

PAN FISH ASA AND MARINE HARVEST NV MERGER INQUIRY

Provisional findings

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Provisional findings

1. Introduction

1.1 On 6 July 2006, the Office of Fair Trading (OFT), in exercise of its duty under section 33 of the Act, referred to the CC for investigation and report the anticipated acquisition by Pan Fish ASA (Pan Fish) of Marine Harvest NV (Marine Harvest). We are required to report by 20 December 2006. Our terms of reference are in Appendix A.

1.2 This document, together with the appendices, constitutes our provisional findings which we are required to publish and notify to the main parties under the CC's *Rules of Procedure*.¹ Further information, including non-commercially-sensitive versions of main-party and third-party submissions, and summaries of evidence, can be found on our website.² We cross-refer to these documents where appropriate.

2. Salmon farming

2.1 This section provides a brief overview of the industry, including the regulatory environment. It then describes the main parties to the merger and their principal competitors.

Industry background

Historical overview

2.2 The salmon farming industry started to develop in Canada, Norway, Scotland and the USA in the 1950s and 1960s. In Scotland, the first salmon farming company, Marine Harvest, was set up by Unilever in 1965 and started production in 1972. Experimental salmon farming started in Chile in 1975.

¹ *Competition Commission: Rules of Procedure (CC1)*. Paragraph 10.3.

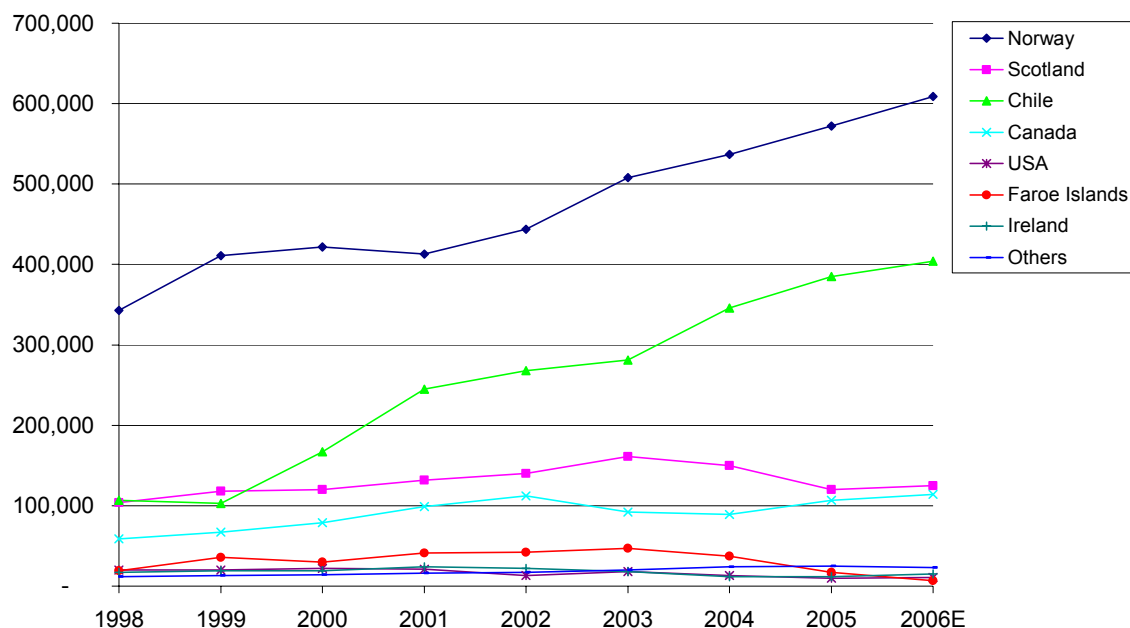
² www.competition-commission.org.uk.

- 2.3 Growth was slow in the 1970s and by the early 1980s, 173 Norwegian farms were producing 4,300 tonnes of Atlantic salmon, whilst Scottish production had reached 600 tonnes. Production grew rapidly in the 1980s, partly driven by the start of production in Australia, the Faeroe Islands, the Republic of Ireland and New Zealand.
- 2.4 Atlantic salmon is the most widely farmed species of salmon, although there is some farming of Pacific salmon.³ Whilst there are substantial catches of wild Pacific salmon, catches of wild Atlantic salmon are minimal.
- 2.5 By 1989, worldwide production of farmed Atlantic salmon had risen to 28,000 tonnes. The continued rapid increase in production of farmed salmon, and record salmon catches of wild Pacific salmon in 1989 and 1991 in the USA and Canada, led to excess supply and the collapse of prices.
- 2.6 Worldwide production continued to rise in the 1990s, achieving double digit annual growth rates in most years. Chile and Norway are currently the largest producers of Atlantic salmon and together account for production of over 1 million tonnes. Figure 1 shows that more recently, although production in Chile and Norway has continued to display unabated growth, production in Scotland has shown some decline; estimated Scottish production for 2006 is slightly higher than for 2005. European production volumes are shown in Table 10 on page 55. Over the same period, significant increases in productivity were achieved due to a number of technological improvements, such as advances in feed and feed technology, the development of new fish vaccines, improved development of breeds, increased automation of production, and larger and more efficient production units.

³There is one species of Atlantic salmon, but several of Pacific salmon (eg Coho and Sockeye).

FIGURE 1

**Worldwide supply of Atlantic salmon
tonnes**



Source: CC from Kontali analyse⁴: Salmon World 2006.

2.7 Throughout the 1990s and beyond, the salmon farming industry experienced pronounced fluctuations in prices. As in other commodity markets, the volatility is caused by a delay in adjusting output to changes in market conditions: it starts when prices rise faster than production costs, thus resulting in increased profitability for salmon farmers. This in turn encourages producers to increase output for a longer period of time compared with many other commodities due to the long production period for salmon (see paragraph 2.16), until finally supply outstrips demand and prices fall; this results in lower profitability and a contraction in supply, which starts the cycle again.

2.8 Faced with financial difficulties in periods of low prices, in the mid-1990s the industry entered a phase of consolidation, horizontally, vertically and across territories. These financial difficulties worsened between 2000 and 2002, due to overinvestment, rising

⁴Kontali Analyse AS is an independent company based in Norway which provides analyses and reports for the fisheries and aquaculture industry including international salmon farming.

feed costs, high debt levels and low prices. Estimates by Kontali suggest that Norwegian salmon farmers lost between NOK 2.0 billion and NOK 2.5 billion⁵ in 2003 alone. In Norway a number of producers were unable to repay their borrowings and banks adopted a policy of converting debt into equity. In Scotland, similar financial difficulties resulted in a number of bankruptcies and an increased reluctance of banks to lend to the sector.

- 2.9 Higher prices in 2005 and 2006 have led to a considerable improvement in the financial viability of the sector, although access to capital remains an issue for Scottish producers.

The salmon production process

- 2.10 Salmon are 'anadromous' fish, living mostly in the sea, but breeding in fresh water. Salmon go through two key phases of development:

- (a) In freshwater: salmon spawn in fresh water in the autumn or winter. The incubation period depends on water temperature and is about 500 degree days.⁶ After hatching, the young salmon remains in fresh water until it reaches 100 to 120 mm in length. Known as a parr at this stage of development, the salmon undergoes physiological, morphological and behavioural changes, called 'smoltification', as a result of which the young salmon, now called a smolt, is able to survive in saltwater. The freshwater stage can take up to two years.
- (b) In seawater: in the wild, the smolt migrates to the sea, where the adult continues to grow until it reaches maturation. This stage of development can take up to 23 months.

⁵Equivalent to £170 million to £215 million.

⁶A measurement unit that combines temperature and time, ie temperature in degrees Celsius multiplied by duration in days.

- 2.11 Salmon farming follows the natural life cycle of the fish, whilst seeking to speed up the fish development at all stages. Fish used for brood stock have been farmed for several generations and selected for particular traits such as rapid growth. Trait selection and improvements in feed technology have resulted in increased feed uptake, protein utilization, energy utilization, and feed conversion efficiency.
- 2.12 The freshwater phase of the production process is carried out in hatcheries and freshwater farms. Due to the operational requirement for a continuous flow of clean, well-oxygenated water, the availability of suitable sites is limited, particularly in Scotland, despite the increasing use of water recirculation systems. From hatching to the parr stage, the process is carried out indoors in tanks. Some parr are transferred to outdoor tanks or to cages in fresh water, but increasingly parr are kept in indoor tanks which may be heated and subjected to lighting regimes simulating accelerated seasons so as to initiate early smoltification after six months or so of development. Such methods allow a smoothing of the harvesting pattern over the calendar year. Smolts are transported to seawater sites either in a purpose-designed tank, slung below a helicopter, by road, or by sea in specially designed boats, known as well-boats.
- 2.13 The seawater phase of production is carried out in carefully selected sites, to avoid excessive exposure to rough seas whilst providing an adequate flux of clean, uncontaminated water. Such conditions are present in the Scottish lochs and Norwegian fjords. Sea temperature is also a key consideration, as Atlantic salmon grow fastest within a range from 6°C (winter) to 15°C (summer). Fish are kept in cages moored to the seabed. The typical density of a salmon farm is 15 to 20 kg per m³ in Scotland and 25 kg per m³ in Norway. The fish are fed, usually using automatic devices, a diet of pellets containing fish meal protein (eg anchovy, capelin, and sardine), fish oil, pigments (to colour the flesh of the fish) and vitamins. Feed is the

largest element of cost in salmon production and represents nearly 40 per cent of the cost of gutted packed fish.⁷ Due to concerns regarding the sustainability of wild fish stocks and the rising cost of fish meal and fish oil, farmers are increasingly substituting these ingredients with plant-based alternatives. Salmon feed used in Chilean production typically contains feathermeal.⁸

- 2.14 To increase the probability of all fish receiving food, it is normal practice to 'grade' them which involves periodically separating them into groups based on size. This helps to ensure that smaller fish are not at a disadvantage at feeding times and helps farmers to offer the correct amount of feed to the fish and regulate stocking density.
- 2.15 Slightly different practices are adopted at the premium end of the salmon market. For example, some retailers specify the use of fish oil only feed. One retailer told us that it requires a maximum stocking density of 15 kg per m³ and a maximum stocking density requirement for organic production of 10 kg per m³. One premium salmon producer told us that it avoided grading of the salmon since it considered that the handling involved stressed the fish.
- 2.16 The entire salmon rearing cycle for a given fish takes from around 18 months (6 months in freshwater and 12 months in seawater) to about 35 months (12 months in freshwater and 23 months in seawater). The freshwater stage of the process can be carried out in controlled conditions, whilst the seawater stage is subject to more uncertainty due to the lack of control over factors such as the temperature of the seawater, weather conditions and disease risks.

⁷FOB Oslo/Glasgow.

⁸Feeding material produced from poultry feathers, see Glossary.

