine producers fixed the baseline lysine price for Europe at DEM 5,10/kg (see paragraph 135). ADM, Ajinomoto, Kyowa and Cheil confirmed this agreement on 16 June 1994 (see paragraph 137). On 30 June 1994 Ajinomoto informed Sewon that the agreement had been confirmed. On 19 July 1994 ADM, Ajinomoto, Sewon and Cheil agreed to keep the price of DEM 5,10/kg until the end of 1994 (see paragraph 139). All five lysine producers again confirmed this agreement on 23 August 1994 (see paragraph 144).
- (202) On 7 September 1994 ADM, Ajinomoto, Sewon and Cheil fixed the lysine price to be between DEM 5,00 and DEM 5,20/kg in Europe (see paragraph 145). On 23 November 1994, Sewon confirmed that it would keep this price, too (see paragraph 149).

⁽⁹⁾ [1992] ECR II-1155, paragraphs 129 and 144.

⁽¹⁰⁾ [1999] ECR II-347, paragraph 177.

- (203) On 1 December 1994 ADM, Ajinomoto, Kyowa and Cheil set the minimum offer price at DEM 4,80/kg for Europe (see paragraph 150). On 12 December 1994 Sewon agreed to set the price at this level (see paragraph 152).
- (204) On 18 January 1995 all five producers agreed the European target price to be DEM 4,90/kg, with an exceptional minimum price of DEM 4,80/kg (see paragraph 156).
- (205) On 9 March 1995 ADM, Ajinomoto, Sewon and Cheil set the European price at DEM 4,40 to 4,50/kg (see paragraph 158). All five producers confirmed this price on 21 April 1995 (see paragraph 161).
- (206) On 27 April 1995 the five lysine producers set the European minimum price at DEM 4,25/kg and the target price at DEM 4,50/kg (see paragraph 164). All five lysine producers confirmed the minimum price on 23 May 1995 (see paragraph 165).
- (207) It therefore has to be concluded that, from at least July 1990, Ajinomoto, Kyowa and Sewon repeatedly expressed their joint intention to apply certain sales prices in the EEA, and hence concluded agreements within the meaning of Article 81(1) of the EC Treaty and Article 53(1) of the EEA Agreement. ADM became a party to price agreements with the then incumbent lysine producers as of 23 June 1992, and Cheil as of 27 August 1992.
- (208) The Commission has no reason to believe that after 27 June 1995, when the FBI searches took place, the undertakings concerned by this Decision concluded more price agreements.
- (209) ADM suggests that a review of the documents which the Commission used to demonstrate that the commencement date of ADM's involvement in the infringement corresponds with the meeting attended by ADM, Ajinomoto/Eurolysine and Kyowa representatives in Mexico City on 23 June 1992 does not support the Commission's conclusion. It is of the opinion that no agreement was reached involving ADM in the cartel at that time. With regard to agreements on price, ADM observes that any such agreement at the Mexico City meeting was conditional on agreement as to volume allocations. In its view, final agreement could not have been reached before 8 December 1993 (i.e. the meeting in Tokyo).
- (210) As to this argument it has to be noted that agreements which are concluded under a condition are nevertheless 'agreements' within the meaning of Article 81(1) of the EC Treaty and Article 53(1) of the EEA Agreement. Therefore, ADM's agreement to the prices discussed during the Mexico meeting, which was conditional on the other producers' agreement to a volume allocation of 48 000 t, falls into this category. Moreover, this agreement became unconditional. On 23 June 1992 in Mexico Ajinomoto/Eurolysine and Kyowa agreed to the volume allocation requested by ADM. ADM then confirmed its agreement to this allocation on 2 July 1992. Sewon agreed on 7 August 1992. At about the same time, Cheil agreed to self-restrain its sales as well (mentioned during the meeting of 2 November 1992, between Ajinomoto and Sewon). The condition for the price agreement of 23 June 1992 to become unconditional was therefore met.
- Agreements on quantities
- (211) From the minutes of the meeting of 18 February and 12 March 1991 it can be seen that Ajinomoto, Kyowa, and Sewon agreed to sell, in 1991, worldwide the same quantities as in 1990 (see paragraphs 58 and 61). There was at least agreement between the participants that in 1991 in Europe Sewon's quantities should be the same as in 1990. Furthermore, at least in 1991, Ajinomoto, Kyowa and Sewon agreed to the home-market principle, i.e. that the local producer should sell as much as possible in its own region. The local producer in Europe was Ajinomoto/Eurolysine.
- (212) The Commission reaches this conclusion on the basis of the fact that Kyowa and Ajinomoto insisted on this principle (meetings of 18 February 1991 and 19 June 1992) and that Sewon had submitted to the same principle (see paragraphs 56 and 68).
- (213) On 23 June 1992 ADM, Ajinomoto and Kyowa agreed to the proposal that worldwide lysine sales quantities had to be coordinated (see paragraphs 73 and 74). On 10 July 1992, the two Korean lysine producers adhered to the idea to coordinate their sales with ADM (see paragraph 76).
- (214) On 10 July 1992 Ajinomoto and Kyowa proposed to the Korean producers a sales allocation plan for 1992 which provided for a quota of 48 000 t in favour of ADM (see paragraph 77). On 2 July 1992 ADM had already agreed to its 1992 quota (see paragraph 76) (confirmed in the meeting of 8 September 1992, see paragraph 80). During the meeting of 7 August 1992, it became clear that Sewon adhered to the agreement on ADM's quota (see paragraph 78). Sewon confirmed its agreement during the meeting of 2 November 1992 (see paragraph 87). Furthermore, at this meeting, Sewon agreed to limit its sales in Europe to 6 000 t. Although Cheil did not agree to any individual sales quantity allocation, it agreed, within the plan, to coordinate sales quantities to self-restrain its sales (mentioned during the meeting of 2 November 1992 between Ajinomoto and Sewon, see paragraph 87).

- (215) The negotiations for an agreement on individual sales volume allocations for 1993 started on 21 January 1993. Although the parties continued their efforts during the summer of that year, they reached no agreement on a comprehensive individual sales allocation for 1993. On 5 October 1993 however, all five lysine producers agreed to reduce supply in order to prevent a price decline. As regards Europe, a 40 % to 50 % reduction was envisaged (see paragraph 114).
- (216) At their meeting of 25 October 1993 Ajinomoto and ADM reached agreement on a comprehensive individual sales volume allocation for all five lysine producers for 1994: all five producers were allocated a basic quota equal to their 1993 sales. Out of the expected sales increase, Kyowa, Sewon and Cheil would each get a supplementary quota of 2 000 t while ADM and Ajinomoto would share equally the remaining worldwide lysine sales increase (see paragraph 117). Kyowa and Sewon adhered to this agreement on 8 December 1993 (see paragraph 121). On 10 March 1994 ADM, Ajinomoto, Kyowa, and Sewon confirmed their agreement on the sales allocation volumes for 1994, and Cheil adhered to this agreement (see paragraphs 127 and 128). Sewon confirmed its agreement once again on 23 and 24 November 1994 (see paragraph 149).
- (217) On 18 January 1995 ADM, Ajinomoto, Kyowa and Cheil agreed to maintain, for 1995, the market share allocated for 1994 (see paragraph 153). Sewon did not participate in the 1995 sales volume allocation.
- (218) It therefore has to be concluded that, as from at least 18 February 1991, Ajinomoto, Kyowa and Sewon repeatedly expressed their joint intention to control the supply of lysine and to allocate certain sales volumes to each other in the EEA and hence concluded agreements within the meaning of Article 81(1) of the EC Treaty and Article 53(1) of the EEA Agreement. ADM became a party to agreements on quantities as from 2 July 1992. Also at some moment during the second half of 1992, and in any event before 2 November 1992, Cheil agreed, within the plan to coordinate sales quantities (meeting of 10 July 1991), to self-restrain its sales (mentioned during the meeting of 2 November 1992, between Ajinomoto and Sewon). From this moment, Cheil definitely consented to the adoption of an overall plan comprising the constituent elements of an agreement on sales quantities, and it became a party to such agreements with the other lysine producers ⁽¹¹⁾.
- (219) Cheil does not agree with the Commission's conclusion concerning the duration of its involvement in sales volume agreements. It suggests that it was always in disagreement with the other companies as to how much volume it should produce. Cheil states that the only occasion on which it might have been possible to suggest that it could have agreed to a volume allocation was at the Honolulu meeting (10 March 1994) where, on the face of the minutes, it might appear that it had settled on an agreed volume of 17 000 t. Cheil emphasises however that it only gave this token indication after being put under considerable pressure by ADM and Ajinomoto. Cheil stresses that at the time it indicated it might accept 17 000 t, it had already taken the internal decision to expand to 40 000 t. Cheil states that while it indicated that it might agree to a volume allocation on 10 March 1994, it already knew that in practice it would not comply.
- (220) Furthermore, Cheil claims that statements on sales volumes, made by its representatives before 10 March 1994, were merely acknowledgments of the generally known economic principle that over-capacity will lead to a reduction in prices. It argues that such acknowledgments of a general economic nature do not amount to an agreement to limit sales volumes within the meaning of Article 81(1) of the EC Treaty.
- (221) The Commission's finding that Cheil's behaviour constitutes restrictive agreements within the meaning of Article 81(1) of the EC Treaty and Article 53(1) of the EEA Agreement, is not altered if it could be established that this undertaking had no genuine intention to implement the intentions actually expressed by it. Having regard to the manifestly anti-competitive object of the events at the occasions where the intentions were expressed Cheil, by participating without taking any action to publicly distance themselves from what occurred at them, gave the impression to the other participants that it had the same intentions as the other parties and would act in conformity with them (judgment in Case T-7/89 *Hercules* ⁽¹²⁾). The notion of 'agreement' is objective in nature. The actual motives (and hidden intentions) which underlay the behaviour adopted towards the other participants are irrelevant (judgment in Case T-142/89 *Usines Gustave Boël* ⁽¹³⁾).
- (222) As to Cheil's argument that it did not express any intention as to its sales volumes, but that it merely acknowledged a general economic principle, the Commission notes that it is clear that the objective of

⁽¹¹⁾ See Judgment in Case T-295/94 *Buchmann* [1998] ECR II-813, paragraph 121.

⁽¹²⁾ [1991] ECR II-1711, paragraph 232.

⁽¹³⁾ [1995] ECR II-867, paragraph 60.

the meetings in question was clearly to control sales volumes and that it is the Commission's understanding and that of the other lysine producers that Cheil made statements concerning its conduct on the lysine market.

- (223) The Commission has no reason to believe that after 27 June 1995, when the FBI searches took place, the undertakings concerned by this Decision concluded more agreements on sales quantities.

— **Agreement on the exchange of information on sales quantity**

- (224) On 8 December 1993, ADM, Ajinomoto, Kyowa and Sewon agreed that from January 1994, all companies were to make monthly reports of sales/shipments by region to Ajinomoto, at the latest 15 days after the end of the month, allowing for feedback each month (see paragraph 122). Cheil adhered to this agreement on 10 March 1994 (see paragraph 128).

- (225) ADM, Ajinomoto, Kyowa and Cheil implemented the agreement on the quantity information system until 27 June 1995. Sewon stopped producing sales figures as from beginning 1995 (meeting of 27 April 1995). However it continued to participate in meetings where it was informed of the figures reported by the other producers, until 27 June 1995. In those circumstances, Sewon remained a participant in the agreement on the exchange of information ⁽¹⁴⁾.

- (226) It therefore has to be concluded that, from the beginning of 1994, the undertakings concerned by this Decision had a joint intention to exchange information on their sales quantities in the EEA in order to monitor the agreements on sales quantity allocation, and hence were parties in an agreement within the meaning of Article 81(1) of the EC Treaty and Article 53(1) of the EEA Agreement.

- (227) The Commission has no reason to believe that after 27 June 1995, when the FBI searches took place, the undertakings concerned by this Decision continued their agreement on the exchange of information on sales quantity.

(c) *Object of the agreements*

- (228) Article 81(1) of the EC Treaty and Article 53(1) of the EEA Agreement expressly mention, as restrictive of competition, agreements that fix selling prices, limit or control production, or share markets within the EEA. In the present case, the objective of the companies concerned was to regulate the lysine market and to coordinate their behaviour in such a way as to ensure that their agreed price and sales quota initiatives would

be successful. Therefore, the agreements on prices and sales quantities in question have as their object the restriction of competition within the meaning of Articles 81(1) of the EC Treaty and Article 53(1) of the EEA Agreement.

- (229) As to the information exchange system, it has to be noted that the information which the undertakings, according to the agreement, were to receive and subsequently actually did receive was capable of appreciably influencing their conduct. Given the availability of this information, each undertaking knew that it was being kept under close surveillance by its competitors and that it could, if necessary, react to the conduct of its competitors, on the basis of considerable more recent and accurate data than those available by other means. It follows that the information exchange system appreciably reduced the decision-making independence of the participating producers by substituting practical cooperation between them for the normal risks of competition. In any event, where an exchange of firm specific information is the adjunct of an anti-competitive practice, such as in the present case, it is also caught by the prohibition in Article 81(1) of the EC Treaty and Article 53(1) of the EEA Agreement as an integral part of that practice.