- 2.17 Once the fish reach marketable size, they are harvested and then slaughtered. Following slaughtering, the fish are placed on ice and before they enter rigor mortis (8 to 20 hours after death) they are transferred to a processing plant where they are gutted, washed, graded and packed. This is known as primary processing.
- 2.18 Farming companies sell most production as fresh gutted salmon. Some of this is then used for smoking or for further processing (called secondary processing) into fillets and single size cuts or into speciality fresh salmon products. Some of the farming companies are also involved in smoking and secondary processing.
- 2.19 Avoidance and control of fish diseases is a crucial issue for salmon farmers, as diseases can destroy the entire stock at the affected farm and spread to neighbouring operations and wild fisheries. It is estimated that the Infectious Salmon Anaemia (ISA) outbreak that affected Scotland in 1998 and 1999 led to the destruction of 1,000 tonnes of Atlantic salmon across 32 farms and significant consequential losses. Some diseases can be avoided by vaccination, whilst the risk posed by others, such as ISA, can be managed by controlling trade in live fish and by the adoption of certain farm management practices. In Scotland, the salmon farming industry, in consultation with other stakeholders, has established 20 management areas (defined zones based on overlapping tidal excursions). A Framework Agreement between salmon farming and wild fisheries' interests sets out the general principles whereby farms and other stakeholders in a given management area can establish Area Management Agreements (AMAs). The primary aim of the AMAs, which are voluntary in nature and of which there are currently ten, is to develop practical measures to facilitate the promotion and maintenance of healthy wild salmonid fish and farmed salmon stocks at local levels.

2.20 The industry voluntary Code of Good Practice⁹ identifies these practical measures, which include:

- (a) stocking smolts from multiple freshwater sources should be minimized;
- (b) fallowing within a management area should be synchronized;
- (c) stocking a previously unused site that may bridge management areas should be avoided;
- (d) movement of fish between management areas and within management areas should be avoided, and essential movements should be carried out only with agreement from other farmers in the management area;
- (e) a single-year class¹⁰ of fish should be stocked within a given management area;
- (f) farmers within a management area should agree good husbandry practices including stocking density limits; and
- (g) information exchange between farmers within a management area may include mutual inspections for assurance purposes.

2.21 In addition, following harvesting, cages and sites are usually left fallow in order to break disease cycles. In both Scotland and Norway, the minimum fallowing period is six weeks.¹¹

Regulation and government policies

2.22 The salmon industry is subject to a significant number of regulatory constraints in both Scotland and Norway.¹² These include:

- (a) the setting up or expansion of a salmon farm requires approval from a number of regulatory bodies;
- (b) the consents awarded by authorities impose limits to capacity at a given site;

⁹Voluntary code of practice developed by the Scottish Salmon Producers' Organisation.

¹⁰Fish hatched or put to sea in a given year.

¹¹This is a statutory requirement in Norway.

¹²We focus here on Scotland and Norway as they are the major suppliers of farmed salmon in and to Europe.

- (c) the day-to-day operation of fish farms is heavily influenced by regulation and government policies; and
- (d) trade in both live fish and salmon products is also the subject of government controls.

2.23 In both Scotland and Norway, a person seeking to establish a salmon farm needs to obtain consents from several authorities. In Scotland, an applicant is required to obtain separately a development consent from the Crown Estate (CE) which also charges operators a rent for the seabed used for farming, a licence¹³ from the Scottish Environment Protection Agency (SEPA), and a navigational consent from the Scottish Executive Development Department (SEDD), before registering its business with the Fisheries Research Services (FRS) within two months of commencing business. Similar approvals are required in Norway, but the entire process is coordinated by the Directorate of Fisheries, and all information is requested on a single application form which addresses the requirements of all relevant authorities. In Norway, licences for salmon and trout are normally allocated from time to time in so-called allocation rounds. Appendix B (The regulatory framework) provides an overview of the government bodies involved in the regulation of salmon farming in both Scotland and Norway.

2.24 Although there are no published figures on the time and cost involved in these processes, it is estimated that a new farm application in Scotland takes one to three years to complete and that the cost of the process ranges from £15,000 to £80,000. In Norway, the procedure takes 8 to 14 months, and costs between NOK 80,000 and NOK 150,000 (about £7,000 to £12,500), with a further one-off payment of NOK 5 million (about £420,000) in the South of Norway and NOK 4 million in the North (about £330,000) for the licence.

¹³Until the 1 April 2004, SEPA issued a Discharge Consent under the Control of Pollution Act 1974.

Regulatory capacity limits in Scotland

- 2.25 Regulation is only one of a number of factors that determine capacity. Capacity issues are discussed further in paragraphs 6.2 to 6.7.
- 2.26 In Scotland, the licences awarded by SEPA and the consents awarded by the CE establish the maximum regulatory capacity of a farming site by imposing limits on different variables: the development consent establishes the number of cages and the total surface area covered by the farm's equipment, whilst SEPA's licence imposes limits on the maximum weight of fish held at any specific site at any one time (the consented biomass limit) and also limits the use of medicine and chemicals to match the environment's capacity to disperse and breakdown waste. The biomass limit is calculated through mathematical modelling of dispersion for each individual site. SEPA also stipulates that the maximum density of fish should not exceed 25 kg of fish per m³.
- 2.27 Of a total current consented biomass of 350,000 tonnes, 346,000 tonnes of biomass capacity can be used for farming salmon.¹⁴ However, a significant proportion of this capacity has not been used for several years: our analysis of SEPA data shows that only 69 per cent of sites with a consented biomass of less than 500 tonnes have been in production at some point since January 2002. Although this number rises to 83 per cent for the largest sites (ie with a consented biomass limit in excess of 1,000 tonnes), only 79 per cent of all sites have been in use at some point since January 2002.
- 2.28 The total consented biomass limit is not the binding constraint on capacity and production in Scotland has never exceeded an estimated 161,000 tonnes. This issue is further discussed in paragraphs 6.2 to 6.7.

¹⁴306,638 tonnes of consented biomass can be used for salmon only; 39,640 for salmon and other species.

Regulatory capacity limits in Norway

- 2.29 Regulatory constraints on capacity are also in place in Norway. Until 2005, capacity was limited by licensed volume of fish installations (12,000 m³ to a depth of 6 m, even though cages can go much deeper); a biomass limit of 65 kg per m³ of licensed volume (75 kg in the North of Norway); a maximum allowed density of 25 kg per m³ of actual volume and a feed quota per licence. The feed quota system was abolished from January 2005 and replaced by licences based on Maximum Total Biomass (MTB). Each licence has a 780-tonne MTB limit, except in the North of Norway, where the limit is 900 tonnes. Under this system, a licence is limited by the MTB limit and the maximum allowed density of 25 kg per m³.
- 2.30 In addition, the Norwegian regulations restrict the share of national capacity that can be owned by any one company: no company is allowed to own more than 25 per cent of biomass capacity and a special permit is required to be allowed to own between 15 and 25 per cent of such capacity.
- 2.31 The location of farms and distance between farms are also subject to regulation in both Scotland and Norway. In Scotland, guidelines set the range at approximately 8 km to adjacent Atlantic salmon farms,¹⁵ 3 km to shellfish farms and approximately 0.4 km to 1.7 km to other interests (eg leisure interests) in Scotland. Based on an analysis of the environmental impact of farming on Scottish waters, the Scottish Executive has also produced locational guidelines identifying areas which are likely to be particularly environmentally sensitive to new or expanded farming developments. The guidelines state that there should be a presumption against further development of finfish farming on the east and north coast of Scotland. In Norway, the distance between salmon farms is decided on by the Food Safety Authority and its decision is based on the health of the fish in the given area. The

¹⁵In the Shetland Islands, the separation between sites is set at 1 km.

required distance between farms has been reduced over time from 10 km down to at least 1 km, but preferably 2 to 3 km. The location of farms is impacted by the allocation of licences by the Ministry of Fisheries to specific regions and coastal zone plans, which are prepared by municipalities and identify areas assigned to aquaculture.

2.32 In Scotland, the various conditions attached to a SEPA licence and participation in AMAs constrain individual operators' ability to maximize production at a given site. For example, farmers must manage their harvesting pattern to ensure that they do not exceed the biomass limit; in addition, they need to maximize production within the harvest window specified in their licence and are limited in their ability to optimize production by moving fish at different stages of growth between sites.

2.33 Trade in salmon eggs and smolts is allowed provided the farm of origin and the zone it is in are free of certain viral diseases. Eggs are imported into the UK from Australia, Iceland, Norway, South Africa, and the USA. Although imports of smolts into the UK from farms which meet the appropriate standards would theoretically be possible, there have not been any reported imports of smolts into the UK in recent years. There is no list of certified farms and the regulations would if needed be applied on a case-by-case basis, which results in considerable uncertainty as to whether imports of smolts into the UK are in practice possible. The Association of Salmon Fisheries Board also told us that a group of Scottish producers were opposed to the import of smolts from Norway for health reasons.

Tariffs and trade regulation

2.34 Anti-dumping measures against imports of salmon from Norway into the EU were first put in place in 1997; they were terminated in May 2003. However, in 2004, following complaints by the UK and Irish governments and by a group of EU salmon producers

representing a major proportion of the Community production of farmed salmon, the European Commission put in place provisional tariff quotas against Chile, the Faeroe Islands and Norway. Following investigations by the European Commission, the European Council decided in January 2006 on the implementation of definitive anti-dumping measures against imports from Norway in the form of a Minimum Import Price (MIP) of €2.80 per kg and a fixed duty for salmon products sold at a price below the MIP. The European Council also adopted a differentiated system of minimum import prices taking into account the different cuts of salmon and their related costs.

Table 1 shows the MIP and the fixed duty for each cut of salmon:

TABLE 1 **MIP for various presentations of farmed salmon**

	<i>MIP €/kg net product weight</i>	<i>Fixed duty €/kg net product weight</i>
Whole fish, fresh, chilled or frozen	2.80	0.40
Gutted, head-on, fresh, chilled or frozen	3.11	0.45
Other (including gutted, head off), fresh, chilled or frozen	3.49	0.50
Whole fish fillets and fillets cut in pieces, weighing more than 300g per fillet, fresh, chilled or frozen, skin on	5.01	0.73
Whole fish fillets and fillets cut in pieces, weighing more than 300g per fillet, fresh, chilled or frozen, skin off	6.40	0.93
Other whole fish fillets and fillets cut in pieces, weighing 300g or less per fillet, fresh, chilled or frozen	7.73	1.12

Source: Council Regulation (EC) No 85/2006.

2.35 We understand that these measures are being challenged in the Court of First Instance and within the framework of the World Trade Organisation Dispute Settlement Mechanism.

2.36 Since the implementation of the MIP in January 2006, the price of Norwegian salmon has been consistently above the MIP and the differential between the Norwegian import price for salmon and the MIP has grown from £0.50 to £1.34 in May 2006. Due to variations in exchange rates the MIP has fluctuated between £1.91 and £1.94 over the same period.

Pan Fish ASA

History

- 2.37 Pan Fish (formerly Pan Fish Holding AS) was incorporated in 1992 in Norway. Between 1992 and 1997 it made a number of acquisitions and in 1997 it floated on the Oslo Børs. From 1997 Pan Fish acquired loan-financed interests in fishing, fish farming, fish meal and fish oil companies. Pan Fish's current operations include salmon farming and smolt production in Norway, Scotland, Canada and the Faeroe Islands, and salmon smoking in France.
- 2.38 Pan Fish experienced a challenging situation in 2002. Low salmon prices, disease and quality problems in Pan Fish's Canadian aquaculture business, coupled with reduced sales for products such as herring caused a loss of NOK 2.1 billion (approximately £180 million) before interest and tax for the financial year. These financial problems were exacerbated by its high levels of debt.
- 2.39 In January 2003 a financial restructuring was agreed with Pan Fish's banks and bondholders. This involved conversion of debt to equity, a cash injection and refinancing of remaining loans. A new board of directors was elected on 10 January 2003, with Mr Atle Eide appointed as Chief Executive, which he remains today.
- 2.40 Three further refinancings took place in 2003, 2004 and 2005.
- (a) a further NOK 900 million refinancing took place in October 2003, involving a conversion of debt to equity and taking out a subordinated convertible loan;
 - (b) the issue of NOK 750 million of new equity and loan capital and a share consolidation took place in August 2004; and
 - (c) in May 2005, NOK 500 million of debt was converted to equity and a further NOK 200 million of new equity was raised through a public issue.

2.41 Pan Fish told us that these refinancings put the group in a position to ‘accelerate the rebuilding of the Company as a leading global supplier of salmon, and to fully utilize its asset base through increased production’. On 7 June 2005 Greenwich Holdings Ltd, a company controlled by Mr John Fredriksen,¹⁶ acquired Nordea Bank’s shareholding of 48 per cent of Pan Fish.

2.42 Pan Fish made a number of small acquisitions and disposals between October 2004 and January 2006. These are listed in Table 2.

TABLE 2 Pan Fish acquisitions and disposals, October 2004 to March 2006

<i>Date</i>	<i>Event</i>	<i>Value £m</i>	<i>Notes</i>
Oct-04	Swap		Acquired Danish processing plant in exchange for some Faroese farming operations.
May-05	Disposal	9	Disposed of all US farming interests.
May-05	Closure		'Temporary' closure of Danish processing plant due to EU anti-dumping rules.
Aug-05	Disposal	7	Sold 11% stake in multi-national fish-farming operation.
Aug-05	Acquisition	0.5	Bought remaining 50% of Oppdrettslaks AS, a small Norwegian salmon farm.
Aug-05	Acquisition	4.5	Bought Corrie Mhor, Scottish smolt producer.
Aug-05	Acquisition	5.5	Bought Murray Seafood, Scottish salmon farmer.
Oct-05	Acquisition	25	Bought Aqua Farms, Norwegian salmon farmer. Included 33% of Kritsen Group and 27% of Aalesundfisk.
Jan-06	Acquisition	2	Bought remaining 66% of Kritsen group (French smoked salmon producer).
Jan-06	Acquisition	1	Bought 17% of Aalesundfisk (Norwegian fish distribution and marketing company).
Mar/Apr-06	Acquisition	400	Bought 57% of Fjord (multinational fish farmer) in three tranches.

Source: Pan Fish.

2.43 On 6 March 2006, the same day that the proposed acquisition of Marine Harvest was announced, Pan Fish acquired 25.7 per cent of Fjord Seafood ASA (Fjord) from Gevevan Trading Co Ltd (Gevevan) (a company indirectly controlled by Mr Fredriksen), financed by the issue of new shares to Gevevan. A further 14.2 per cent was purchased on 15 March 2006 (financed by a private placement of new shares). Control of Fjord was achieved through the purchase of 17.8 per cent of Fjord’s shares on 10 April 2006, bringing Pan Fish’s total ownership to 57.7 per cent. On 10 May 2006, Pan Fish made a mandatory offer for the remaining shares in Fjord and now owns 100 per cent of the company.

¹⁶Mr Fredriksen is an entrepreneur with commercial interests that include shipping and offshore oil drilling. He also indirectly controls Gevevan Trading Co Ltd, a party to the purchase of Marine Harvest (see section 3).

Financial performance

2.44 Since Fjord was only acquired by Pan Fish in 2006, the historic financial performance of Pan Fish and Fjord are presented separately.

Pan Fish

2.45 Table 3 shows the financial performance and certain profit ratios for Pan Fish. Between 2001 and 2005, turnover fell by 70 per cent (an average annual reduction of 14 per cent). This was principally due to falling salmon prices and reduced production volumes. Although Pan Fish showed a positive gross margin in all five years, in 2002 and 2003 these were very low (2.3 and 6.8 per cent respectively). Overheads increased from £64 million to £84 million in 2002 but declined in each subsequent year. Non-trading items represented expenses of £105 million in 2002 and £99 million in 2003. These items included provisions and asset write-downs arising from the low salmon prices facing Pan Fish at that time. The high levels of overhead and non-trading expenses caused Pan Fish to make substantial losses in 2002 and 2003. Non-trading items included changes to licence valuations. As a result of the financial restructuring and despite reductions in cost, Pan Fish made a small loss before interest and tax of £4 million in 2004. In 2005 Pan Fish returned to profit, making earnings of £46 million before interest and tax.

TABLE 3 Financial performance of Pan Fish, 2001 to 2005

	Years ended 31 December					£ million
	2001	2002	2003	2004	2005	
<i>Financial performance</i>						
Turnover	431	384	237	189	159	
Cost of sales	<u>356</u>	<u>373</u>	<u>221</u>	<u>157</u>	<u>108</u>	
Gross margin	75	11	16	32	51	
Overheads	<u>64</u>	<u>84</u>	<u>50</u>	<u>36</u>	<u>38</u>	
Trading profit/loss	11	-72	-35	-4	13	
Non-trading items	<u>50</u>	<u>-105</u>	<u>-99</u>	<u>0</u>	<u>33</u>	
EBIT	61	-177	-134	-4	46	
Capital employed at year end	429	273	210	213	181	
<i>Profit ratios</i>						
Gross margin (%)	17.4	2.3	6.8	16.9	32.0	
EBIT return on sales (%)	14.1	-46.1	-56.5	-2.1	28.9	
Return on capital employed at year end (%)	14.2	-64.8	-63.8	-1.9	25.4	

Source: Worldscope, Datastream.

Note: Figures have been converted from Norwegian Krone (NOK) at average exchange rates for each year. These rates are 2001: 12.95NOK = £1; 2002: 11.96; 2003: 11.56; 2004: 12.34; 2005: 11.71.

Fjord

2.46 Table 4 shows the financial performance and certain profit ratios for Fjord between 2001 and 2005. Fjord made losses in each year between 2001 and 2003, but increased turnover during this period by 41 per cent. In 2004 turnover fell by £49 million but due to higher gross margins and lower overheads, Fjord made a small trading profit. In 2005 Fjord benefited from rising salmon prices and made a profit before interest and tax of £65 million.

TABLE 4 Financial performance of Fjord, 2001 to 2005

£ million

	Years ended 31 December				
	2001	2002	2003	2004	2005
<i>Financial performance</i>					
Turnover	247	334	348	299	327
Cost of sales	<u>200</u>	<u>269</u>	<u>306</u>	<u>243</u>	<u>250</u>
Gross margin	47	65	42	56	78
Overheads	<u>73</u>	<u>82</u>	<u>60</u>	<u>49</u>	<u>47</u>
Trading profit / loss	-26	-17	-18	8	31
Non-trading items	<u>-24</u>	<u>5</u>	<u>-46</u>	<u>1</u>	<u>34</u>
EBIT	-50	-12	-64	9	65
Capital employed at year end	356	379	348	309	348
<i>Profit ratios</i>					
Gross margin (%)	19.0	19.5	12.1	18.7	23.9
EBIT return on sales (%)	-20.2	-3.6	-18.3	3.0	19.9
Return on capital employed at year end (%)	-14.0	-3.2	-18.3	2.9	18.7

Source: Worldscope, Datastream.

Note: Figures have been converted from Norwegian Krone (NOK) at average exchange rates for each year. These rates are: 2001: 12.95 NOK = £1; 2002: 11.96; 2003: 11.56; 2004: 12.34; 2005: 11.71.

Marine Harvest NV

History

2.47 Marine Harvest was founded in Scotland in 1965. It was acquired by Nutreco Holding NV (Nutreco), the current majority shareholder, in 1999 and managed in combination with Nutreco's other aquaculture operations. In April 2005 Nutreco's fish farming operations were merged with those of Stolt Sea Farm Investment BV (Stolt) into a new company, Marine Harvest NV. This new company is owned 75 per cent by Nutreco and 25 per cent by Stolt. After the April 2005 merger, Marine Harvest undertook a global restructuring, focused on cost reduction and rationalization of its asset base.

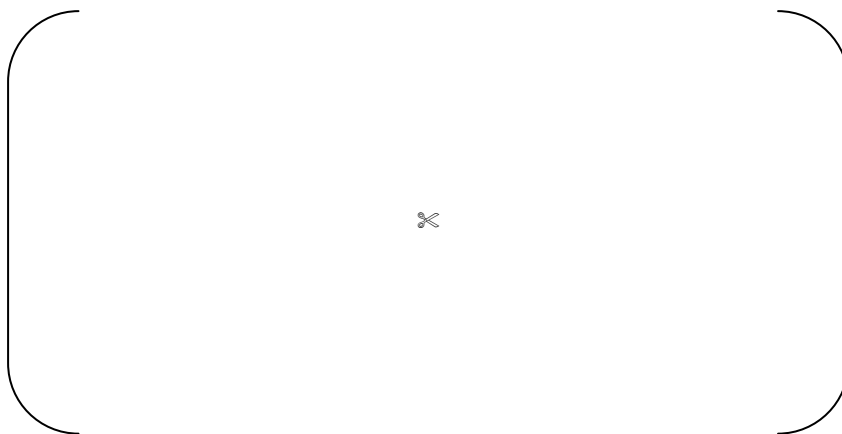
Financial performance—Marine Harvest

2.48 Before the merger between Marine Harvest and Stolt in April 2005, Marine Harvest's salmon farming and processing operations were reported internally as part of an aquaculture division which also included Nutreco's fish feed operations. The financial information for 2003 and 2004 therefore comes from Nutreco's management

accounts. Separable financial information has only been available since the merger with Stolt in April 2005.