- (230) It is established case-law that there is no need to take account of the concrete effects of agreements in order to conclude that they are prohibited by Article 81(1) of the EC Treaty (and by implication Article 53(1) of the EEA Agreement), when it is apparent, as in this case, that they have as their object the restriction of competition (judgment in Case C-277/87 *Sandoz* ⁽¹⁵⁾).

(d) *Effect on trade between Member States of the Community and EEA countries*

- (231) The agreements in question had an appreciable effect upon trade between Member States of the Community and EEA countries.

- (232) The lysine market is one which is particularly characterised by trade between Member States. In the EEA there is only one producer of lysine, i.e. Eurolysine, with production plants in France and Italy. Lysine purchased in all other EEA countries has to be imported from these countries, from outside the EEA, or from the EEA countries into which the lysine produced in third countries had initially been imported.

⁽¹⁴⁾ See Case T-295/94 *Buchmann*, loc. cit., at paragraph 131.

⁽¹⁵⁾ [1990] ECR I-45.

(233) Virtually all trade throughout the EEA in this important agro-industrial sector was controlled by the cartel. All producers supplied lysine throughout the EEA. The collusive behaviour adopted by the lysine producers distorted the pattern of trade in this region through the effect on price levels and quantities.

(234) The application of Article 81(1) of the EC Treaty and Article 53(1) of the EEA Agreement to a cartel is not limited to that part of the members' sales which actually involve the transfer of goods from one Member State to another. Nor is it necessary, in order for those Articles to apply, to show that the individual conduct of each participant, as opposed to the cartel as a whole, affected trade between Member States (judgment in Case T-13/89 ICI ⁽¹⁶⁾) and, by implication, EEA countries.

2. Article 81(3) of the EC Treaty and Article 53(3) of the EEA Agreement

(235) The agreements which are the subject of this Decision took place in secrecy and have not been notified to the Commission. Therefore, they cannot be exempted from the application of Article 81(1) of the EC Treaty and Article 53(1) of the EEA agreement. In any event, the type of conduct adopted by the undertakings in question does not meet the conditions laid down in Article 81(3) of the EC Treaty and Article 53(3) of the EEA Agreement.

3. Single continuing infringement

(236) In the present case, the undertakings concerned by this Decision, in varying compositions of participants, concluded at different times anti-competitive agreements concerning different types of behaviour either separately or in combination. Every single one of these agreements constitutes, in principle, an infringement of Article 81 of the EC Treaty and Article 53 of the EEA Agreement.

(237) This series of anti-competitive agreements was concluded in the context of a single common plan to regulate prices and supply on the lysine market. The undertakings concerned participated in an overall framework which manifested itself in agreements with the object of restricting competition between the participating undertakings on the lysine market. The Commission considers therefore that it is artificial to sub-divide the individual actions into separate infringements as it is clear that the actions were undertaken in the context of an overall common plan pursuing the same anti-competitive purpose.

(238) From the case-law of the Court of Justice and the Court of First Instance, it follows that Article 81 of the EC Treaty and Article 53 of the EEA Agreement can be infringed both by separate acts and a series of connected acts (judgments in Case C-49/92 P *Anic* ⁽¹⁷⁾ and in Case T-1/89 *Rhône Poulenc* ⁽¹⁸⁾). The Commission concludes that, in the present case, the actions of the participants constitute one single continuing infringement.

(239) Ajinomoto, Kyowa and Sewon committed this infringement from at least June 1990, Cheil from the beginning of 1991, and ADM from 23 June 1992.

(240) The Commission has no reason to believe that the infringement continued after 27 June 1995, when the FBI searches took place. On the other hand, the infringement had not ended at the date of the last meeting at which an agreement within the meaning of Article 81(1) of the EC Treaty and Article 53(1) of the EEA Agreement was reached, i.e. 23 May 1995, because the parties had the intention to continue the conspiracy on 7 July 1995 in the Cayman Islands (agreed during the meeting of 21 April 1995 in Hong Kong).

(241) Ajinomoto claims that the period in which the cartel operated in a systematic fashion, with the participants exchanging sales volume information among themselves, and ostensibly agreeing on target prices and sales levels, was quite brief. Ajinomoto states that this period began in January 1994 and lasted no more than one and a half years. Ajinomoto alleges that while competitors had conducted meetings prior to this time, and reached agreements on target prices from time to time, any adherence to such agreements was short-lived. In particular, price wars in which lysine prices were driven below cost, placing Eurolysine in serious financial peril, occurred throughout the first halves of both 1992 and 1993.

(242) Cheil stresses that it did not attend meetings from December 1993 to March 1994.

(243) The Commission does not accept the argument that the infringement, in which Ajinomoto and Cheil participated, was not continuous. Whilst it is clear that the extent and the depth of the cooperation between the lysine producers changed over time, in terms of the number of the firms participating and of the scope the agreements conclude, it is the Commission's view that the incumbent as well as the new cartel members at any time of their collusion subscribed to an identical common plan to regulate prices and supply on the lysine market.

⁽¹⁶⁾ [1992] ECR II-1021, paragraph 304.

⁽¹⁷⁾ C-49/92 P, not yet published in the ECR, paragraph 81.

⁽¹⁸⁾ Case T-1/89, [1991] ECR II-867, paragraphs 125 and 126.

(244) In particular, the Commission considers that ADM's entry into the pre-existing cartel did not constitute the end of that cartel and the beginning of a new one. Rather ADM's entry led to the extension of the pre-existing cartel to embrace again all producers of lysine and brought about a more structured approach to the operation of the cartel (see paragraph 71). The possibility that ADM was unaware, at the time of its market entry, of an ongoing cartel between its competitors, and that its conception was that it participated in the creation of a new cartel, does not affect the Commission's finding on the duration of the collusion, as the duration of an infringement has to be determined on an objective basis.

(245) Regarding the period from December 1993 to March 1994, Cheil did not participate in one meeting, i.e. the meeting of 8 December 1993 in Tokyo. This meeting prepared the 1994 sales volume allocation, which was finally discussed and agreed upon by all five lysine producers during the meeting of 10 March 1994 in Honolulu. Cheil's absence from the meeting of 8 December 1993 in Tokyo therefore did not end its participation in the infringement committed before this date. On the contrary, its attendance at the meeting of 10 March 1994 in Honolulu proves that Cheil continued its illegal behaviour.

(246) The fact that the parties tried to solve the problems which occurred from time to time after agreements had been reached indicates that the agreements were linked to each other.

(247) Given that there is one single continuing infringement of Article 81 of the EC Treaty and Article 53 of the EEA Agreement, it follows that each undertaking concerned by this Decision is responsible for the totality of the infringement for the period of its participation (judgments in Case C-49/92 P *Anic* ⁽¹⁹⁾).

C. LIMITATION PERIOD

(248) Pursuant to Article 1 of Council Regulation (EEC) No 2988/74 ⁽²⁰⁾, the power of the Commission to impose fines or penalties for infringements of Article 81 of the EC Treaty and Article 53 of the EEA Agreement are subject to a limitation period of five years. Time begins to run on the day on which the infringement is committed. In the case of continuing or repeated infringements, however, time begins to run on the day on which the infringement ceased. In the present case, the continuing infringement ceased on 27 June 1995.

(249) On 11 June 1997, the Commission carried out investigations at the premises of some participants in the cartel. Pursuant to Article 2 of Regulation (EEC) No

2988/74 those actions interrupted the limitation period in the present proceedings. Therefore the Commission is entitled to impose fines for this infringement on the undertakings to which the present Decision is addressed.

D. FINES IMPOSED PURSUANT TO ARTICLE 15(2)(a) OF REGULATION NO 17

(250) Compliance with Article 81 of the EC Treaty and Article 53 of the EEA Agreement is enforceable by means of fines. Pursuant to Article 15(2)(a) of Regulation No 17, the Commission may by decision impose such fines, where undertakings infringe the competition rules either intentionally or negligently.

1. Infringement of the competition rules either intentionally or negligently

(251) The facts presented by the parties indicate that all the participants in the cartel had the intention to conclude agreements to fix prices, share markets and to exchange information. For example, on 1 October 1992 all the participants in the cartel met in Paris to discuss prices and to exchange information to enable an evaluation to be made of the impact of price agreement made at earlier meetings (for example, 27 August 1992) for the purpose of concluding a new price (DEM 4,00/kg).

(252) Moreover, all participants in the cartel were aware of the illegality of their conduct. For example, on 8 December 1993, regarding the submission of monthly sales figures, ADM told the others that they had 'to watch their telephones and to be very careful'. The cartel members also took precautions to disguise the fact that they met and the purpose of their meetings.

(253) They organised meetings under the cover of official Fefana meetings, for example the meeting of 19 May 1994 in Paris. The parties adopted the practice that, while attending an official industry meeting, one person would obtain a hotel suite and secretly notify the others. They would then secretly meet to discuss prices and sales volumes away from the official meeting. They also met at fake Fefana meetings, for example the meeting of 23 August 1994 in Sapporo.

(254) The Commission therefore concludes that the addressees of the present Decision committed the infringement intentionally.

⁽¹⁹⁾ Loc. cit., at paragraph 203.

⁽²⁰⁾ OJ L 319, 29.11.1974, p. 1.

2. The amount of the fines

(255) In fixing the amount of the fines, the Commission follows the methodology explained in its guidelines of 14 January 1998 on the method of setting fines imposed pursuant to Article 15(2) of Regulation No 17 and Article 65(5) of the ECSC Treaty (the guidelines on fines) ⁽²¹⁾.

(a) The basic amount

(256) The basic amount is determined according to the gravity and duration of the infringement, which are the only criteria referred to in Article 15(2) of Regulation No 17.

— Gravity

(257) In assessing the gravity of the present infringement, the Commission takes account of its nature, its actual impact on the market, where this can be measured, and the size of the relevant geographic market.

Nature of the infringement

(258) By their nature, horizontal restrictions such as price cartels and market-sharing quotas are very serious infringements. The present infringement concerns a price and quota cartel similar to the very serious infringements found for example in the Commission's decisions in *Polypropylene* ⁽²²⁾, *PVC* ⁽²³⁾ and *Cartonboard* ⁽²⁴⁾, which in substance were upheld by the judgments of 24 October 1991 ⁽²⁵⁾, 14 May 1998 ⁽²⁶⁾, 20 April 1999 ⁽²⁷⁾, and 8 July 1999 ⁽²⁸⁾ respectively. The Commission therefore considers, that the present infringement is very serious by its nature.

(259) ADM opposes this conclusion. ADM argues that the present infringement did not jeopardise the proper functioning of the single market as required by the Commission guidelines on fines as defined at paragraph 1(A), third indent, under 'very serious infringements'. ADM contends that there was no partitioning of national markets. In ADM's view the Commission's documents show, that when, in the present case, European prices were the subject of a conversation or agreement, they were considered in unified terms on a trans-Europe basis. Similarly volumes were not allocated in Europe on a country-by-country (or 'stay at home') basis. Instead volume allocations were discussed for the most part in worldwide aggregates. ADM suggests that even when volume information sharing occurred,

volumes were broken down regionally only to the Europe-wide level and not to the level of individual Member States.

(260) The Commission rejects this reading of its guidelines on fines. First, from the definition of 'very serious infringements' in the guidelines it is clear, that price cartels and market-sharing quotas, by their nature, jeopardise the proper functioning of the single market. It is only in relation to 'other practices' that the latter qualification has to be actually established in order to conclude that they are such infringements. Secondly, within the categories of price cartels and market-sharing quotas there cannot be, in view of their incompatibility with the common market, any distinction between prices and shares of volumes agreed between competitors operating in the same geographical area and those agreements based on geographical separation (i.e. a 'stay at home' basis).

The actual impact of the infringement on the lysine market in the EEA

(261) The Commission considers that the infringement, committed by undertakings which were practically, for the period covered by this Decision, the only lysine producers in the world, had the effect of raising prices higher than they would otherwise have been and restricting sales quantities, and therefore had an actual impact on the lysine market in the EEA.

(262) From the evidence in the Commission's possession, it is clear that around March 1991 ADM's market entry had the effect of placing significant downward pressure on prices. As a result, in the summer of 1992, the lysine price was around 50 % lower in comparison with prices at the beginning of 1991. The price initiatives taken by the companies concerned in the second half of 1992 led, within six months, to a substantial recovery of lysine prices in Europe, bringing them back to around 80 % of the price at the beginning of 1991.

(263) In July of 1993 a similar scenario unfolded. After ADM had decreased its price, during the period April to June, the prices immediately recovered following a new agreement in June.

(264) The price agreements concluded following the Mississippi flood in the summer of 1993, which destroyed the USA soybean crop, allowed the parties to maintain the European price level at around DEM 5,00/kg until the beginning of 1995, which was above the agreed price level at the beginning of 1991 even though the worldwide lysine production capacity had doubled and demand had risen only by around 60 %.

⁽²¹⁾ OJ C 9, 14.1.1998, p. 3.

⁽²²⁾ OJ L 230, 18.8.1986, p. 1.

⁽²³⁾ OJ L 239, 14.9.1994, p. 14.

⁽²⁴⁾ OJ L 243, 19.9.1994, p. 1.

⁽²⁵⁾ ECR [1991] p. II-867.

⁽²⁶⁾ ECR [1998] p. II-813.

⁽²⁷⁾ Joined Cases T-305-94 et seq. PVC [1999] ECR II-931.

⁽²⁸⁾ Not yet published in the ECR.