2.49 Table 5 shows the financial performance of Marine Harvest from 2003 to 2005.

TABLE 5 Financial performance of Marine Harvest, 2003 to 2005



Source: Marine Harvest/Nutreco Management Accounts.

Note: Figures have been converted from euros at average exchange rates for each year. These rates are: 2003: €1.445 = £1; 2004: 1.473; 2005: 1.462.

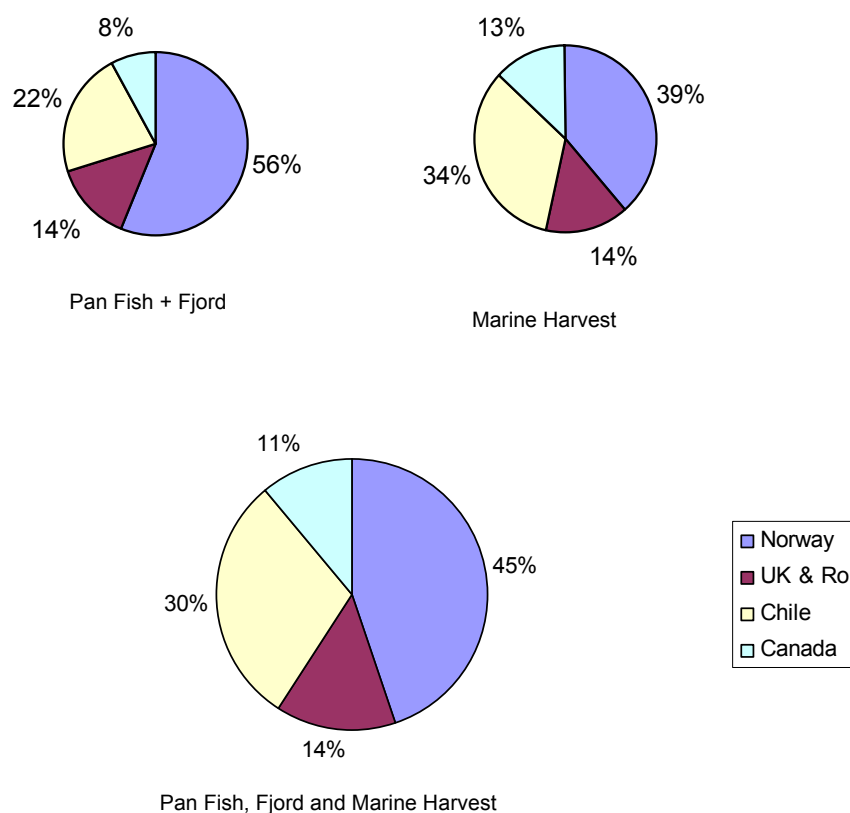
2.50 Marine Harvest's financial performance shows a similar trend to Pan Fish and Fjord's, showing [x]. The 2005 figures are for the eight months following the merger with Stolt. The similar financial performance of Fjord and Pan Fish between 2001 and 2005 and Marine Harvest between 2003 and 2005 highlights the low returns made in the industry during 2002, 2003 and to a lesser extent 2004 as a result of low salmon prices.

Geographic distribution of operations

2.51 Figure 2 shows Marine Harvest's estimates of the relative size of the parties' salmon farming operations in Norway, the UK (Scotland) and Ireland, Chile and Canada.

FIGURE 2

Distribution of Pan Fish, Fjord and Marine Harvest operations by country



Source: Marine Harvest competitor benchmarking. Figures are for sales by country of origin for the nine months from 1 July 2005 to 31 March 2006.

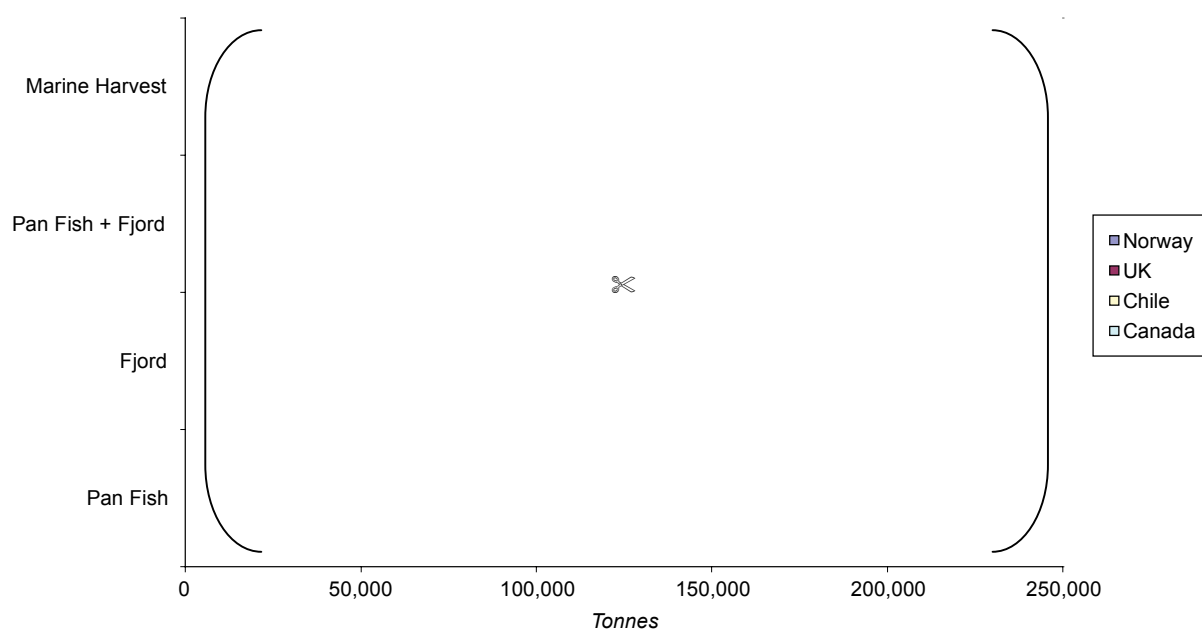
2.52 Both merging parties have the largest proportion of their operations in Norway. For Pan Fish (including Fjord), Norway represented over half of sales in the nine months to 31 March 2006. For Marine Harvest, this figure was 39 per cent. Marine Harvest produces a greater proportion of its salmon from Chile (34 per cent compared with 22 per cent). Both Pan Fish and Marine Harvest had a similar proportion—14 per cent—of their operations in the UK and Ireland.

Relative size of operations

2.53 Figure 3 shows Marine Harvest's estimates of the relative size of its and Pan Fish's operations.

FIGURE 3

Sales volumes in the nine months to 31 March 2006—by entity



Source: Marine Harvest competitor benchmarking. Figures are for sales by country of origin for the nine months from 1 July 2005 to 31 March 2006.

2.54 Figure 3 shows that Marine Harvest's sales volumes are almost twice the size of those of the combined Pan Fish and Fjord business, with larger sales volumes in all four countries of production.

Other Salmon farming companies

2.55 Table 6 shows the estimated 2005 sales of farmed salmon for the largest 17 salmon producers.

TABLE 6 Estimated 2005 global sales of farmed salmon

	2005 sales tonnes	Share % [Ranges]
Pan Fish (incl Fjord Seafood)	143,889	8.8
Marine Harvest	275,062	16.8
<i>Pan Fish and Marine Harvest</i>	<i>418,951</i>	<i>25.6</i>
Lerøy	⌋	⌘ [6–10]
Cermaq (Mainstream)		⌘ [5–8]
AquaChile (incl Aguas Claras)		⌘ [5–8]
Coast Group		⌘ [2–5]
Pesquera Camanchaca		⌘ [2–5]
Pesquera Los Fiordos		⌘ [2–5]
Salmones Multiexport		⌘ [2–5]
Norway Royal Salmon		⌘ [2–5]
Cultivos Marinos Chiloe		⌘ [1–2]
Seaborn		⌘ [1–2]
Salmones Antarctica		⌘ [1–2]
SSF *		⌘ [1–2]
Sekkingstad		⌘ [1–2]
Invertec		⌘ [1–2]
Norwell		⌘ [1–2]
Others	⌘ [35–45]	
Total	1,635,000	

Source: Kontali estimates, provided by the main parties.

*Note: Scottish Sea Farms (SSF) is owned 50% by Lerøy and 50% by Salmar.

2.56 Apart from the merging parties, there are three other companies which are estimated to have sold over 50,000 tonnes in 2005: Lerøy Seafood Group ASA (Lerøy), Cermaq ASA (Cermaq) which farms under the Mainstream brand), and AquaChile SA.

Lerøy

2.57 Lerøy is a Norwegian company listed on the Oslo Børs. In addition to salmon farming, it markets and distributes other fish species. Its salmon farming operations are principally in Norway. In 2005 it had turnover of NOK 4 billion (approximately £342 million). Lerøy acquired Fossen AS (a salmon smoking company) for approximately £18 million in April 2006, and a controlling stake of 57 per cent in Hydrotech Gruppen AS (a Norwegian salmon producer) for approximately £60 million in August 2006.¹⁷ The estimated 2005 production of salmon by Lerøy and companies

¹⁷Source: Thomson/Worldscope.

now controlled by it was over 100,000 tonnes.¹⁸ It also owns 50 per cent of Scottish Sea Farms, which had production of 20,000 – 24,000 tonnes in 2005.¹⁹

Cermaq ASA

2.58 Cermaq is a Norwegian company. Until October 2005 its majority shareholder was the Norwegian government. It is now listed on the Oslo Børs and the Norwegian government owns 43 per cent of the shares. Cermaq farms salmon under the Mainstream brand from sites in Chile, Norway, Scotland and Canada. In addition, it produces and supplies fish feed under the EWOS brand. In 2005 it produced approaching 90,000 tonnes of salmon, with a turnover of NOK 2.04 billion (approximately £175 million).

AquaChile SA

2.59 AquaChile SA is a Chilean company, managed and controlled by the Fisher and Puchi families. Its farming operations are based entirely in Chile and consist of three salmon species—Atlantic, trout, and coho.²⁰ Estimated production of Atlantic salmon in 2005 was in excess of 80,000 tonnes.

3. The merger

Outline of the merger situation

Introduction

3.1 This section sets out in more detail the transaction by which Pan Fish would acquire Marine Harvest.

¹⁸Source: Kontali, provided by the main parties.

¹⁹The other 50 per cent of Scottish Sea Farms is owned by Salmar AS.

²⁰Source: Intrafish *The World's 30 largest salmon companies* 28 July 2005.