- (265) Moreover, whilst it cannot be established that every company concerned fully implemented the agreements, it is clear that at least ADM was disciplined in executing the price decisions. In November 1992 ADM announced exactly the DEM 3,75/kg that it agreed to in September of that year. The price announced in December 1992 exceeded by DEM 0,10, the target price agreed one month before. During the second half of 1993, the announced price was substantially higher than the agreed minimum prices. From March until at least September 1994, ADM announced prices which were the agreed minimum prices. At the very least the announced prices thus served as a reference point in individual negotiations on transaction prices with customers ⁽²⁹⁾.
- (266) A good example of ADM's attitude towards the price agreements, is its internal meeting held in St Louis at the end of May/beginning of June 1994. There the European sales organisation was disciplined to stay at the target price of DEM 5,10 agreed with the other lysine producers in May of that year.
- (267) In relation to quotas, the information in the Commission's possession is also conclusive of the relation between each of the companies' actual sales quantities and the quota agreements. At the end of 1994, the worldwide market shares attained by each of the producers were almost identical to the shares they allocated to each other:

	Ajinomoto	ADM	Kyowa	Sewon	Cheil
Allocated	33	27	19	14	7
Actual	36	28	18	10	8

- (268) Moreover, statements made by company representatives indicate indirectly that the price and quota agreements served their purpose.
- (269) During its meeting with Ajinomoto on 5 November 1992 in Seoul, Cheil considered that the lysine price increase was a substantial success. On 26 February 1993, Ajinomoto, Kyowa, Sewon and Cheil noted that the European price was maintained, because Ajinomoto and Sewon restricted their sales volumes. On 28 April 1993, ADM and Eurolysine agreed that if the prices went up in Europe, it was because of the price agreement concluded in Mexico (23 June 1992), and that the only place where it was fully implemented was in this region. When Ajinomoto, Kyowa and Sewon met on 27 May 1993, Ajinomoto referred 'to the good results' of their cooperation before ADM's entry into the market. On 18 January 1995, all five lysine producers concluded that, in 1994, the difference between allocated quota and actual sales of each company was not excessive and that therefore the price level could be maintained.
- (270) Ajinomoto, ADM, Kyowa and Sewon disagree with the Commission's conclusion that the infringement had an actual impact on the lysine market in the EEA.
- (271) Ajinomoto claims that the impact of the lysine conspiracy was not significant, because synthetic lysine only accounts for less than 5 % of all lysine consumed by the feed industry each year in the Community.
- Ajinomoto suggests that while the main sources of lysine and other amino acids are protein concentrates of vegetable or animal origin (e.g. soybean meal, fishmeal, and skimmed milk), another source of certain amino acids is industrial production through fermentation (e.g. lysine) or chemical processes (e.g. methionine). These (synthetic) amino acids are identical to those amino acids found in feed protein. In Ajinomoto's view, therefore, use of synthetic amino acids is not compulsory. Synthetic lysine is just one ingredient among many, and other lysine-rich products such as soybean meal or fishmeal can always be used instead. As a result, if the cost of synthetic lysine is too high in comparison to alternative lysine-rich feedstuffs, it will be eliminated entirely.
- (272) Ajinomoto states that feedmills view natural and synthetic lysine as substitutable. It maintains that feedstuffs producers use computers to optimise feed formulae via a least-cost-formulation technique. After inputting data on available feedstuffs and their current prices, successive substitutions are made between feedstuffs until the cheapest formula is found that supplies all nutritional requirements. Lysine is treated in these analyses as any other ingredient. The price threshold at which an ingredient comes into the formula is called the 'shadow price'. Ajinomoto holds that the volatility of price movement of ingredients is by far the main driver of synthetic lysine market price fluctuations. It contends that historically, it has been the cause of virtually all lysine price changes. Ajinomoto considers that notwithstanding the existence of a price-fixing agreement, there was very little scope for the cartel members to control lysine prices artificially.

⁽²⁹⁾ See judgment in Case T-308/94 Cascades [1998] ECR II-925, paragraph 177.

For Ajinomoto this is apparent from the curve of the synthetic lysine market price and its shadow price, as compared with the price of related agricultural or fishery commodities containing natural lysine.

(273) Ajinomoto suggests that the lowering of ceiling prices on cereals in Europe in 1993 resulted in a substantial increase in the 'spread' at that time, thus leading to a significant increase in lysine prices through ordinary market mechanisms.

(274) The Commission agrees that it is technically possible for synthetic lysine to be substituted by natural lysine, and vice versa. However, natural lysine does not exist in pure form. If natural lysine is substituted for synthetic lysine, it necessarily involves the addition of all the other substances, including in particular protein and other amino acids, to which natural lysine is compounded. This can result, for example, in an excess amount of protein for a given diet formula, necessitating the addition of other essential amino acids.

(275) The Commission accepts that the price of soybean meal and corn provides an upper limit on the pricing decisions of the parties. When this ceiling is low enough, soybean meal becomes a substitute for synthetic lysine and, thus, forces synthetic lysine prices down.

(276) However, as long as the price of soybean meal remained high enough (and significantly higher than cash corn prices) the parties were able to maximise their profits by raising selling prices as high as demand conditions would allow. That is, the parties set prices according to the perceived level of lysine's own price elasticity of demand. Dr Connor of Purdue University analysed this situation ⁽³⁰⁾ for the USA and came to the conclusion that:

'when lysine prices were USD 0,70 to 0,90 per pound, the elasticity of demand was perceived to be around - 0,2; when prices were higher (USD 1,10 to USD 1,20) the elasticity was about in the range - 0,5 to - 0,8. When five companies form a cartel and face a demand for their products with elasticity of between - 0,45 and - 0,8, a well-known economic formula predicts that the cartel's optimal prices will be between USD 0,88 and USD 1,49. In fact, US selling prices by the three largest sellers were always within the USD 0,92 to USD 1,22 range in every month of the core collusive period, October 1992 to July 1995.'

⁽³⁰⁾ 'Lysine production, trade and the effects of international price fixing', by Dr John Connor, Staff Paper 98-18, September 1998, Purdue University, p. 35.

(277) ADM contends that, during the period identified by the Commission as that within which ADM participated in the described infringement, lysine prices were determined for the most part by factors other than 'collusion'.

(278) ADM submitted two economic studies in order to put forward evidence capable of showing that the infringement had no actual anti-competitive impact on the EEA market for lysine.

(279) In the first study ADM suggests that the events over the relevant period in the lysine industry can best be understood if competitors are analysed as if operating and interacting in an oligopoly market structure. ADM considers that the oligopoly can be characterised as Cournot ⁽³¹⁾. It is argued that the price charged by each firm in a Cournot game would be distinguishable from and lower than the price that would be obtained if, instead, the rival firms in the industry were effectively behaving collusively.

(280) In both the studies, ADM tries to rationalise its observed behaviour in a way that is compatible with economic theory. For this ADM subdivides the period of investigation.

(281) ADM argues that prior to the meeting of 8 December 1993 in Tokyo the impact of its performance on the lysine market can be characterised as pro-competitive. ADM suggests that, in order to solve its output problem, it had to obtain firm specific information from its competitors. It is ADM's view that the exchange of that firm specific information (in contrast to common information such as demand) between competitors made it possible to achieve, in the lysine market, a non-cooperative Cournot equilibrium.

(282) ADM suggests that, by the end of 1993, it had obtained satisfaction about the capacity of its plant and about its growth in 1994. Although ADM admits that, during the

⁽³¹⁾ In a market structure with relatively few sellers, each large enough to affect market prices and volumes, when acting alone, the problem each firm must solve individually ('the game') is how much to invest in capacity to produce and how much to produce in order to maximise its profit, given the output and respective capacities of its rivals, and the demand for the product. The collective outcome of each firm's uncoordinated effort to solve its respective output problem determines the market price at which the lysine buyers demand is satisfied by the sum of the outputs supplied by rival firms. This is called the Cournot equilibrium output and price. This price amounts to the competitive price in such a market and the lowest price that will be sustainable consistent with uncoordinated profit maximisation.

second period, it was attracted to collude with the other industry members, its participation in the cartel was that of the typical 'cheater'.

- (283) In order to show that its behaviour had, during the second period and with the exception of two meetings, no actual impact on the lysine market, ADM submitted a simulation of a simple Cournot model using industry data ⁽³²⁾.
- (284) ADM concludes that its actual prices charged in the market were no greater than the 'but for a cartel' Cournot prices and were therefore no different from the prices that would be expected had no collusion been identified. ADM therefore effectively rules out the possibility that the actual prices were the outcome of ADM implementing a cartel agreement. However, ADM does not rule out the possibility that its pricing was the result of cheating on a cartel agreement. In ADM's view, the meetings and competitor communications were statistically insignificant in determining European lysine prices, except to a small degree and only during a period of limited duration. ADM claims that only two meetings, on 8 December 1993 in Tokyo and on 10 March 1994 in Hawaii, had a statistically significant positive effect in raising lysine prices.
- (285) Finally, ADM notes that the number of players in the industry increased from four to five with the entry of ADM. Based on the results of a game-theoretic study of cartel stability by the economist Reinhard Selten ⁽³³⁾ the conclusion ADM draws is that the position of an outsider becomes relatively more attractive as the number of competitors increases. With six players the Selten model would suggest that the probability of cartel stability is very small. Based on the fact that there were five competitors, ADM's second study suggests that this is a border case. In this case, the competitors have 'complete information' about the demand and cost parameters and are 'perfectly' informed about past actions but have no well-organised system of information sharing about current outputs and prices. The study suggests that this explains that, on the one

hand, ADM agreed on this price of that quantity; on the other hand, it simultaneously cheated on the agreed quantities to secretly increase its current market share. The second study concludes that there was an explicit attempt to collude at the meeting of 8 December 1993, in which ADM took part. Being the fifth player, however, it was the one that behaved competitively to the extent that it could do so secretly.

- (286) The Commission considers that the findings of the parties themselves are eloquent on the impact of this cartel. It is inconceivable that the parties would have repeatedly agreed to meet in locations across the world to fix prices and share markets over such a long period without there being an impact on the lysine market.
- (287) The likelihood that ADM's observed behaviour could be explained away as being pro-competitive is also small due to the fact that the development of non-cooperative business strategies among companies requires years of experience in observing each others moves and countermoves in a particular industry. ADM only entered the industry in 1991 and so it could not base its actions on history. Due to the fact that a cartel existed prior to ADM's entry, neither Ajinomoto, Kyowa and Sewon had any basis for tacitly pricing cooperatively. Overt price fixing is therefore a more likely outcome than tacit forms of cooperation in the absence of a long period of business interaction.
- (288) Moreover, the conclusions of ADM's first study are sensitive to the assumptions made, in particular those concerning the final elasticity of demand and the cost structures of ADM's competitors. The studies mentioned in footnotes 30 and 32, on which the assumptions of the first ADM study are taken, contradict each other concerning the assumptions for the marginal cost and the elasticity of demand for lysine. These studies also use different models of oligopoly behaviour to simulate the lysine industry. The fact that the assumptions used by ADM's first study have been contested alone disqualifies the first ADM study from being sufficient proof to rebut the Commission's findings as to the question of whether the collusive behaviour had an actual impact on the market.
- (289) Concerning ADM's second study the Commission considers that the ability to sustain collusion in an industry does not depend mechanically on the results of a game theory model as to whether ADM was the fifth company or not. Cartels can also be stable with many more players as numerous Commission decisions (for examples, see paragraph 258) have shown. In contrast, in other industries three firms could be enough to

⁽³²⁾ The Cournot model is expressed as $\text{Price} = \text{marginal cost} / (1 - \text{Herfindahl-Hirshman index}) / \text{industry price elasticity}$. ADM did not have actual figures for the marginal cost but they were estimated based on a multiple regression model of ADM costs of variable inputs used in lysine production and distribution. The figure for the price elasticity was taken from a report by John Connor, 'The cost to US animal feeds manufacturers of an alleged price-fixing conspiracy by lysine manufacturers 1992 to 1995' and the response of Frederick R. Warren-Boulton, prepared for US litigation.

⁽³³⁾ Reinhard Selten: 'A simple model of imperfect competition where four are few and six are many', *International Journal of Game Theory*, 2 pp. 141 to 201, reprinted in R. Selten: 'Models of Strategic Rationality', Kluwer, Academic Publishers, 1988, pp. 95 to 155.

ensure effective competition. The Commission therefore concludes that the second ADM study is little more than a mechanical application of a particular game-theoretic model. In every case the conclusion as to whether an industry can sustain a cartel depends on the facts of the case. In this case the facts as established by the parties enable the Commission to state that the parties were able to conclude price and market sharing agreements for a long period and that they had an impact on the lysine market.

(290) As to the alleged pro-competitive information exchange during the first period under scrutiny identified by ADM, the Commission notes that the policy conclusion to be drawn from the game-theoretic economic literature concerning the distinction between industry and firm specific information depends on the assumptions made. For example, the author of the second ADM study has noted ⁽³⁴⁾ that 'when the information to be shared relates to the cost of production, a distinction is to be made between costs that are "common" and costs that are "private". Indeed the distinction leads to opposite policy conclusions. When the uncertainty is about a common value, such as the evolution of industry-wide costs or the cost of fuel, not to share information is an equilibrium Cournot strategy.' The Commission therefore rejects the notion that the exchange of information between the parties can be considered to be pro-competitive on the basis of ADM's second study.

(291) Kyowa holds that, during the period from ADM's 1991 entry into the lysine market until shortly after late June 1992, collusive efforts plainly had little or no effect on the market, because prices were in constant decline. Kyowa asserts that even after a price agreement was allegedly reached in June 1992, another price war had developed by the end of 1992 and lasted until the middle of 1993.

(292) Sewon claims that it consistently undercut the agreed target prices, so that the actual impact of the infringement on the European market was substantially reduced. Sewon submits that price agreements had little or no effect without an agreement on volume. It refers, for example, to the meeting of 26 October 1994 in Zurich, where the large producers declared that, without an agreement on quantity, the negotiations on price were meaningless.

(293) Neither Kyowa's nor Sewon's arguments are conclusive. The Commission recognises that during the collusion between lysine producers, there were periods when the actual impact of the price fixing was less significant than during other periods. However, the periods described by the parties as 'price wars' only provide an indication of what the prices would have been under conditions of normal competition. Furthermore, the Commission finds that, during the entire duration of the infringement committed by the undertakings concerned by the present Decision, price and volume agreements existed in parallel (see paragraphs 221 and 232). The Commission also notes that the threat of lower prices was a means by which ADM strategically influenced their fellow cartel members' future actions (see paragraph 70).

(294) As to volumes, Ajinomoto notes that during the main period of the cartel's operation the lysine market in Europe grew substantially and Eurolysine operated at full capacity at all times. With the exception of ADM, all other parties concerned by this Decision also make the point that they operated at full capacity, and that therefore it is difficult to discern any real market impact of the infringement.

(295) In any event, even on the hypothesis that this was the case, this argument is not conclusive as to the finding of actual impact on the market. Investment decisions as to increase capacity could have been delayed or changed on the basis of the collusion. Stock management and geographical allocation of volumes could have been influenced by the volume agreements. In any event, the periods of 'price wars' and 'price peace' between the parties concerned by this Decision were necessarily linked to changes in volumes put on the market and the strategic games played by the cartel participants (see paragraph 293).

(296) In conclusion, the Commission considers that the parties concerned by the present Decision have not been able to rebut its finding as to the actual impact of the infringement on the lysine market in the EEA. In this respect, the Commission refers to the judgment in Case C-49/92 P *Anic*, where the Court of Justice held that it is presumed that undertakings, which collude and which continue to operate in the market, take into account the results of their collusion when determining their market behaviour ⁽³⁵⁾. It is for the undertakings concerned in the first instance to put forward evidence capable of showing that the infringement had no actual impact on the decision-making of the participants and therefore on the market. This evidence had not been produced.

⁽³⁴⁾ Louis Philips, *Competition policy: a game-theoretic perspective*, Cambridge University Press 1995, Chapter 5, p. 88.

⁽³⁵⁾ *Loc cit.*, at paragraph 121.

— *The size of the relevant geographic market*

- (297) The undertakings concerned by this Decision operated during the period covered by the present proceeding in each part of the EEA. Every part of the EEA was under the same influence of the collusion. The competitive conditions on the supply side and demand side of the market for synthetic lysine were similar throughout the EEA. The Commission considers, therefore, the relevant geographic market to be at least EEA-wide.

— *The Commission's conclusion on gravity*

- (298) Taking into account the nature of the behaviour under scrutiny and its actual impact on the lysine market, which was EEA-wide, the Commission considers that the undertakings concerned by the present Decision have committed an infringement of Article 81(1) of the EC Treaty and Article 53(1) of the EEA Agreement, which satisfies the conditions of paragraph 1(A), third indent, of the Commission's guidelines on fines defining very serious infringements.
- (299) ADM and Ajinomoto oppose this conclusion. They consider that the facts support a conclusion that the infringement in this case is of lesser gravity than in typical cartels and justify a conclusion that the conduct should be characterised as a 'serious', rather than a 'very serious', infringement. Both undertakings refer to the Commission's *Greek Ferries* Decision, where the Commission regarded the infringement in that case merely as a serious one ⁽³⁶⁾.
- (300) The Commission notes that in the *Greek Ferries* Decision the reasoning as to the seriousness of the infringement was manifold: the Commission accepted that the parties did not apply in full all the specific price agreements and that they engaged, during the period of the infringement, in price competition through discounting. Moreover, the Greek Government, during the period of the infringement, encouraged the undertakings to keep fare increases within the inflation rates. Fares were kept at one of the lowest levels within the common market for maritime transport from one Member State to the other. Finally, the infringement produced its effects only within a limited part of the common market, namely three of the Adriatic Sea routes. Even if all routes between Greece and Italy were taken into account, the market was still small compared to other markets within the Community ⁽³⁷⁾.

- (301) The Commission therefore considers that the particular circumstances taken into account in the *Greek Ferries* Decision differ substantially from those in the present case. In particular, the extent of the relevant geographic market in the present case (the EEA) compared with that in the *Greek Ferries* Decision (three Adriatic Sea routes), as well as the limitation of the collusion to prices in that case, excludes any similarity as to the assessment of the gravity of the infringements.
- (302) The Commission therefore concludes that the undertakings concerned by the present Decision have committed a very serious infringement.

— *Differential treatment*

- (303) Within the category of very serious infringements, the proposed scale of likely fines makes it possible to apply differential treatment to undertakings. The Commission notes that, in the present case, there is considerable disparity between the sizes of the undertakings committing the infringement.
- (304) In order to take account of the effective capacity of the undertakings concerned to cause significant damage to the lysine market in the EEA and the need to ensure that the amount of the fine has a sufficiently deterrent effect, the Commission considers it appropriate that larger basic fines should be imposed on Ajinomoto and ADM than on Kyowa, Cheil and Sewon because of the considerable disparity between their sizes. It has therefore divided the parties into two groups according to size and taken this into account in determining the starting point for the fine according to the gravity of the infringements. The comparison is made on the basis of total turnover in the last year of the infringement. It is appropriate to take worldwide turnover as the basis for the comparison of the relative size of the undertakings because it enables the Commission to assess the real resources and importance of the undertakings concerned in the markets affected by their illegal behaviour.

	Total turnover (EUR billion)	Total lysine turnover (EUR million)
Ajinomoto	5	183
ADM	12,6	154
Kyowa	2,8	73
Cheil	1,5	40
Sewon	0,946	67

- (305) The Commission accordingly sets the basic amounts of the fines determined for gravity as regards Ajinomoto and ADM to EUR 30 million and as regards Kyowa, Cheil and Sewon to EUR 15 million.

⁽³⁶⁾ OJ L 109, 27.4.1999, p. 24; see also Commission Decision of 14 October 1998, British Sugar (OJ L 76, 22.3.1999, p. 1).

⁽³⁷⁾ See paragraph 148 of the *Greek Ferries* Decision.

- (306) In the view of ADM, there is no need for deterrence in respect of itself under the European competition rules. It claims that it has already suffered such significant sanctions (including penal sanctions for certain executives) that it has already been sufficiently deterred from further infringement in the USA, Europe or indeed anywhere else in the world.
- (307) ADM refers expressly to the US criminal fine imposed on it which, in its view, addressed 'fixing the price and allocating the sales volumes of lysine offered for sale to customers in the United States and elsewhere'. ADM underlines that, in October 1996, it pleaded guilty in a US federal court to a criminal charge of conspiracy to restrain trade in lysine sales in the USA and elsewhere and paid a fine of USD 70 million. In May 1998, ADM also paid a criminal fine to Canadian authorities of CAD 16 million in respect of the same conduct. A fine was also paid to the Mexican authorities.
- (308) Beyond these criminal fines, ADM put forward that it settled consolidated US civil class action law suits. ADM has paid additional settlement damages to direct and indirect lysine purchasers, resolving various individual US federal and State class action claims. ADM has also paid to settle derivative shareholder actions brought against it, based in substantial part on the behaviour which was the subject of the lysine criminal actions and civil litigation in the USA.
- (309) ADM suggests that, in July 1996, the ADM board of directors approved the company's first corporate code of conduct and compliance policy. Stressing ADM's commitment to the highest ethical standards of business conduct, the policy states that ADM demands strict adherence to the letter and the spirit of all laws applicable to the conduct of its business and demands high standards of integrity and ethical conduct from its personnel. The policy also makes it clear that the ADM board of directors, through its audit committee, will assure that the code is properly administered. Moreover, ADM indicates that, in July 1997, the ADM board of directors named a compliance officer and authorised additional staff to expand the company's compliance efforts. In January 1999, ADM distributed a formal EC competition law compliance guide, detailing the manner in which all ADM employees must conduct themselves with respect to the anti-trust laws applicable in the Community, as well as the importance of complying with those laws. The guide is directed to all management and employees at all levels of responsibility within the company whose positions involve material decision-making, contacts with competitors, material contacts with customers or suppliers, or other functions with a potential anti-trust impact in the Community.
- (310) Ajinomoto requests that the Commission's assessment of the appropriateness of any fine in Europe take account of the fact that it has already been subjected to fines in the USA and Canada, and has therefore already been punished for its acknowledged misdeeds.
- (311) The Commission does not consider that, in the present case, fines imposed elsewhere, especially in the USA, on ADM, Ajinomoto or any other undertaking to which the present Decision is addressed, have any bearing on the fines to be imposed for infringing European competition rules. Nor does the possibility that undertakings may have been obliged to pay damages in civil actions have any relevance. Payments of damages in civil law actions which have the objective of recouping the damages caused by cartels to individual companies or consumers cannot be compared with public law sanctions for illegal behaviour. The Commission also notes that according to information provided by the authorities of the USA and Canada, the criminal fines imposed by those authorities on the undertakings concerned by this Decision only took account of the anti-competitive effects that the collusion under scrutiny in this Decision produced in the area of their jurisdictions. Finally, criminal fines imposed on individuals cannot in any event be taken into account because the present proceedings do not address natural persons.
- (312) The Commission welcomes ADM's initiative to set up a compliance policy. However, as the present case indicates, this initiative came too late and cannot, as a prevention tool, dispense the Commission from its duty to sanction the infringement of the competition rules which ADM has committed in the past ⁽³⁸⁾.
- Duration**
- (313) In the present case, the undertakings concerned have committed an infringement of medium duration (between three and five years). The starting amounts of the fines determined for gravity (see paragraph 305) are therefore increased by 10 % per year, i.e. as to ADM and Cheil by 30 % and Ajinomoto, Kyowa and Sewon by 40 %.

⁽³⁸⁾ Judgment in Case T-305/94 PVC, loc. cit., at paragraph 1162.

— The basic amount

- (314) The Commission accordingly set the basic amounts of the fines as regards ADM at EUR 39 million, as regards Ajinomoto at EUR 42 million, as regards Kyowa at EUR 21 million, as regards Cheil at EUR 19,50 million, and as regards Sewon at EUR 21 million.
- (315) ADM, Ajinomoto and Kyowa are of the opinion that, in the present case, it would not be appropriate for the Commission, in fixing the amount of the fines, to follow the methodology explained in its guidelines on fines. They suggest that setting a fine by reference to a fixed basic amount according to the category of infringement without complementary reference to turnover affected by the infringement may result in illegal fines even if the limit in Regulation No 17 is not exceeded. They assert that previous Community practice clearly considered reference to turnover to be a vital constituent of the Commission's calculations when setting a proportionate and therefore a legitimate fine. The undertakings in question maintain that the Commission may not radically alter the basic method of setting fines without warning or impose heavier fines based on a new methodology on offenders who have terminated their illegal activities before the new methodology was published or had even been mooted at a consultative level.
- (316) ADM refers to paragraphs 94 and 95 of the judgment in case T-77/92 *Parker Pen* ⁽³⁹⁾ in which the Court of First Instance stated that the Commission did not take into account the fact that the turnover accounted for by the product to which the infringement relates was relatively low in comparison with the turnover resulting from Parker's total sales, and therefore reduced the Commission's fine. ADM is of the opinion that the Court made it clear that a fine set without regard to the company's Community turnover in the goods to which the infringement relates would be considered disproportionate for that very reason.
- (317) The Commission notes from the outset that as it is not possible to have recourse to the method which is provided for in its guidelines of fines, in cases where the decision predates those guidelines ⁽⁴⁰⁾, it is equally not possible to question the Commission's right to follow the method, which the guidelines lay down, in cases where the decision is taken after its publication.
- (318) As to the need to take account, in fixing the fine, of the turnover in the product in question the Commission agrees that, in the past, it frequently determined the fine according to a base rate representing a certain percentage of sales in the relevant Community market. However, the only constraints of the Commission's discretion in the fixing of fines pursuant to Article 15(2) of Regulation No 17 are the legal thresholds indicated by that provision, which refer, *inter alia*, to the total turnover of the undertakings concerned. For the rest, in assessing the present case in accordance with the guidelines on fines, the Commission has taken due account of the economic importance of the particular activity concerned by the infringement in its conclusions of gravity.
- (319) Kyowa submits that, in view of its cooperation with the Commission in the present case, fairness and due process require that any fine imposed on it by the Commission be calculated on the basis of the regulations, precedents and practice of the Commission applicable at the time Kyowa entered into its cooperation with the Commission. The relevant factual considerations Kyowa puts forward to constitute the circumstances of its cooperation include behaviour of the Commission's staff in discussions regarding the basis for its cooperation.
- (320) Kyowa suggests that in meetings with the Commission's staff, which occurred on 31 July and 1 August 1997, while always recognising that the amount of the fine is a matter for the Commission itself to decide, the methodology then used by the Commission for determining its potential fine was discussed. According to Kyowa, it was informed that the Commission's traditional approach was to base the fine on an enterprise's turnover within the common market for the product involved in the investigation during the last year of the illegal conduct, and that there was nothing in this investigation which would warrant a different approach.
- (321) Kyowa stresses that the substance of its discussions with the Commission's staff was summarised in a letter sent to the Commission on 7 August 1997. Kyowa underlines that the letter clearly and unequivocally sets forth the bases upon which Kyowa proceeded with its cooperation, i.e. the expectation that any base fine would be calculated in accordance with the then existing traditional Commission approach.
- (322) In the Commission's view the substance of Kyowa's discussions with the Commission's staff on the terms of its cooperation is evidenced by Kyowa's letter of 7 August 1997, read in conjunction with a letter, which the Commission, in response to Kyowa's letter, addressed to Kyowa on 25 August 1997.
- (323) It is true that the Commission did not dispute that, in the past, it frequently determined the fine according to a base rate representing a certain percentage of sales in the relevant Community market. However, in its letter
- ⁽³⁹⁾ [1994] ECR II-289.
- ⁽⁴⁰⁾ Case T-141/94 Thyssen, loc. cit., at paragraph 666.

of 25 August 1997 the Commission expressly stated that 'it is evident that there are a number of different elements which determine the importance of a possible fine, such as the duration and gravity of the infringement and the benefit for the parties generated by the infringement'.