Timeline to the transaction

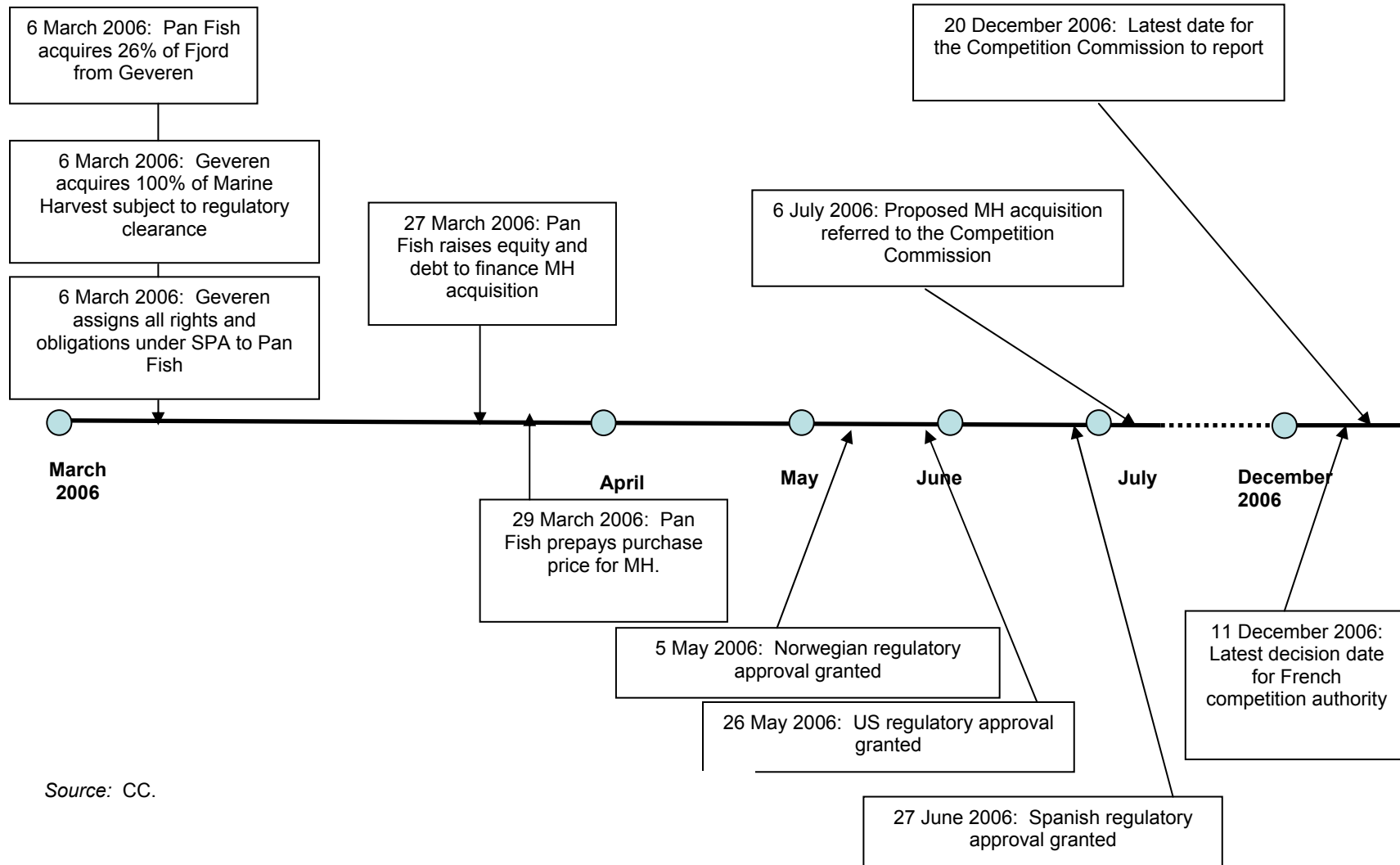
3.2 Figure 4 sets out the timeline of the transaction, including regulatory clearances, financing and Pan Fish's acquisition of Fjord.

Structure of the deal

3.3 The Share Purchase Agreement (SPA) was signed on 6 March 2006, between Nutreco and Stolt (the vendors) and Geveran (the purchaser).

FIGURE 4

Timeline of the anticipated merger



Source: CC.

- 3.4 The SPA provides for the transfer of all of the vendors' shares in Marine Harvest to Geveran in return for a payment of €1.175 billion. By purchasing the shares, Geveran also assumed Marine Harvest's net debt of approximately €150 million.²¹
- 3.5 The transfer was due to take place on 28 March 2006. However, when it had become clear that regulatory approval would not be achieved by this date, the parties agreed to delay the closing, first to June 2006 and then to 31 December 2006.
- 3.6 Closing is conditional on the requisite consents being given by the European Commission and/or relevant national competition authorities. If regulatory consent is not given, then the vendors must sell their shares in Marine Harvest to a third party and remit the proceeds to the purchaser. Therefore all regulatory risk is borne by the purchaser, although the purchaser also benefits from Marine Harvest's performance until the shares are eventually sold. Whatever the regulatory outcome, the vendors will receive the agreed purchase price of €1.175 billion.
- 3.7 Also on 6 March, Geveran entered into an Assignment and Assumption Agreement with Pan Fish, under which Pan Fish assumed all of Geveran's rights and obligations under the SPA. The Agreement was conditional on Pan Fish raising approximately €680 million in a private placement of equity and obtaining a €700 million bank guarantee or loan. Pan Fish met the necessary conditions for financing by 27 March 2006.
- 3.8 The consideration of €1.175 billion was pre-paid by Pan Fish on 28 March.²² The merger has been approved in all necessary jurisdictions except the UK and France.

²¹Press release from Nutreco and Stolt Neilsen, 6 March 2006. .

²² Although the consideration has been paid, Pan Fish does not have control over Marine Harvest's shares which remain pledged to the bank.

Pan Fish said that a decision by the French competition authorities is expected by 11 December 2006.²³

Financing

3.9 The consideration was part-financed by an issue of 1.25 billion Pan Fish shares at NOK 4.36 each. This provided NOK 5.45 billion (approximately €680 million or £470 million). Pan Fish's share price on 6 March was NOK 4.36, but increased during the issue period when it traded between NOK 5.50 to NOK 6.50 .²⁴

3.10 The remainder of the purchase price was financed by a syndicated loan facility of €900 million. This facility was also used to replace existing debt in both Marine Harvest and Pan Fish. The interest rate on the facility is between 60 and 150 basis points above LIBOR and the term of the loan is five years.

Rationale for the merger

3.11 Pan Fish's stated strategy is to become the world's lowest cost and largest salmon producer. Pan Fish claimed the enlarged company would be able to exploit synergies and economies of scale to become the lowest cost producer of salmon. This enlarged company would be able to serve larger customers, develop value added products, diversify into new fish species, and become attractive to global investors.

3.12 A Pan Fish presentation also noted that a large market leading company might have a 'possible stabilizing effect on supply side long term'.

²³Source: Press release with Q2 results presentation.

²⁴Source: Thomson Datastream.

3.13 Because of its size, the purchase of Marine Harvest is central to Pan Fish's strategy. Pan Fish said that the specific rationale for the Marine Harvest merger is based on two factors:

(a) *Enhanced efficiencies*. These include re-organisation of the merging firms' sites into geographic clusters, and combining processing, sales and distribution operations of the merging firms. The potential reduction in costs should enable Pan Fish to achieve its 'lowest-cost producer' strategy.

(b) *Diversification and vertical extension*. The merged entity's greater financial strength should enable it to develop Marine Harvest's capabilities in breeding other species, and Fjord's capabilities in value added products.

4. Jurisdiction

4.1 Under the Act and our terms of reference (see Appendix A), we are required to investigate and report on whether arrangements are in progress or in contemplation which, if carried into effect, will result in the creation of a relevant merger situation. Section 23 of the Act provides that a relevant merger situation exists where two or more enterprises have ceased to be distinct and where the share of supply test or the turnover test specified in the Act is satisfied.

4.2 On completion of the transaction described in paragraphs 3.2 to 3.8, Pan Fish will acquire all the shares of Marine Harvest and by virtue of coming under common ownership, the enterprises will cease to be distinct in accordance with section 26 of the Act.

4.3 The share of supply test is satisfied if the merger creates or increases a share of at least one-quarter in the supply of goods or services of any description in the UK, or in a substantial part of the UK. We consider here the supply of farmed Atlantic salmon in the UK.

4.4 Pan Fish estimated that it had a market share by volume of 16.2 per cent, and Fjord had a market share of 1.1 per cent, of the UK market for the supply of farmed Atlantic salmon, and that Marine Harvest had 23.9 per cent of the same market. Together the merging parties will therefore have a combined market share by volume of 41.1 per cent which amounts to greater than one-quarter share of supply in the UK. Accordingly the share of supply test is satisfied and we are not required to consider the turnover test.

4.5 We therefore find that Pan Fish's anticipated acquisition of Marine Harvest will result in the creation of a relevant merger situation within the meaning of the Act. The main parties to the anticipated merger have not disputed our jurisdiction during the course of our inquiry.

5. Market definition

5.1 The purpose of market definition is to set the limits of the market, in product and geographic terms, over which competition is believed to occur, in order to delineate the extent of the competitive analysis. In defining the market, we identify first the relevant product market and then the geographic market. In essence, we are seeking to identify the extent to which customers could readily switch between substitute products (demand-side substitution), or suppliers could readily switch their facilities between the supply of alternative products (supply-side substitutability) in response to a small but significant non-transitory increase in price (SSNIP) imposed by a hypothetical monopolist, such that the price increase would be unprofitable. This approach is described in the CC's guidance.²⁵

²⁵*Merger References: Competition Commission Guidelines (CC2)*, paragraph 2.4 et seq. In this case the CC used the commonly used range of 5 to 10 per cent as the customer survey sought reactions to a 5 to 10 per cent price rise.

Product market definition for salmon

5.2 The main product sold by each of the merging parties is farmed Atlantic salmon which has been subject to primary processing (see paragraph 2.17). Pan Fish and Marine Harvest told us that they consider the relevant product market to encompass at least the supply of all farmed salmon. They also told us that they face competitive pressures from other products and other regions, such as:

- (a) Atlantic Salmon, farmed in Chile;
- (b) wild pacific salmon, of various species, originating in North America; and
- (c) other sources of dietary protein such as other species of fish as well as chicken and red meat.

5.3 The principal issues in our consideration of market definition are:

- (a) the significance of the location of farming of Atlantic salmon, in particular whether:
 - (i) salmon farmed in Scotland constitutes a distinct product market from salmon farmed elsewhere in Europe (most significantly in Norway); and
 - (ii) whether Atlantic salmon farmed in Chile should be included in the relevant product market;
- (b) whether organic salmon should be included in the relevant market;
- (c) whether salmon subject to secondary processing (particularly freezing) should be included in the relevant product market;
- (d) whether wild Atlantic salmon or Pacific salmon (wild or farmed) should be included in the relevant product market; and
- (e) whether the relevant product market might be as wide as to encompass other species of fish, or other protein sources.

We consider each of these issues in turn.