- (324) It is the Commission's view that the terms of reference of any cooperation with the Commission are set by the leniency notice. Already in the first meeting between Kyowa and the Commission's staff concerning Kyowa's potential cooperation in the Commission's investigation, which took place on 8 July 1997, the Commission's staff in charge of the investigation made 'specific reference' ⁽⁴¹⁾ to the leniency notice.
- (325) The leniency notice sets out the conditions under which enterprises cooperating with the Commission during its investigation into a cartel may be exempted from fines, or may be granted reductions in the fine which would otherwise have been imposed upon them. Furthermore, the notice expressly states that cooperation by an enterprise is only one of several factors which the Commission takes into account when fixing the amount of a fine.
- (326) Concerning the procedure, the leniency notice explains that where an enterprise wishes to take advantage of the favourable treatment set out in the notice, it should contact the Commission's Directorate-General for Competition. But it also specifies that only on its adoption of a decision will the Commission determine the fine.
- (327) Although the Commission is aware that the leniency notice will create legitimate expectations on which enterprises may rely when disclosing the existence of a cartel to the Commission, these expectations concern only the non-imposition or reduction of a possible fine, provided that all the conditions set out in the notice are met, and not the basic amount of the fine.
- (328) It is therefore clear, that any legitimate expectation in view of the amount of the fine which the Commission imposes at the end of a proceeding, can only arise from the leniency notice itself. In particular, it is excluded from the outset that an enterprise wishing to take advantage of the favourable treatment set out in the notice can directly or indirectly determine terms different from those explained in the notice. More specifically, it is not possible that such an undertaking, during its contacts with the Commission's staff, on the one hand, recognises the impossibility of the Commission's staff to commit the Commission as to the

likely fine, but, on the other hand, imposes on the Commission its own terms of cooperation by declaring its expectations as to the possible fine, in relation to which the Commission's staff cannot make any statements without committing the Commission's discretion as to the imposition of the fine.

(b) *Aggravating circumstances*

— **Role of leader in the infringement**

- (329) The Commission considers that ADM and Ajinomoto were the leaders in the infringement. This allegation is based on the following considerations.
- (330) Until the entry of ADM onto the market for lysine, Ajinomoto established the lysine prices which the other Asian producers agreed to follow (meeting of 20 September 1990). It was also the prime mover in ensuring that the other Asian producers agreed to cooperate with ADM in the framework of the global cartel. On 1 October 1992, Ajinomoto became a proxy for ADM in local European conspiracy meetings. During its talks with ADM of 4 November 1992, Ajinomoto and ADM envisaged economic sanctions against Sewon. Two days earlier, Ajinomoto threatened Sewon with an anti-dumping action in Europe. On 25 October 1993, Ajinomoto agreed with ADM that it would get the other Asian producers to agree to the allocation scheme. On 23 November 1994 and 20 April 1995, Ajinomoto (and Kyowa) again tried to persuade Sewon to agree to a sales quantity allocation. Moreover, Ajinomoto manned and organised the secretariat of the quantity monitoring system.
- (331) After its entry onto the lysine market and until June 1992, ADM used the price of lysine to force other lysine producers to conclude with it agreements with the purpose of restricting competition on the lysine market. ADM repeated this behaviour in the first half of 1993, in order to force other lysine producers to conclude quantity agreements. Moreover, on 19 May 1994, ADM warned Sewon to reduce its sales or there would be pressure on price. On 23 August 1994, ADM threatened the other lysine producers with another price war, and predicted that Sewon would be severely damaged not only in the overseas markets but in the Korean market as well.
- (332) Both ADM and Ajinomoto were the driving forces behind the global cartel. The meetings of 30 April 1993 in Decatur, continued on 14 May 1993 in Tokyo, and of 25 October 1993 in Irvine, involving the top management of both undertakings, in particular illustrate the leading roles ADM and Ajinomoto played in the infringement.

⁽⁴¹⁾ At page 2 of Kyowa's written reply of 1 February 1999 to the Commission's statement of objections of 29 October 1998.

- (333) ADM and Ajinomoto contest the Commission's finding on the role they played in the infringement.
- (334) ADM suggests that Ajinomoto, Kyowa and Sewon operated a cartel for at least 17 years prior to its market entry. ADM submits that the long-standing nature of the cartel prior to its appearance on the scene highlights that it could not plausibly be thought to have achieved a leadership position in such a long-standing arrangement immediately upon its entry into the market.
- (335) Concerning its price strategy, ADM holds that the Commission's allegation that it engaged in price cutting to force quantity agreements is unsupported and incorrect. ADM contends that its pricing strategy was consistent with the price needed to achieve its target of 50 % market share in five years. In the context of this plan and in view of the incumbent producers' strategy, its low pricing was in fact the only option available to it to attempt to establish entry into the lysine market. ADM claims that the constant price wars throughout the period of the infringement reflect the non-implementation of the cartel rather than any leadership role within it.
- (336) As regards the events on 4 November 1992, 19 May 1994, and 23 August 1994, ADM notes that the only ADM representative present was Mr Whitacre. After 4 November 1992 this ADM official was working with the FBI. ADM claims that Mr. Whitacre's actions exaggerated its role in the infringement. ADM puts forward that he was motivated by a personal objective to deflect onto ADM an FBI investigation of his own criminal acts by expanding ADM's potential culpability in future criminal proceedings.
- (337) In addition, ADM indicates that the description of the 4 November 1992 conversation belies the suggestion that ADM and Ajinomoto were collaborating to punish Miwon. ADM stresses that it made it clear that it was intending to ship to Korea before any suggestion of sanctions against Miwon was made by Ajinomoto. It was ADM's independent commercial decision to make the shipment. Concerning the meeting on 19 May 1994 with Sewon, ADM underlines that its representative merely noted that prices would reduce if volume increased. This sentence is simply a statement of the natural outcome of supply and demand.
- (338) Finally on this point, concerning the meeting of 25 October 1993 with Ajinomoto, ADM emphasises that it did not undertake to get the other producers to agree to the sales allocation scheme. It suggests that the evidence shows that Ajinomoto would undertake this task.
- (339) The Commission does not accept that the mere pre-existence of the cartel excluded that ADM played from the beginning of its involvement a leading role in the collusion. As is shown by ADM's behaviour during the meeting of 23 June 1992 in Mexico, ADM immediately took the lead as to the future structure of the cartel by referring to its experience in the citric acid collusion.
- (340) Moreover, the Commission does not put into question ADM's awareness that, under normal conditions of competition, its volume targets could only be reached by fierce price competition. However, it is clear from the information in the Commission's possession that ADM's first choice was to realise its volume targets with collusive prices (meetings of December 1991 with Ajinomoto and Kyowa). By its temporarily low prices ADM demonstrated towards its competitors the losses that all operators would have to bear in the absence of an agreement on volumes and prices. These statements of the outcome of supply and demand in case of substantial price cuts constitute threats towards the other lysine producers, and in particular in relation to Sewon which was reluctant to submit to volume reductions. Therefore the Commission's finding that ADM engaged in price cutting to force quantity agreements is coherent with ADM's primary goal of achieving a 50 % market share.
- (341) As to the question whether Mr Whitacre's actions have to be attributed to ADM, the Commission notes that Mr Whitacre was former President of ADM's Bioproducts Division reporting directly to ADM's vice-chairman. ADM's vice-chairman, who had no connections with the FBI, was equally involved in the conspiracy. Moreover, ADM's lysine cartel activities started well before Mr Whitacre's commitment to work for the FBI, which in particular is demonstrated by the meetings of 23 June and 1 October 1992. It is therefore clear that Mr Whitacre acted within ADM's overall company policy towards lysine.
- (342) Ajinomoto claims that in the period prior to mid-1992, when meetings and agreements with ADM began, the initiative for discussions of the European market did not come from Ajinomoto but rather from Sewon and Kyowa. Ajinomoto holds that the meetings among Ajinomoto, Kyowa, and Sewon, which took place at the end of 1990 and the beginning of 1991, alternated between Tokyo and Korea, as the three companies took turns hosting the meetings.
- (343) Ajinomoto contends that, in particular, the lysine price agreed on 20 September 1990 between the Asian producers was not imposed on the other two producers, but instead that this price had been discussed among

the three producers by telephone and that prior to the meeting tentative agreement had been reached. Ajinomoto alleges that rather than being forced to go along, Sewon enthusiastically agreed to the proposed arrangement.

(344) Ajinomoto alleges that it did not initiate discussions with ADM nor did it force any other producer to participate in the cartel. To the contrary, Ajinomoto asserts that it was frequently used to express the position of Kyowa, Sewon, Cheil, and Orsan (Ajinomoto's joint venture partner in Eurolysine) to ADM, and vice versa.

(345) Ajinomoto claims that ADM affected the conduct of the incumbent producers well before its effective entry to the market. The incumbent producers were aware of ADM's intention to enter the lysine market from an early date, realising also that ADM's huge capacity build-up meant that it intended to carve out a significant share of the market for itself. Ajinomoto underlines that ADM approached the incumbent producers to inform them of its plans in this regard in 1991. A review of the chronology of events prior to and immediately following ADM's entry into the European lysine market demonstrates, in Ajinomoto's opinion, the extent to which the incumbent producers were influenced by ADM's capacity build-up and aggressive stance, even before the latter assumed effective control.

(346) Ajinomoto suggests that, from its market entry, ADM was the sole leader in the infringement, proposing the structure and main workings of the price fixing and volume allocation initiatives. Ajinomoto maintains that by the time ADM began full production, it was actively orchestrating the cartel's proceedings. In particular, ADM forced the other manufacturers to discuss prices and volumes by charging very low prices, and threatening to do so again if its demands were not met. Ajinomoto suggests that ADM proposed the structure and main workings of the price fixing and volume allocation initiatives, which were copied from the citric acid cartel in which ADM had participated.

(347) Ajinomoto contests the Commission's assertion that, on 1 October 1992, it became a proxy for ADM in local European conspiracy meetings. It puts forward that, in reality, it was simply, at ADM's direction, to be used as a conduit to report to ADM on future meetings.

(348) Ajinomoto is of the opinion that it would have been impossible for it to coerce Sewon (or any other producer) to agree to its proposals. As regards its alleged threat of an anti-dumping action, Ajinomoto maintains that the party interested in the issue of anti-dumping was not Ajinomoto but Orsan, Ajinomoto's partner in Eurolysine. Ajinomoto indicates that Eurolysine was at the time effectively managed by

Orsan and its owner La Farge Coppée, over whom Ajinomoto had no control, and that the Eurolysine representatives at the meeting of 2 November 1992 were appointed by Orsan. Ajinomoto suggests that as ADM was going to ship lysine to Korea in any event, regardless of any encouragement on its part which could have occurred on 4 November 1992, the idea of economic sanctions against Sewon cannot be attributed to it. Ajinomoto does not contest that, on 23 November 1994 and 20 April 1995, it tried to persuade Sewon to agree to a sales quantity allocation. It claims, however, that the fact that it had to try to 'persuade', rather than force Sewon to agree to ADM's demands, is hardly a sign of leadership.

(349) Concerning the role it played on 25 October 1993, Ajinomoto contends that it simply tried to persuade the other producers to comply with ADM's demands. Ajinomoto suggests that, in reality, it was ADM's plan, which was devised at the meeting by ADM's vice-chairman. Ajinomoto admits that, once again, it was the intermediary between ADM and the other producers, but not a leader.

(350) Ajinomoto states that the role of manning the cartel secretariat was imposed on it by ADM. Ajinomoto claims that from the evidence it is apparent that ADM suggested the idea. Moreover, Ajinomoto holds that the fact that it assumed responsibility for certain administrative tasks cannot be taken as evidence that it was a leader. It refers to the Commission Decision in *Cement*, where the Commission noted that the fact that different undertakings may play differing roles in the pursuit of the common objective is in the nature of cartels⁽⁴²⁾. Ajinomoto alleges that, for example, the reason why Eurolysine sent out invitations to the other producers to the Fefana meetings was because Eurolysine had the chairmanship of the Fefana amino acid working party. Ajinomoto argues that it and Kyowa acted as coordinators because, unlike the Korean producers, they were large manufacturers with worldwide coverage, who were therefore interested in lysine activities in all regions. In particular, since Ajinomoto had the largest market position and since all participants in the cartel other than ADM were Asian corporations, Ajinomoto finds it not surprising that it was requested to act as coordinator.

(351) Ajinomoto puts forward that Sewon and Kyowa also frequently took the initiative in cartel discussions. Ajinomoto suggests that, in particular, all other producers played an equal role in responding to the threat posed by ADM. Ajinomoto suggests that if, during the early stages of the discussions with ADM, any companies took the lead, Kyowa was just as instrumental as itself. Ajinomoto also suggests that if it

⁽⁴²⁾ OJ L 343, 30.12.1994, p. 1, paragraph 46.

was a leader, Kyowa should also be classed as such, since, on 23 November 1994, it too sought to persuade Sewon to accept ADM's demand. As to Sewon's role in the infringement, Ajinomoto stresses that this undertaking was an active participant in price fixing throughout the period and participated in volume allocation, except where it disagreed with the volume the others were willing to allocate it. Ajinomoto asserts that, rather than a victim of the conspiracy, in reality Sewon used the cartel to its own benefit, while free-riding on the volume agreements of the other producers.

(352) As to Ajinomoto's claims that in the period prior to mid-1992 the initiative for discussions of the European market did not come from it but rather from Sewon and Kyowa, the Commission notes that Ajinomoto/Eurolysine was, at that time, the market leader in the EEA. It therefore had the choice to accept or to reject those initiatives. Once it accepted the collusion, it also took the lead in the coordination. This is confirmed by the information in the Commission's possession concerning the meeting of 20 September 1990.

(353) In relation to the tasks which Ajinomoto assumed in the framework of the conspiracy (intermediary between, on the one hand, ADM and, on the other hand, Kyowa, Sewon, Cheil and Orsan, organiser of fake Fefana meetings, manning the cartel secretariat) the Commission considers that it is irrelevant whether these tasks were offered to Ajinomoto by the other participants or seized by Ajinomoto on its own initiative. The decisive point for the conclusion that Ajinomoto was a leader in the infringement is that this undertaking actually exercised these functions.

(354) Concerning Ajinomoto's repeated attempts to bring Sewon into a comprehensive volume agreement, it is clear that also ADM and, to a lesser degree, Kyowa have from time to time participated in these actions or even taken similar action on their own initiative. However, these actions demonstrate again the active role played by Ajinomoto in the infringement and contribute to the overall assessment that it was a leader. It must, however, be stressed that the role played by Kyowa, which undoubtedly was an active cartel member, was substantially different from the roles played by ADM and Ajinomoto, both in relation to frequency and to importance for the cartel's operation.

(355) Finally on this point, the fact that ADM also played a leading role in the infringement does not excuse Ajinomoto's behaviour. Both undertakings were by far the most powerful cartel members with the same ambition, i.e. to be the leader in the world lysine market.

(356) For these reasons, ADM's and Ajinomoto's basic amounts of the fine are increased by 50 % each, i.e. with regard to ADM by EUR 19,50 million, and with regard to Ajinomoto by EUR 21 million.

(c) Attenuating circumstances

— An exclusively passive role in the infringement

(357) Sewon and Cheil claim that they played an exclusively passive role in the infringement.

(358) Sewon submits that it was forced to participate in the infringement by means of threats from the large lysine producers, namely Ajinomoto, ADM and Kyowa. It holds that through its obstructive conduct, undertaken at great risk to itself, it very often prevented the producers from reaching a consensus.

(359) First, with regard to the collusion on price, Sewon maintains that it was not in a position to openly oppose the demands of the large producers. In order to force cooperation from Sewon, these producers continuously threatened Sewon with measures endangering its existence.

(360) Second, with regard to volume allocation, Sewon states that, despite threats and intimidation from the large producers, it resisted the allocations agreed upon between the large producers and obstructed their activities. For fear of retaliatory measures by the large producers, Sewon tried to avoid open conflict with these producers and, as a result, at times gave the impression of being willing to cooperate on the issue of volume allocation. Sewon states that open confrontation with the large producers was nevertheless unavoidable as from the meeting of 19 May 1994 in Paris, where Sewon revealed its major increase in production capacity, causing substantial retaliatory threats from the large producers and the eventual collapse of the entire conspiracy.

(361) Cheil suggests that, as a small producer and a new entrant into the market, it invariably adopted a very low profile when attending meetings with the other companies. It maintains that it never took the initiative to call any meeting and it never led the discussions at any meeting. Cheil claims that, in fact, the principal reason why it attended these meetings was to gain further insight into the lysine industry.

(362) The Commission rejects Sewon's arguments for the most part, and Cheil's arguments in their entirety.

(363) The Commission notes that, in a cartel and for the purpose of determining the appropriate fine, there are three categories of members, i.e. leaders, active members and passive members. In the present case, ADM and

Ajinomoto were the leaders. As to the role of the other three cartel members, the Commission is of the opinion that in substance (indeed in a few instances Kyowa took a leading role) they fall into the category of active members. This follows not only from the frequency of their participation in meetings during a long period, but also from their behaviour during the meetings where they actively took part in the discussions.

(364) In fact, Sewon and Cheil do not call in question the Commission's finding on this point. Rather they put forward justifications for their active participation in the collusion. However, neither the threats of which Sewon thought that it was the target nor Cheil's need to gather information can justify infringements of the European competition rules. Sewon should have informed the competent authorities, including the Commission, of the illegal behaviour of its competitors in order to put an end to it, and Cheil would have, with some effort, certainly found legal means of gathering information granting it the insight into the lysine industry for operating its lysine business in competition with the other producers.

(365) The Commission, nevertheless, considers that, from the beginning of 1995 and in relation to sales quantities, Sewon changed its behaviour from an active to a passive member in the infringement. Indeed, Sewon was not a party to the 1995 agreement on quantities, and though Sewon remained a participant in the agreement on the exchange of information, it ceased, in the beginning of 1995, to inform the other producers on its sales quantities. Under those circumstances, the Commission finds that the increase in Sewon's fine on account of duration should be reduced by 20 %.

— Non-implementation in practice of the offending agreements

(366) ADM, Ajinomoto, Sewon and Cheil suggest that they did not, in practice, implement the offending agreements.

(367) As to the price agreements, ADM states that, excepting at most those concluded during the Tokyo meeting of 8 December 1993 and the meeting in Hawaii of 10 March 1994, its actual European transaction prices charged around the time of each price agreement referred to in the present Decision were lower than those agreed upon. ADM contends that the other producers were well aware that it was not implementing any agreed terms. ADM is of the opinion that the list price instructions, to which the Commission refers in the present Decision, must be contrasted with the analysis of transaction data comparing the prices stated, to have been agreed with actual ADM prices, which were far below that level. ADM contends that this transaction analysis is a more accurate reflection of ADM's pricing than the list prices.

(368) Sewon claims that it consistently undercut the agreed target prices.

(369) Cheil states that its prices were almost always the lowest in the market, in some cases up to 25 % lower than the prices charged by the other companies.

(370) Ajinomoto suggests that it is apparent from the data referred to in the present Decision that the cartel members did not keep to agreed prices. It stresses that the five cartel members never achieved the same average monthly price.

(371) As to the agreements on quantities, ADM states that it substantially exceeded its allocations each year. Its relentless increase in its production capacity and production attest that there was never any reduction or restraint in its production or supply of lysine.

(372) Sewon asserts that it increased its worldwide sales from approximately 27 000 tonnes in 1990 to approximately 43 000 tonnes in 1995 and made full use of its production and sales capacity at all times.

(373) Cheil claims, in particular, that although it indicated that it might accept a production capacity of 17 000 t (at the Honolulu meeting in March 1994), at the time this indication was given, it had already taken the internal decision to expand its capacity to 40 000 t.

(374) As to the agreement on the exchange of information, ADM notes that it behaved strategically by lying and dissembling, in its exchanges of information with the other lysine producers, about common information and variables such as prices to customers, sales and proposed market allocation quotas throughout the relevant period.

(375) Cheil claims that, whenever it submitted data on sales volumes, such data were continuously incorrect as they understated its actual sales. Cheil stresses that in fact it supplied misleading information to the other companies. Cheil maintains that, for example, in 1994 it reported 8 951 t total sales in Europe, whereas the real sales volume amounted to 9 689 t.

(376) The Commission notes that the implementation of agreements on target prices, which were agreed in most cases, does not necessarily require that these prices eventually are actually applied in the market. Such agreements are implemented when the parties fix their prices in order to move them in the direction of the target agreed upon. From the information in the Commission's possession it is clear that, in the present case, after most of the price agreements, the parties fixed their prices in accordance with their agreements.

- (377) Moreover, it cannot be expected that, by implementing a price agreement, a party to this agreement charges to its customers one single price. Normally, customers get a variety of rebates resulting in different actual transaction prices. Therefore, the fact that different actual transaction prices exist in relation to a company's customers and to the customers of different companies does not prove that price agreements were not implemented. A company's internal price instructions, as have been discovered by the Commission in the case of ADM, are the most reliable proof of the implementation of price agreements.
- (378) With regard to the implementation of the agreements on quantities, it is clear that the cartel members considered the quantities allocated to them as the minimum quantities. As long as every party was able to sell at least the quantities allocated it, the agreement was respected. According to the information in the Commission's possession, this was the case.
- (379) Concerning the implementation of the agreement on the exchange of information, it is the Commission's view that such an agreement is implemented as soon as the parties submit to each other the data they agreed upon. The question whether this data is correct, and to what degree, as well as whether incorrect data had been submitted in error or intentionally, is not relevant in this context. In any event it appears that the data, submitted to each other by the cartel members, was acceptable when compared with each of the producers' own data concerning the total market.
- (380) In principle, an agreement restricting competition is implemented where the cartel members determine their conduct on the market according to the joint intentions expressed. In case of repeated agreements, concluded over a long period, the Commission is of the opinion that it can be presumed that the agreements have been implemented by each of the parties as they would not have repeatedly agreed to meet in locations worldwide to fix prices and share markets over such a long period of time. In such circumstances, the undertakings concerned bear the full burden of proof to show that they did not, in practice, implement the offending agreements. The Commission finds that the arguments put forward by the parties do not rebut either the proof on which the Commission bases its conclusion, nor the described presumption.
- (381) In its guidelines on fines, the Commission has indicated that it will reduce the basic amount of the fine when offenders terminate the infringement as soon as the Commission intervenes, and in particular when it carries out checks.
- (382) In the present case, the Commission carried out its first investigation on 11 and 12 June 1997. At that time, the undertakings concerned by the present Decision had already ended the infringement. However, the Commission considers that, if the undertakings had not ended the infringement on their own initiative before the Commission intervened, but if the end of the infringement is caused by the intervention of another authority, the termination of the infringement will only then constitute an attenuating circumstance in the setting of the fine, if the undertaking had terminated the infringement as soon as the other authority intervened.
- (383) In the USA, the FBI searched the offices of ADM, Ajinomoto and Sewon on 27 June 1995. The Commission has no reason to believe that the undertakings concerned by the present Decision continued the infringement beyond that date.
- (384) For those reasons, the basic amounts of the fines are decreased by 10 % each, i.e. with regard to ADM by EUR 5,85 million, with regard to Ajinomoto by EUR 6,30 million, with regard to Kyowa by EUR 2,1 million, with regard to Cheil by EUR 1,95 million, and with regard to Sewon by EUR 1,98 million.

— Other attenuating circumstances

- (385) ADM submits that any detrimental impact of its participation in the infringement was outweighed by the positive effects of its entry into the market and continuing increases in production. In this respect, ADM argues that, prior to its entry, the incumbent producers had operated a policy of high prices and restricted output. ADM claims that, in contrast, it made it clear that lysine is a commodity. ADM considers that its entry into the production and sale of synthetic lysine in Europe resulted in a net benefit to customers and estimates total benefits for the years 1992, 1993, 1994 and the first half of 1995 to be between approximately USD 147,7 million and USD 152,2 million.
- (386) Furthermore, ADM justifies its collusion with its lysine competitors by both offensive and defensive factors.
- (387) From a defensive point of view, ADM claims that there was a real threat of retaliation by the lysine producers' cartel existing before its market entry.
- (388) As to the offensive factors, ADM maintains that lysine market data of various sorts, even in aggregate or generalised form, were simply not readily available to ADM managers. ADM adds that, equally, there were no mechanisms in place to assist it to discern any effort to

— Termination of the infringement as soon as a public authority intervenes

grow overall demand for lysine. ADM suggests that engaging the cartel enabled it to find out such information.

(389) The Commission does not agree that the reasons, which ADM puts forward in order to justify its illegal behaviour, constitute attenuating circumstances in view of the determination of the appropriate level of the fine.