Whether salmon farmed in Scotland is in a separate market to that farmed in Norway

- 5.4 We received evidence that certain customers did not regard salmon from outside Scotland to be a substitute for Scottish salmon, because its Scottish origin was perceived as an important characteristic of the product. We considered the possibility that salmon farmed in Scotland might form a distinct market. In the following assessment, we compare Scottish salmon specifically to Norwegian salmon, as Norway is the major alternative source of supply, but similar arguments could be applied to salmon produced elsewhere .
- 5.5 We were told that Scottish salmon had often been sold at a small price premium to Norwegian salmon. This is discussed further in paragraphs 6.34 to 6.36. However, the existence of such a premium does not of itself indicate that Scottish salmon does, or does not, constitute a separate market, but may simply reflect a real or perceived difference in quality or specification.

Views of the main parties

- 5.6 The main parties told us that they consider salmon to be largely a commodity product and that there is direct competition between salmon originating from different countries. They told us that these days the fish exhibit largely the same characteristics (genetic, quality or other) whatever the country of origin.
- 5.7 The main parties submitted evidence to support their view that Scottish salmon does not form a distinct market. This evidence included analysis of prices, trade flow data and evidence on potential switching.

- *Analysis of prices*

5.8 The parties have conducted *price correlation analysis*. The parties analysed Scottish and Norwegian salmon prices²⁶ charged by Marine Harvest in the UK for the 3 to 4 kg size salmon to derive a price correlation between the two series of 0.89. The parties submit that this evidence indicates that the prices of Scottish and Norwegian salmon constrain each other.

5.9 The parties have also conducted *time series analysis* of relative prices. This analysis investigated whether the price ratio of Scottish and Norwegian salmon in the UK could be explained by its own price history and random shocks, ie whether the price ratio was stationary (long-term reversion to a mean). A finding that the price ratio is stationary implies that the two price series do not diverge over time. This would be consistent with the market factors that drive prices applying equally to both price series, which the parties claim is indicative that they are in the same market. This univariate study found that Scottish and Norwegian salmon prices in the UK were stationary, with 84 per cent of a shock in the relative price being absorbed within four weeks. The parties also submitted results of the same test for France which they told us suggested that Scottish and Norwegian salmon were also in the same product market in France.

5.10 The parties also analysed the time series of all combinations of the four price series available (Scottish and Norwegian prices in the UK and France). This multivariate analysis found joint stationarity, (ie the combination of all series tended to revert to the mean indicating no series was being driven by influences different to the others) which the parties told us implied that Scottish and Norwegian salmon were in the

²⁶Weekly average prices based on both spot and contract sales between 2003 and 2006. The 'most severe' outliers have been removed from the data.

same product market and that the product market extended geographically to include both the UK and France.

- *Trade flow data*

5.11 The parties argued that imports of Norwegian salmon accounted for 16.5 per cent of UK consumption in 2000. From January 2006 to May 2006, imports of Atlantic salmon farmed outside the UK have increased to 42 per cent of UK consumption; the great majority of this is from Norway (this is discussed further in paragraphs 6.26 and 6.27). The parties argued that this was consistent with Norwegian and Scottish salmon being in the same market.

- *Previous regulatory decisions*

5.12 The parties also drew attention to the previous regulatory decisions of Nutreco and Stolt's joint venture to establish Marine Harvest, which was considered by the European Commission in 2005,²⁷ and the CC's decision in the merger between Nutreco N.V. and Hydro Seafood GSP Ltd in 2000,²⁸ which they argued supported their view.

- *Evidence on potential switching*

5.13 Pan Fish told us that it was not straightforward for the parties to identify the quantities of salmon purchases that have been switched between themselves and a specific rival. However, Pan Fish said that it was aware of numerous occasions when it had been told by customers that they were planning to switch some of their Scottish salmon purchases to Norwegian origin product. Customers that have indicated a willingness to switch at least some of their requirements include [REDACTED].

²⁷Case No COMP/M.3722, dated 12 April 2005.

²⁸Report published 22 December 2000, see www.mmc.gov.uk/inquiries/completed/2000/index.htm.

5.14 The parties also pointed to the fact that in many UK supermarkets, packaging is designed to allow origin to be switched at short notice. They told us that many UK supermarkets take advantage of this flexibility to be able to switch between origins to obtain the lowest cost fish.

5.15 The parties therefore argued that even if there were some customers with a strong preference for salmon of a certain origin, there were sufficient customers that were willing to switch origins to ensure that prices of salmon of different origins were kept in line.

Views of customers and retailers

5.16 We took evidence from many of the customers of the main parties. We also took evidence from the leading UK retailers, which together represent about 75 per cent of UK retail sales of salmon.

5.17 In the UK, most retailers do not buy directly from the farming companies, rather they source their salmon via intermediaries; however, intermediaries that supplied retailers told us that the retailers' views and policies were extremely important, particularly with regard to the origin of salmon. We therefore took evidence from retailers.

5.18 According to an Ernst & Young report, commissioned by the Highlands and Islands Enterprise in 2005,²⁹ approximately 75 per cent of domestic sales of Scottish salmon are made through the grocery retail channel, with the remainder being sold through the foodservice channel. Retailers sell salmon in a variety of forms, ranging from wet fish sold on fish counters, through filleted portions, to fish used as an ingredient in

²⁹*Current market trends within the Scottish salmon farming industry*, 23 December 2005, Ernst & Young. Report commissioned by the Highlands and Islands Enterprise. (The Ernst & Young report.)

ready meals and products such as quiches. Very often retailers offer both standard and premium product ranges. The sourcing and labelling of salmon can vary depending upon how, and in which of the retailers' ranges, it is being sold.

5.19 We found a variety of retailer views on the relative quality of Scottish and Norwegian salmon.

- (a) There was no clear consensus as to the superiority of products from either Scotland or Norway, but the majority of respondents considered the salmon to be very similar; some noted that Norwegian salmon, due to the generally colder waters there, tended to be fed a diet with a higher oil component which could lead to some differences (in particular smokers require salmon whose flesh does not have a high oil content).
- (b) A number of the major UK retailers sold both Scottish and Norwegian salmon more or less interchangeably.
- (c) Some retailers considered that their customers had a preference for Scottish salmon. This appeared to apply in the UK, and in some other European countries.
- (d) In some cases, particularly in relation to their premium ranges, retailers considered that the Scottish labelling provided a marketing advantage.
- (e) In some cases, retailers had established particular supply relationships with Scottish suppliers, with associated regimes to ensure a certain quality of product. In these cases, the product was generally marketed as being Scottish, but this was only one component of the product differentiation.
- (f) Those retailers that had a Scottish-only policy³⁰ told us that if the relative price of Scottish salmon, as compared with Norwegian salmon, were to rise substantially, then they would consider sourcing Norwegian salmon. These

³⁰Scottish-only denotes that customers only purchase Scottish salmon at the moment. Some might be willing to switch to salmon from other sources if Scottish salmon became relatively more expensive.

retailers found it difficult to know how much the relative price of Scottish salmon would need to rise before they would source Norwegian salmon since much would depend on customer reaction. However, it generally appeared unlikely that they would switch from Scottish to Norwegian salmon in response to a 5 to 10 per cent price increase for Scottish salmon.

(g) A number of retailers aimed to sell only Scottish salmon in their stores in Scotland.

5.20 We took evidence from a number of processors. We asked them how they would respond to a rise in the relative price of Scottish salmon and most told us that they would continue to source salmon from Scotland and would pass any price increases on to their customers; a minority of processors/wholesalers said they would be likely to switch to other sources. As noted above, those processors that supplied retailers made their sourcing decisions in accordance with their retailers' requirements.

5.21 Salmon smokers and retailers told us that many consumers in the UK and continental Europe had a definite preference for smoked Scottish salmon rather than Norwegian smoked salmon.

(a) Several smokers commented that there was a customer perception that Scottish salmon was superior to salmon of other origin. It was put to us that this was down to marketing efforts by the Scottish industry.

(b) Smokers have specific requirements in terms of oil content and fish size, but did not express a consistent view that Scottish salmon met these requirements better than Norwegian salmon.

(c) One smoker commented that Norwegian suppliers offered a better product but had suffered from bad publicity, whilst another commented that Scottish salmon tended to have a lower oil content, firmer flesh and a darker flesh colour, but added that salmon from the two origins was becoming increasingly similar. It

explained that the increased oil content in Norwegian salmon was the result of more efficient farming methods, to which the Scottish industry was aspiring. Another smoker believed that it was the combination of diet and water temperature which led to quality differences between the fish of the two origins. One company believed that quality differences were not due to the country of origin but the farm of origin and that there were good products originating from both Norway and Scotland.

- (d) One smoker told us that it could not switch from Scottish to Norwegian salmon because of the greater freshness of the former.
- (e) All smokers we spoke to have a Scottish-only policy except for two which also obtain salmon from other origins. Smokers consistently told us that if the price of Scottish salmon increased by 5 to 10 per cent they would pass the price increase on to customers, but a number of them added that if prices increased there would eventually be a switch by smokers to salmon of other origins.

Third party research

- 5.22 An academic working paper by Haldrup, Mollgaard and Nielsen,³¹ based on data from 1995 to 2002, suggested that Scottish and Norwegian salmon were in the same market.
- 5.23 Stirling Aquaculture and the Department of Marketing, University of Stirling, prepared a report in 2001 for Scottish Quality Salmon on the current and potential value of the Scottish label to the farmed salmon industry.³² Overall, the report concluded that the Scottish salmon brand did have a significant premium which was potentially sustainable.

³¹Haldrup, N, Mollgaard, P and Nielsen, C K (2005) *Sequential versus simultaneous market delineation: The relevant antitrust market for salmon* CCP working paper no 05-02.

³²Stirling Aquaculture and Department of Marketing, University of Stirling (2001). *The Current and potential value of the Scottish label to the farmed salmon industry*.

5.24 Another academic paper by Rora, Monfort and Espe,³³ which examined consumer preferences based on data from a French hypermarket, suggested that price differences in the market were due to tradition and reputation rather than actual quality differences.

5.25 The Ernst & Young Report (see paragraph 5.18) stated that most of the parties interviewed attested to the strong preference for Scottish produced salmon and to a premium that the product commands over Norwegian salmon. The report noted that the historically high level of selling prices in 2005 had resulted in some processors no longer being prepared to pay a premium for Scottish salmon and in some retailers sourcing product from outside the UK in order to maintain supply. Many of the parties interviewed by Ernst & Young stated that it was difficult to tell the difference between Scottish and Norwegian salmon. The authors concluded that it was conceivable that, having switched to Norwegian salmon on price grounds, processors and retailers would continue to source primarily on the basis of price, and not return to a policy of paying a premium for Scottish salmon.

CC analysis and assessment

- *CC customer questionnaire*

5.26 We circulated a customer questionnaire to about 40 of the merging parties³⁴ largest customers. We asked them about their current pattern of sourcing. A majority of these customers currently source salmon from both Scotland and Norway.