(390) First, the Commission considers that it is clear that the benefits to the European economy would have been greater if ADM had competed with the other lysine producers. The European economy, and in particular the European consumers, suffered an important loss which otherwise would not have occurred if ADM's market entry and its subsequent behaviour on the market were realised under normal conditions of competition (see paragraphs 261 to 297 concerning the assessment of the actual impact of the infringement on the lysine market in the EEA). It is clear that ADM's illegal behaviour had a substantial negative impact on the lysine market in the EEA.

(391) Secondly, as to the offensive and defensive factors by which ADM justifies its collusion with its lysine competitors, the Commission notes, from the outset, that ADM does not claim, and indeed has not submitted any proof, that it was aware of the existence of the Asian/European cartel. Therefore, the argument that ADM had to defend itself against retaliation by the incumbent lysine producers by joining this cartel has to be rejected. In any event, instead of joining the cartel, ADM should have privately enforced the competition rules or denounced the illegal behaviour of its competitors to the competition authorities.

(392) Finally on this point, with regard to information gathering, it is clear that behaviour which, in principle, is prohibited pursuant to Article 81(1) of the EC Treaty and Article 53(1) of the EEA Agreement can only be declared to be compatible with the common market if the conditions set out in Article 81(3) of the EC Treaty and Article 53(3) of the EEA Agreement are met. That is not the case here. There can be no doubt that if information cannot be collected by legal means, which in the Commission's view in practice did not occur, the undertakings concerned have to operate on the market without such information.

(393) ADM and Ajinomoto stress that they have contributed significantly to the development of the European agricultural industry, creating employment in Europe, and generating revenues in Europe through the export of lysine. They therefore request that their positive contribution to the European economy be taken into account in their favour in the Commission's assessment of any fines in the present case.

(394) The Commission rejects the suggestion that the commercial benefits of industrial and commercial activity should be used to offset the negative effects of infringements of the competition rules.

(395) Kyowa suggests that, during the cartel period set forth in the present Decision, in the EEA it enjoyed only a small profit for one of those years, and suffered substantial losses during the other four years. Kyowa claims that, in the EEA, its lysine business suffered net losses for the period as a whole. Kyowa requests the Commission to take account of this fact.

(396) The Commission does not consider that, in general, losses which occurred during the period of an infringement of the competition rules, constitute an attenuating circumstance in the fixing of the fine. In any event, the Commission should know the reasons which formed the basis of the losses in order to be able to assess their relevance. However, Kyowa has not indicated such reasons.

(d) Application of the Commission's leniency notice

(397) The addressees of the present Decision have cooperated with the Commission, at different stages of the investigation and in relation to different periods covered by the investigation into the infringement for the purpose of receiving the favourable treatment set out in the Commission's leniency notice. In order to meet the legitimate expectations of the undertakings concerned as to the non-imposition or reduction of the fines on the basis of their cooperation, the Commission examines in the following section whether the parties concerned satisfied the conditions set out in the notice.

— Preliminary remarks

(398) ADM indicates that after the 27 June 1995 search of its offices by the FBI, it has fully cooperated with the US authorities, and hence indirectly with authorities of other States with which the USA has an agreement on cooperation in anti-trust matters. ADM therefore claims favourable treatment under the leniency notice.

(399) Moreover, ADM alleges that, by ADM Ingredients' response of 24 October 1997 to the Commission's formal requests for information of 28 July 1997 pursuant to Article 11(1) of Regulation No 17, it had cooperated with the Commission in establishing the facts relating to the present proceeding.

(400) Furthermore, ADM claims that, after having received the statement of objections in the present case, it provided

the Commission with information and documents which materially contributed to the establishment, in relation to the period before its own market entry, of the full extent of the infringement by the other lysine producers. It concludes that this behaviour should be rewarded with a reduction of the fine under the leniency notice.

(401) Finally, ADM alleges that it always was willing to satisfy the conditions of the leniency notice to the best of its ability. ADM claims that it was prepared to supply to the Commission information which was available to it and that it is prepared in future to divulge any relevant information as soon as it becomes able to do so. ADM notes, however, that the persons most knowledgeable concerning its participation in meetings and communications with the cartel were not in a position to provide ADM with information that would have permitted it to cooperate with the Commission. Moreover, though ADM could have provided the Commission with copies of the documents which ADM provided to the US authorities, it did not do so because it considered that the provision of these documents would not, in practice, provide worthwhile assistance to the Commission without access to the individuals involved. ADM argues that it would be inequitable to prejudice a company which satisfies the conditions of the leniency notice to the best of its ability. ADM is of the opinion that the relevant criterion should be whether a company is prepared to and does divulge the full extent of relevant and useful information available to it.

(402) As to ADM's possible cooperation with the US authorities in their lysine investigation, the Commission notes that, according to the information provided by the authorities of the USA, their investigation was limited to the anti-competitive effects that the collusion under scrutiny in the present Decision produced in the area of their jurisdiction, i.e. the USA. In any event, it is obvious that the US authorities have no competence to find an infringement of the European competition rules. The Commission admits that the intervention of the US authorities caused the end of the collusion effecting the EEA. It is however clear that any fine to be imposed by the Commission in application of the European competition rules can only be reduced if the cooperation of the undertakings concerned by this Decision was with the Commission.

(403) Regarding ADM Ingredients' response to the Commission's requests for information, the Commission does not agree that the submission of the information qualifies for any reduction of the fine under the leniency notice. As an addressee of a formal request for information pursuant to Article 11(1) of Regulation No 17, ADM Ingredients was obliged to supply the information. Although it is not necessary that the cooperation is provided by the undertaking concerned on its own initiative, it is clear from the leniency notice that the cooperation must be voluntary, and in

particular outside the exercise of any investigatory power used by the Commission ⁽⁴³⁾.

(404) In relation to the information ADM submitted to the Commission on the behaviour of the lysine producers before its market entry and without taking any position as to the value of the information provided by ADM, the Commission points to the difference between 'whistle blowing' and 'self-incrimination'. The provision of information on cartels in which the informant has not participated cannot, by the very fact that the informant is not the subject of any fine, be dealt with under the leniency notice. This principle applies equally to cartel members which provide information on periods for which a fine cannot be imposed on them. The benefit of the leniency notice arises only in favour of enterprises participating in cartels, which are deterred from informing the Commission of the existence of the cartel by the risk of incurring fines. In the present case, there is no risk for ADM of being fined for the period before its involvement in the collusion with the other parties. Although the Commission welcomes, in the public interest, all information on the existence of cartels, including that from parties which are not involved in the collusion, there is no possibility for the Commission to reward such informants.

(405) At section I of its requests for information of 28 July 1997, the Commission required ADM to submit all business records in relation to a number of meetings with other amino acid producers. In response to this request, ADM Ingredients replied on 24 October 1997 that its offices in Europe had been requested to locate the requested information, and that it had also requested the assistance of its US parent company. In its reply of 24 October 1997, ADM Ingredients enclosed copies of documentation relating to the travel arrangements of some of its officials. It then noted that these are the only documents it can locate which are responsive to the Commission's questions relating to these meetings. However, in the course of the present proceedings, ADM admitted that it could have provided the Commission with copies of the documents which it provided to the US authorities. It suggests that it did not do so because it considered that the provision of those documents would not, in practice, provide worthwhile assistance to the Commission.

(406) It is the Commission's view that ADM refused to cooperate with the Commission in carrying out its investigation in the present case. The Commission has come to this conclusion on the basis that ADM did not supply the information in its possession corresponding to the meetings with competitors listed by the Commission in its requests for information of 28 July 1997 pursuant to Article 11(1) of Regulation No 17. The Commission therefore considers that ADM has not

⁽⁴³⁾ Case T-308/94 Cascades, loc. cit., at paragraph 260.

cooperated in the Commission's inquiry and cannot benefit from sections B and C of the leniency notice.

— Non-imposition of a fine or a very substantial reduction in its amount

- (407) Ajinomoto suggests that it meets the conditions for non-imposition of a fine laid down in section B of the leniency notice, and that the nature of its cooperation with the Commission therefore qualifies it for full leniency.
- (408) The Commission acknowledges that Ajinomoto informed the Commission about the cartel under scrutiny in this Decision before the Commission had undertaken an investigation, ordered by decision (see paragraph 177). The Commission also acknowledges that, at that time, it did not already have sufficient information to establish the existence of the alleged cartel. The Commission notes that already before Ajinomoto approached the Commission on 12 July 1996, the lysine cartel had received extensive press coverage in the USA and elsewhere, which the Commission confirmed in a letter addressed to Ajinomoto on 1 August 1996. Moreover, on 27 August 1996, when Ajinomoto provided the first documents under its cooperation, the US Department of Justice informed the public on its first criminal anti-trust charges in its lysine investigation against, *inter alia*, Ajinomoto.
- (409) Ajinomoto was the first of the cartel members to adduce evidence of the cartel's existence. The Commission also considers that this evidence, in relation to the period to which it refers, has been decisive, as it is in itself sufficient to establish the existence of the cartel as from ADM's market entry.
- (410) Ajinomoto put an end to its involvement in the illegal activity before 12 July 1996, the time at which it disclosed the cartel to the Commission.
- (411) For the following reasons, it is the Commission's view that Ajinomoto's cooperation only in part fulfils the conditions for the non-imposition of a fine or a very substantial reduction in its amount pursuant to section B of the leniency notice.
- (412) The Commission considers that Ajinomoto, at least by negligence, did not provide it with all the relevant information and all the documents and evidence available to it at the time when it started its cooperation with the Commission regarding the cartel's operations before ADM's market entry.
- (413) As from June 1990 until June 1992, when ADM joined the cartel, the Commission finds that, on nine different occasions, Ajinomoto had concluded agreements on lysine prices and quantities with its competitors. Of the Ajinomoto officials who participated in those events, at least one is still employed by Ajinomoto (Mr Mimoto).
- One other (Mr Ikeda), although retired in 1994, on 28 January 1999 delivered a statement which forms part of Ajinomoto's defences in the Commission's proceedings. The Commission therefore has reason to believe that Ajinomoto is in possession of, or is able to obtain possession of, information concerning the cartel's existence in relation to the period before ADM's market entry.
- (414) Moreover, the Commission is aware that immediately after the US authorities executed a search warrant at Ajinomoto's US offices at Heartland Lysine on 27 June 1995, Ajinomoto's Tokyo legal department instructed that remaining documents concerning the cartel, which were stored in Europe and Japan, be destroyed. Ajinomoto admits that it had destroyed some of its documentation and, more particularly, documentation which it stored in Europe.
- (415) For these reasons, the Commission considers that Ajinomoto's cooperation with it was not complete.
- (416) The Commission accepts that there can be doubts as to the question of whether early agreements are part of a single continuing infringement, and therefore as to the question of which information has to be provided to the Commission on the basis of the cooperation. However, in case of doubt, Ajinomoto should have pointed to the information in question in order to get guidance from the Commission as to its relevance in the present investigation. It is not for the company to determine the scope of the subject of the Commission's investigation.
- (417) Finally, as the Commission has shown (see paragraphs 353 to 356), Ajinomoto was a leader in the infringement. The Commission thus is of the opinion that Ajinomoto played a determining role in the illegal activity which, already in itself, excludes the application of section B of the leniency notice.
- (418) Where there is, as in the present case, more than one leader in an infringement, it could be argued that, in relation to each other, leaders are co-equals, and that in such a context none of the leaders is able to play a determining role in the infringement. This would also provide an incentive for leaders in the infringement to come forward first and to adduce decisive evidence of the cartel's existence.
- (419) However, from the wording of the leniency notice it is clear that the Commission balanced the Community interest in granting favourable treatment to offenders which cooperate with it against the Community interest to deter future offenders by fining undertakings for their committed infringements. This balance would be

disturbed if leniency was available for cartel members which played a determining role in the infringement.

(420) The Commission therefore concludes that Ajinomoto's cooperation does not meet the conditions laid down in points (d) and (e) of section B of the leniency notice.

(421) Ajinomoto considers that if it is fined in this case, notwithstanding its cooperation, this could adversely affect reliance in the future by others on the leniency notice. In its view, there is a substantial difference between cooperation offered prior to or after the initiation of an investigation. Ajinomoto suggests that it was as a result of its cooperation, offered in view of the leniency notice, that the Commission initiated an investigation. If the difference between cooperation prior to and after initiation of an investigation were only of a insubstantial nature, the incentive for parties to volunteer information to the Commission at an early stage would be significantly reduced.

(422) The Commission acknowledges that Ajinomoto's cooperation was instrumental in establishing the key evidence of the infringement in relation to the period as from ADM's market entry. However, the Commission does not consider that Ajinomoto had legitimate expectations as to the non-imposition of a fine for its infringement of the European competition rules. In particular, it is obvious that Ajinomoto relied on the false expectation that the Commission's investigation would be parallel to the lysine investigation in the USA, where the US authorities concentrated on the collusion in which ADM participated. Although, in principle, the European competition rules and the competition rules established in other parts of the world serve a similar purpose, undertakings should be aware of the fact that, also in international cartel cases which are investigated by different public authorities, the subject and the extent of the Commission's procedure is based exclusively on the application of the European law.

(423) Sewon was the first of the cartel members to adduce complete decisive evidence concerning the infringement found by the Commission in the present case. The documents provided by Sewon constitute, together with those submitted by Ajinomoto as to the period as from ADM's market entry, the main source of evidence used by the Commission in preparing the present Decision. Sewon also put an end to its involvement in the illegal activity before the time at which it started cooperating with the Commission. It did not compel another enterprise to take part in the cartel and acted neither as an instigator nor played a determining role in the illegal activity.