5.27 We asked each of the customers how they would respond to a 5 to 10 per cent price rise for Scottish salmon. Some customers indicated that they would reduce their purchases of Scottish salmon and increase that from other sources. However, a

³³Rora, A M B, Monfort, M C and Espe, M (2004) *Effects of Country of Origin on Consumer Preference of Smoked salmon collected in a French Hypermarket*, Journal of Aquatic Food Product Technology, vol 13 (1), pp 69–85.

³⁴Including Fjord.

significant number indicated that they would maintain their Scottish purchases and pass on the price increases to their customers.

5.28 For each of the customers that responded, we evaluated their responses and assessed their likelihood of switching. We calculated the overall effects, taking care to avoid double counting. In some cases, there was a degree of ambiguity in the customer responses which we took account of in our interpretation of them. We also took into account the significant volumes of exports as described in paragraph 5.29. From this information we estimated a range of outcomes. We show two scenarios in Table 7: the first 'low' scenario errs on the conservative interpretation of the information supplied ie we assume the customer would not switch where there exists some uncertainty. In the second 'high' scenario 2, we assume that customers would switch where we have reason to believe that the customer *might* have some flexibility (for example because they source from elsewhere already or the retailers who were the customers of secondary processors indicated they would be prepared to switch sources). In either case, we see that a significant proportion of purchases could be switched away in the event of a SSNIP type price increase for Scottish salmon.

TABLE 7 Analysis of switching responses among UK customers of Scottish salmon

	<i>Tonnes</i>	
Total Scottish production (2005)*	119,700	
Total Scottish exports (2005)*	57,893	
Implied UK consumption of Scottish salmon (2005)	61,807	
Total sales made to 'sample' group (2005)†	56,107	
Maximum <i>approximate</i> exports from sample group‡	3,733	
Total sales made to 'sample group' that are consumed in UK	52,374	
	<i>Low</i>	<i>High</i>
Max sales switched away in response to a SSNIP§	14,314	23,916
Max switched away in response to a SSNIP as % sample group purchases	26	43

Source: Responses to customer questionnaire, CC analysis.

*Source: Kontali Analyse.

†The sample group is those customers who have responded to our questionnaire, plus one processor whose volumes were inferred from information provided by its main customer. This sample group excludes wholesalers, distributors etc where inclusion of their volumes might lead to double counting.

‡This has been based on the indications provided by customers.

§SSNIP = small but significant non-transitory increase in price.

5.29 A large proportion of Scottish salmon is exported. We expect that, as in the UK, some customers located outside the UK would also reduce volumes in response to a 5 to 10 per cent price increase imposed by a hypothetical monopolist of Scottish salmon. However, similarly some customers may be reluctant to switch away from Scottish salmon—in particular those purchasing smoked Scottish salmon or Label Rouge³⁵ salmon. As shown in Tables 8 and 9, the exports of smoked Scottish salmon and Label Rouge fish by no means account for the majority of exports. We were not able to conduct an analysis of export customers in the same depth; for the purposes of our analysis we assume the proportion of non-UK customers that are Scottish-loyal is the same as the proportion of UK customers that are loyal. If it is assumed that export customers display a similar propensity to switch as UK customers, the maximum sales switched away in response to a SSNIP would be in the range 26 to 43 per cent, as for UK customers.

TABLE 8 Analysis of UK exports, 2005

	<i>tonnes</i>
UK fresh exports (WFE*)†	44,468
UK smoked exports (WFE)†	8,178
UK fillet exports (WFE)†	<u>5,247</u>
Total exports	57,893

Source: Kontali Analyse.

*WFE = whole fish equivalent.

†Calculated using conversion rates supplied by the main parties. We have assumed that exports are all Scottish salmon on the basis that it is unlikely that significant volumes of Norwegian salmon would be imported for processing and then exported.

TABLE 9 Estimation of 'differentiated product' 2003

	<i>Volume (tonnes)</i>
Label Rouge (French Market)	7,000

Source: Ernst & Young report 2005.

5.30 The results of the analysis in paragraphs 5.28 and 5.29 indicate that a number of large customers would consider switching some of their volumes to salmon of

³⁵See glossary: Label Rouge is a French Government-approved food certification scheme that assures product origin and quality, and production methods employed.

another origin in response to a SSNIP of 5 to 10 per cent. Whilst it is not possible to draw strong conclusions from this analysis, since we do not know how much volume these customers would switch, we consider this to be consistent with a product market that includes both Norwegian and Scottish salmon. This result is also broadly consistent with, and indeed helps to explain, the increasing share of UK salmon consumption accounted for by Norwegian salmon over time in response to decreases in Scottish salmon production.

- *CC econometric analysis*

5.31 Examination of pricing data (discussed further in paragraphs 6.32 to 6.34) and the main parties analyses³⁶ of the movements of the prices of Scottish and Norwegian salmon (see paragraphs 5.8 to 5.10) show that prices of Scottish and Norwegian salmon tend to move in parallel, suggesting that the prices of each constrain the other. However, while informative, neither the correlation test, nor the extent of co-movement in prices (stationarity) test can be viewed as definitive evidence of the existence of a relevant market. The prices of two products can be correlated overtime and yet they do not belong to the same relevant market. Prices of products may move together for a number of reasons even when the products are not in the same market, for example spurious correlations may result from similar trends, seasonal influences or common costs driving prices. The extent of price correlation also does not show how closely substitutable the products are. Therefore, whilst these types of analyses are helpful, in our view they are better at demonstrating that products are not in the same market through an absence of price correlation, than that they are in the same market through the presence of such price correlation. We have similar reservations about the empirical analysis of Haldrup, Mollgaard and Nielsen (paragraph 5.22).

³⁶Correlation, cointegration and stationarity analyses.

5.32 Therefore, we constructed a model of demand for Scottish salmon in the UK to examine the interaction between demand and price for Scottish and Norwegian salmon (there was insufficient data to estimate an entire demand system). This model is described in Appendix C; it considers Scottish salmon sales as a function of the price of Scottish prices, Norwegian prices and overall consumer food expenditures.

5.33 The results from this econometric analysis are also shown in Appendix C. The model was tested for its sensitivity to changes in various parameters and found to be robust. The model results indicate a positive cross price elasticity of demand between Scottish and Norwegian salmon. A one per cent increase in the price of Scottish salmon is likely to lead to a decrease in demand for Scottish salmon of over three per cent. A one per cent increase in the price of Norwegian salmon is likely to lead to an increase in demand for Scottish salmon of less than three per cent. The parties had some reservations on the modelling approach, although they accepted that the CC's conclusions on the implications for product market definition were correct.

- *Trade regulations*

5.34 As explained in paragraph 2.34 and table 1, there is an MIP to the EU that applies to Norwegian salmon. It is theoretically possible that if market prices fell, prices for Scottish salmon might fall while Norwegian prices were fixed by the MIP, so that prices of Norwegian salmon did not constrain the former. We consider this to be highly unlikely. Scotland supplies a far smaller proportion of EU demand than Norway (Scotland supplies around 25 per cent of EU salmon demand³⁷), and it is expected that substantial Norwegian imports will continue to be required. Against this background, if market prices fell it is unlikely that prices for Scottish salmon would fall

³⁷Kontali Salmon world 2006.

beneath the MIP that applies to Norwegian salmon, rather it appears that the MIP would serve to stabilize prices for salmon in line with its objectives.

- *Assessment of whether Scottish salmon forms a distinct market*

5.35 In assessing whether Scottish salmon forms a distinct market, we need to consider whether a monopoly supplier of Scottish salmon could profitably increase prices by, say, 5 to 10 per cent.

5.36 Our evidence from retailers indicates that whilst some retailers would prefer (in varying degrees) to offer Scottish salmon, several of the major retailers, for their standard ranges, offer Scottish and Norwegian salmon more or less interchangeably and, in response to a 5 to 10 per cent price rise could be expected to switch substantial volumes of purchases from Scottish to Norwegian sources.

5.37 Our evidence from the processors of salmon suggests that a significant amount of switching would take place in response to a price rise, but it is difficult to quantify that amount. Much of this demand is derived from retailers and would be expected to follow retailer preferences. We consider that the demand from food service customers is likely to be at least as price sensitive as that from retailers.

5.38 Evidence from smokers, supported by views of other third parties, indicates that demand for salmon for smoking would be less responsive to an increase in the relative price of Scottish salmon.

5.39 We analysed the responses to our customer survey and considered that, whilst no strong conclusions could be drawn, the pattern of responses was consistent with a market that included both Scottish and Norwegian salmon.

5.40 Our own econometric analysis indicated a large, positive cross price elasticity of demand between Scottish and Norwegian salmon.

5.41 Taking account of the above evidence, we expect that were a monopoly supplier of Scottish salmon to seek to raise prices above existing levels, there would be sufficient marginal customers who would be prepared to switch some or all of their purchases away from Scottish salmon to Norwegian salmon, in response to a change in relative prices, to render that price rise unprofitable. We therefore conclude that there is not a market for Scottish salmon which is separate from that for Norwegian salmon.

Salmon farmed elsewhere in Europe

5.42 We then considered whether, in common with Norwegian salmon, production from elsewhere in Europe (such as the Republic of Ireland and/or the Faeroe Islands) was also in the same product market.

5.43 We have not received any evidence to suggest that salmon from other European sources forms a distinct market from other farmed Atlantic salmon produced in Europe.

5.44 Volumes of salmon produced in these other countries are low relative to those produced in the UK (Scotland) and Norway. In 2005, 12,000 tonnes of farmed salmon were harvested in Ireland, against 119,700 tonnes in the UK and 572,300 tonnes in Norway. Exports of fresh Atlantic salmon from Ireland are also relatively

low at 4,661 tonnes in 2005, against 37,798 tonnes from the UK and 384,266 tonnes from Norway.³⁸

5.45 In 2005, 19,000 tonnes of salmon were harvested in the Faeroe Islands and 9,425 tonnes exported. An outbreak of ISA, (see paragraph 2.19), caused severe problems in 2000 to 2003 and was followed by an area fallowing strategy. This resulted in a large fall in exports to the 15 member states that, at that time, comprised the EU. We were told that exports fell from an average of 1,900 tonnes a month in 2004 to 160 tonnes a month in the 12 months to April 2006. The main parties have told us that deliveries to date in 2006 are 80 per cent less than the equivalent period in 2005.

5.46 According to the main parties, there has not been a significant increase in the price of salmon from the Faeroe Islands relative to the price of salmon in Norway or elsewhere, despite this reduction in supply, suggesting that most purchasers of Faeroe Islands salmon, when faced with a shortage, simply switched to salmon of a different origin.