(424) However, at the time when Sewon started to cooperate with the Commission, there was sufficient information to establish the existence of a cartel as of ADM's market entry. This information had already been supplied by Ajinomoto. Moreover, Sewon disclosed the collusion after the Commission had undertaken investigations

ordered by decision on the premises of ADM and Kyowa. Finally, a substantial part of the information which Sewon submitted to the Commission constituted Sewon's response to the Commission's formal requests for information of 28 July 1997 pursuant to Article 11(1) of Regulation No 17. Therefore, Sewon's cooperation with the Commission was not completely voluntary.

(425) The Commission therefore concludes that Sewon's cooperation does not meet the conditions laid down in point (d) of section B of the leniency notice.

(426) Kyowa and Cheil were not the first to adduce evidence of the cartel existence. The evidence Kyowa and Cheil submitted to the Commission was not decisive in establishing the existence of the cartel, as it is in itself insufficient to establish, in relation to any period, the existence of the cartel. For the most part, the information which Cheil submitted to the Commission consisted of Cheil's response to the Commission's formal requests for information of 28 July 1997 pursuant to Article 11(1) of Regulation No 17. Therefore, Cheil's cooperation with the Commission was, in essence, not voluntary.

(427) The Commission therefore concludes that Kyowa's cooperation does not meet the conditions laid down in point (b), and that Cheil's cooperation does not meet the conditions laid down in points (b) and (d) of section B of the leniency notice.

(428) ADM's attitude towards the Commission's investigation in the present case does not meet any condition laid down in section B of the leniency notice.

— Substantial reduction in the fine

(429) As none of the undertakings concerned by the present Decision meets the conditions laid down in points (b) to (e) of section B of the leniency notice, none of them qualifies for a substantial reduction in the fine pursuant to section C of the leniency notice.

— Significant reduction in the fine

Cooperation with the Commission before the statement of objections

(430) Before the Commission adopted its statement of objections of 29 October 1998, Ajinomoto, Kyowa, Sewon, and Cheil provided the Commission with information, documents and other evidence which enabled the Commission to establish the existence of the infringement in the present case.

(431) Taking into account the extent and quality of the cooperation with the Commission's investigation, the Commission grants Ajinomoto and Sewon, pursuant to section D of the leniency notice the highest possible reduction of the fine that would have been imposed if they had not cooperated with the Commission, i.e. 50 %.

(432) As to Kyowa and Cheil, the Commission considers that a reduction of 30 % is the appropriate reduction of the fine rewarding Kyowa's material contribution to the establishment of a number of meetings and other contacts between the parties, which are part of the infringement.

Cooperation with the Commission after receiving the statement of objections

(433) After receiving the Commission's statement of objections of 29 October 1998, ADM informed the Commission that it did not substantially contest the facts for the purpose of these proceedings. It noted however that its decision not to contest the facts for the purpose of this investigation was not intended to be and should not be deemed to be an admission of such facts or statement against interest for any other purpose. ADM claims that by doing so it qualifies for a significant reduction in the fine which the Commission may impose on it in the present case.

(434) Statements of the kind put forward by ADM which leave open the question whether facts on which the Commission bases its allegations are accurate, may be intended to lead to insecurity as to the legal effects of the decision once it becomes unassailable. However, the legal effects of a Commission decision do not depend on the behaviour of parties during the proceedings leading to the adoption of the decision. A Commission decision which has become definitive provides national courts with significant information, and on the basis of this information national courts are generally able to decide whether the conduct at issue is compatible with the European competition rules ⁽⁴⁴⁾.

(435) The Commission considers that ADM qualifies for a reduction in the amount of the fine of 10 %.

(e) Adjustments

(436) Sewon suggests that the Commission should take account of the specific economic context, in which it actually operates which means that it is unable to pay any substantial fines. Sewon therefore asks the Commission to adjust the amount of the fine to be imposed on it accordingly.

(437) Sewon states that due to the severe and lasting economic crisis in South Korea, its financial situation has deteriorated to the extent that its real ability to pay a fine is greatly reduced. In order to survive in this crisis, Sewon accelerated in 1998 a restructuring process started in 1997 through mergers and the sale of unprofitable businesses. The merger between Daesang Industrial Ltd and Miwon Co. Ltd, that formed Daesang Corporation in November 1997, as well as the sale of the worldwide lysine business to BASF in May 1998, are part of Sewon's attempt to improve its financial situation.

(438) The Commission considers that to take account, when determining the fine, of an undertaking's loss-making financial situation would be tantamount to conferring a unjustified competitive advantage on undertakings least well adapted to the conditions of the market ⁽⁴⁵⁾. While maintaining fines at a level which appears appropriate, the Commission will however give Sewon the possibility to propose acceptable periods for payment of the fine on condition that it demonstrates its inability to pay.

(f) Liability for the infringement

(439) It is settled law that the fact that a subsidiary has separate legal personality is not sufficient to exclude the possibility of its conduct being imputed to the parent company, especially where the subsidiary does not independently decide its own conduct on the market, but carries out, in all material respects, the instructions given to it by the parent company ⁽⁴⁶⁾.

(440) In the present case, the Commission considers that ADM, Ajinomoto, Kyowa and Sewon were in a position to exert a decisive influence on their European subsidiaries' commercial policy. Since ADM Ingredients, Eurolysine, Kyowa Europe and Sewon Europe have been wholly owned subsidiaries of their respective parent companies, they necessarily followed a policy laid down by the bodies which determine their parent companies' policy. It may be observed also that both the parent companies and the European subsidiaries played an active role in cartel meetings. In any event, the parties have not submitted any evidence to support an assertion that the named subsidiaries carried on their businesses on the lysine market as autonomous legal entities which determined their commercial policy largely on their own.

(441) In those circumstances, the Commission is entitled to attribute to the parent companies the conduct of their subsidiaries.

⁽⁴⁴⁾ Notice on cooperation between national courts and the Commission in applying Articles 85 and 86 of the EEC Treaty, OJ C 39, 13.2.1993, p. 6.

⁽⁴⁵⁾ Case T-141/94 Thyssen, loc. cit., at paragraph 628.

⁽⁴⁶⁾ Judgment in Case T-354/94 Stora [1998] ECR II-2111, paragraph 79.

(442) Moreover, in prohibiting undertakings, *inter alia*, from entering into agreements or participating in concerted practices which may affect trade between Member States and have as their object or effect the prevention, restriction or distortion of competition within the common market, Article 81(1) of the EC Treaty and Article 53(1) of the EEA Agreement are aimed at economic units which consist of a unitary organisation of personal, tangible and intangible elements, which pursues a specific economic aim on a long-term basis and can contribute to the Commission of an infringement of the kind referred to in that provision⁽⁴⁷⁾. Since ADM Ingredients, Eurolysine, Kyowa Europe and Sewon Europe are part of the economic units having committed the infringement found in the present Decision, they can be held liable for it.

(443) Until September 1994, Eurolysine was under joint control of Ajinomoto and Orsan. Thereafter Ajinomoto first increased its interest to 75 % and finally acquired all shares from Orsan, and so Ajinomoto is liable for the behaviour of Eurolysine during the entire period covered by the present Decision⁽⁴⁸⁾.

(444) As to Sewon, the Commission notes that it disposed of its entire lysine business in the first half of 1998. However, where the party which committed the infringement continues to exist as a legal person, even though the economic activity concerning lysine which it carried on before is now carried on by a different legal entity, it remains liable for the infringement it committed in the relevant economic sector⁽⁴⁹⁾.

(g) *The amounts of the fines imposed in the present proceedings*

(445) In conclusion the fines to be imposed, pursuant to Article 15(2)(a) of Regulation No 17, should be as follows:

Archer Daniels Midland Company Archer Daniels Midland Ingredients Limited, jointly and severally liable	EUR 47 300 000
Ajinomoto Company, Incorporated Eurolysine SA, jointly and severally liable	EUR 28 300 000
Kyowa Hakko Kogyo Company Limited Kyowa Hakko Europe GmbH, jointly and severally liable	EUR 13 200 000

Daesang Corporation Sewon Europe GmbH, jointly and severally liable	EUR 8 900 000
Cheil Jedang Corporation	EUR 12 200 000,

HAS ADOPTED THIS DECISION:

Article 1

Archer Daniels Midland Company and its European subsidiary Archer Daniels Midland Ingredients Limited, Ajinomoto Company, Incorporated, and its European subsidiary Eurolysine SA, Kyowa Hakko Kogyo Company Limited and its European subsidiary Kyowa Hakko Europe GmbH, Daesang Corporation and its European subsidiary Sewon Europe GmbH, as well as Cheil Jedang Corporation have infringed Article 81(1) of the EC Treaty and Article 53(1) of the EEA Agreement by participating in agreements on prices, sales volumes and the exchange of individual information on sales volumes of synthetic lysine, covering the whole of the EEA.

The duration of the infringement was as follows:

- (a) in the case of Archer Daniels Midland Company and Archer Daniels Midland Ingredients Limited from 23 June 1992 to 27 June 1995;
- (b) in the case of Ajinomoto Company, Incorporated, and Eurolysine SA from at least July 1990 to 27 June 1995;
- (c) in the case of Kyowa Hakko Kogyo Company Limited and Kyowa Hakko Europe GmbH from at least July 1990 to 27 June 1995;
- (d) in the case of Daesang Corporation and Sewon Europe GmbH from at least July 1990 to 27 June 1995;
- (e) in the case of Cheil Jedang Corporation from 27 August 1992 to 27 June 1995.

Article 2

The following fines are hereby imposed on the undertakings referred to in Article 1 in respect of the infringements found therein:

- (a) Archer Daniels Midland Company and Archer Daniels Midland Ingredients Limited,
jointly and severally liable, a fine of EUR 47 300 000;

⁽⁴⁷⁾ Judgment in Case T-352/94 *Mo Och Domsjö* [1998] ECR II-1989, paragraph 87.

⁽⁴⁸⁾ Judgment in Cases 29/83 and 30/83 *Rheinzink* [1984] ECR 1679, paragraph 9.

⁽⁴⁹⁾ Case T-305/94 *PVC*, loc. cit., at paragraph 953.

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|---|---|
| <p>(b) Ajinomoto Company, Incorporated and Eurolysine SA, jointly and severally liable, a fine of EUR 28 300 000;</p> <p>(c) Kyowa Hakko Kogyo Company Limited and Kyowa Hakko Europe GmbH, jointly and severally liable, a fine of EUR 13 200 000;</p> <p>(d) Daesang Corporation and Sewon Europe GmbH, jointly and severally liable, a fine of EUR 8 900 000;</p> <p>(e) Cheil Jedang Corporation, a fine of EUR 12 200 000.</p> | <p>(b) Archer Daniels Midland Ingredients Limited Church Motorway Erith DA8 1DL United Kingdom</p> <p>(c) Ajinomoto Company, Incorporated 15-1, Kyobashi Itchome Chuo-ku Tokyo 1048315 Japan</p> <p>(d) Eurolysine SA 153 rue des Courcelles F-75817 Paris Cedex 17</p> |
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Article 3

The fines shall be paid by the undertakings named in Article 2 within three months of the date of notification of this Decision to the following account:

Account No 642-0029000-95
of the European Commission with
Banco Bilbao Vizcaya Argentaria (BBVA) SA
Avenue des Arts 43
B-1040 Brussels
Code SWIFT: (BBVABEBB)

After the expiry of that period, interest shall be automatically payable at the interest rate applied by the European Central Bank to its main refinancing operations on the first working day of the month in which this Decision was adopted, plus 3,50 percentage points, namely, 7,25 %.

Article 4

This Decision is addressed to:

- (a) Archer Daniels Midland Company
4666 Faries Parkway
Decatur, Illinois 62526
USA

- (e) Kyowa Hakko Kogyo Company Limited
1-6-1 Ohtemachi
Chiyoda-ku, Tokyo 100
Japan
- (f) Kyowa Hakko Europe GmbH
Immermannstraße 65C
D-40210 Düsseldorf
- (g) Daesang Corporation
Daesang Building
96-48 Shinsul-Dong
Dongdaemoon-Ku
Seoul 030-110
Korea
- (h) Sewon Europe GmbH
Mergenthalerallee 1—3
D-65760 Eschborn
- (i) Cheil Jedang Corporation
Standbrook House
4th floor Suite D
2—5 Old Bond Street
London W1X 3TB
United Kingdom.

This Decision shall be enforceable pursuant to Article 256 of the EC Treaty.

Done at Brussels, 7 June 2000.

For the Commission
Mario MONTI
Member of the Commission

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3. Kyowa Hakko Kogyo Company
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5. Cheil Jedang Corporation
6. Fefana

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 - Follow-up

- (d) Meeting of 24 June 1993 in Vancouver
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 - Follow-up
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 - Follow-up
- (g) Meeting of 10 March 1994 in Honolulu
 - Follow-up
- (h) Meeting of 19 May 1994 in Paris
 - Follow-up
- (i) Meeting of 23 August 1994 in Sapporo
 - Follow-up
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 - Follow-up
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 - Follow-up
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 - Follow-up

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H. THE LYSINE INVESTIGATION IN CANADA

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