5.47 We were also told that a high proportion of Irish salmon was organic. Some third parties suggested that Irish salmon was a premium product, but we received no evidence to suggest that it formed a distinct product market.

5.48 In the absence of any evidence to suggest anything distinctive about production in these countries, or the demand for their product, we consider it unlikely that the competitive interaction of farmed Atlantic salmon prices from these countries would be different from that with Norwegian salmon. We conclude that the product market

³⁸Kontali monthly salmon reports.

includes production from these countries, and therefore include production of farmed Atlantic salmon in Europe in the relevant product market.³⁹

Atlantic salmon farmed in Chile

5.49 We considered whether Atlantic salmon farmed in Chile forms part of the same market as Scottish and Norwegian salmon.

5.50 The main parties told us that they considered the relevant market encompassed the sales of all farmed salmon in at least the EEA. They also told us that competitive pressures extended further than this and that imports from Chile acted as a constraint on prices of EEA farmed salmon.

5.51 The main parties told us that 12.5 per cent of EEA consumption of farmed Atlantic salmon was imported from outside the EEA and 21 per cent of EEA production was exported to non-EEA countries. 976 tonnes of frozen Chilean salmon were imported into the EU in the month of April 2006. This contrasts with 1,800 tonnes in April 2005 and 444 tonnes in April 2004.

5.52 The main parties told us that frozen imports of Atlantic salmon from Chile (and of varieties of Pacific salmon from Alaska) were acting as an increasing competitive constraint. Most imports from these countries are of frozen fish due to the high cost of air freight, which is required to import fresh fish. However, the main parties submitted that thawing was straightforward and drew attention to the practice of selling fish as 'fresh, previously frozen', ie fish that have been frozen and subsequently thawed.

³⁹The Faeroe Islands are not in the EEA and so we define the area of production as Europe rather than the EEA.

- 5.53 We obtained a variety of views from UK retailers. Many had considered the use of Chilean salmon, but a number had concerns about the use by Chilean salmon farmers of feathermeal. Nevertheless, we found evidence that there was likely to be an increase in use of Chilean salmon.
- 5.54 We were told by the main parties that historically the price of Chilean salmon imports had not exhibited any significant correlation with European prices. We looked at data on EU import prices from Kontali, comparing Chilean and Norwegian prices. Chilean pricing is much more volatile, with no data available in some months, suggesting a thin market. The correlation with Norwegian prices is weak, for example Chilean prices were generally above Norwegian prices from 2000 to 2002, below from 2002 to 2005, and above again from 2005 onwards.
- 5.55 The main parties told us that there had recently been strong growth in supplies from Chile. We understand that the primary market for Chilean salmon is North America and that sales to Europe may arise from an imbalance between Chilean production and North American demand. Imports in 2005 may have been encouraged by the high salmon prices that have recently prevailed in Europe, yet Chilean imports appear to have fallen in 2006 despite further price rises. We note that the volume of Chilean salmon supplied to Europe has been highly variable, and it appears that insufficient volumes are involved to constrain European prices. Against this background, we did not think it was possible to conclude that there is a significant trend towards increased imports to the EEA from Chile.
- 5.56 We therefore considered that there was no strong evidence that Chilean salmon currently formed part of the relevant market. Thus, we exclude Chilean salmon from our market definition. We also note that Chilean imports are usually frozen, and so

are distinct from the fresh fish usually supplied by European producers. The effects of frozen fish on the market are discussed in paragraph 5.70.

- 5.57 It is possible in the future that some customers may have more flexibility in using frozen product including Chilean salmon, for example in secondary processing. In the long term, the relevant market may widen.

Organic salmon

- 5.58 We considered whether organic salmon formed part of the same market as other salmon.

- 5.59 Organic salmon accounts for only a small part of total salmon production. For example, the Scottish organic salmon production in 2004/05 was approximately 2,500 tonnes, compared to 3,117 tonnes in 2003/2004.⁴⁰

- 5.60 The main differentiating factors regarding organic salmon relate to the types of feed and stocking densities permitted. It was suggested to us that organic standards only addressed certain of the issues that might concern a highly discerning buyer, and that for this reason certain farmers and retailers adopted their own standards that went beyond those of the organic standards organizations.⁴¹

- 5.61 We were told that organic salmon would typically command a price premium of around 20 per cent over standard salmon prices; however, it is not clear how stable that figure has been.

⁴⁰Source: Scottish Executive, Research study into the market penetration of Scotland's organic produce, 8 February 2006.

⁴¹Organic standards are certified by Soil Association Certification Limited and Scottish Food Quality Certification Limited.

5.62 The main parties told us that they considered the relevant market to include all farmed salmon. One major retailer told us that it considered organic salmon may be in the same market as other farmed salmon. Other parties told us that they regarded other differentiating characteristics to be equally as important as organic certification.

5.63 We consider that organic certification is one of a number of potential differentiating features. We have not received evidence that suggests that it formed a separate market and accordingly regard it as part of the same market as non-organic salmon.

Wild Atlantic salmon

5.64 The sales volumes of wild Atlantic salmon are very small compared with those of farmed salmon. We understand that availability is very limited, that there are concerns about sustainability, and that prices are significantly higher than those of farmed salmon.

5.65 There appeared to be no evidence that the pricing of wild Atlantic salmon constrained that of farmed salmon and accordingly we have not included it in our market definition.

Pacific salmon

5.66 We considered whether Pacific salmon formed part of the same market as other salmon.

5.67 The main parties told us that wild Alaskan salmon (which are Pacific species) is sold as fresh salmon by various European retailers. Wild Alaskan salmon is also considered suitable for smoking and there is a history of using Alaskan salmon for this. Pan Fish told us about a catering customer that had recently switched from Pan Fish fresh farmed Atlantic salmon to wild Alaskan on the basis of price. The main

parties also told us that they considered that farmed Pacific salmon from Chile could compete with Atlantic salmon, although they acknowledged that quantities imported into the EEA were small. They also told us that there was some evidence that Atlantic and Pacific salmon competed in the Japanese market.

5.68 Several of the major UK retailers told us that in their view, Pacific salmon was not a good substitute for Atlantic salmon. We were also told by a processor that Coho salmon (a Pacific salmon species) was a very different product from Atlantic salmon. Other than from the main parties, we received no evidence to suggest that Pacific salmon formed part of the same market as Atlantic salmon.

5.69 We considered that, on balance, it was reasonable to exclude Pacific salmon from our market definition.

Frozen salmon

5.70 The main parties to this merger generally sell their product before any processing other than gutting, for example freezing. Salmon farmed in Europe is generally sold fresh rather than frozen at both wholesale and retail level. Frozen salmon may be a potential demand-side substitute for some retail or secondary processing functions; however, sales of frozen salmon are relatively small although it is popular in certain regions. Were frozen salmon to become much more widely accepted by end consumers, it is possible that this would impact on the derived demand for fresh, gutted salmon. We did not see evidence that such demand is significant and we therefore do not consider that in general the price of frozen salmon constrains that of fresh salmon. We therefore exclude imported frozen salmon from the relevant product market of fresh salmon before secondary processing (such as freezing).

Other seafoods and sources of dietary proteins

5.71 The main parties told us that although salmon was a distinct product, they considered the supply of salmon to compete with other species of fish, and within a wider market for protein, which includes, among other things, chicken and red meat.

5.72 Apart from the main parties' views, we received no evidence to consider other seafoods and protein sources to be part of the same market as salmon. For example, there was no evidence that prices of salmon were constrained by the prices of any other types of food. Most other parties told us that they considered the market to be for farmed Atlantic salmon. No other party suggested that the market was wider than salmon.

5.73 We therefore concluded that other seafoods and protein sources should not be considered to be part of the market.

Conclusion on product market definition for salmon

5.74 We concluded that the relevant product market consists of fresh farmed Atlantic salmon, produced within Europe.

5.75 Although we considered that Scottish and Norwegian farmed salmon form part of the same market, we recognize that, in view of strong customer preferences, Scottish salmon may form a relevant market segment. We discuss the effect of the merger on these customers in paragraphs 8.50 to 8.69.

Geographic market definition for salmon

5.76 The main parties submitted that the geographic market encompasses is fundamentally global or, in line with previous regulatory decisions, at least all EEA sales. The main parties said that competitive pressures extended to other regions

and that if the market were to be viewed as EEA wide, it would be strongly influenced by global trends.

5.77 We were satisfied that the market encompassed the EEA as this contention was consistent with market descriptions from other participants, the patterns of trade and the generally low trade barriers within the EEA.⁴² We note that in the previous CC decision Nutreco/Hydro⁴³ the geographic market was found to be EEA wide.

5.78 We therefore considered whether the geographic market was likely to be wider than the EEA.

5.79 We note that the vast majority of Norwegian and Scottish salmon is sold within the EEA. As discussed above, non-EEA markets, such as in the Americas, are largely supplied with farmed salmon from non-European sources, or farmed or wild Pacific salmon. We received no evidence that prices in other markets had any marked impact on prices in the EEA, in particular because the relevant products in these markets appear not to be in the same product market as farmed Atlantic salmon in Europe. We therefore considered it unlikely that influences from outside this area would be sufficiently strong to widen the market further. We therefore consider the geographic market to be EEA wide.

6. Competition in the market

6.1 Having identified the relevant market, we now consider the evidence on recent and current competition in the market as a guide to assessing how competition might develop following the merger.

⁴²The minimum import price imposed on Norwegian salmon is of limited relevance given prevailing price levels; see also paragraph 2.36.

⁴³Cm 5004: *A report on the proposed merger between Nutreco Holding NV and Hydro Seafood GSP Ltd*, December 2000.

Capacity and supply

6.2 Table 10 shows the output of the main European producers of farmed Atlantic salmon. Norwegian production has steadily increased, whereas Scottish production has declined in recent years. The Faeroe Islands and Ireland are much smaller producers; production of the Faeroe Islands was seriously affected by a disease outbreak in 2003.

TABLE 10 Output of the main European producers of farmed Atlantic salmon

	<i>tonnes, '000</i>								
	1998	1999	2000	2001	2002	2003	2004	2005	2006e
Norway	343	411	422	413	444	508	537	572	609
Scotland	104	118	120	132	140	161	150	120	125
Faeroe Islands	19	36	30	41	42	47	37	17	7
Ireland	17	19	19	24	22	18	12	12	15
Total	483	584	591	610	648	734	736	721	756

Source: Kontali.

Note: A small amount of salmon farming also takes place in Iceland.

6.3 As discussed in paragraphs 2.22 to 2.36 regulations form an important constraint on capacity, determining where salmon can be farmed, how much salmon may be farmed at each site, and requiring practices that can further constrain the operator and affect costs. However, the fact that a site might be licensed to farm salmon does not mean that salmon farming at that site will be economically viable. The analysis in paragraph 2.27 indicates that a significant amount of licensed capacity in Scotland is not used. One reason for this appears to be that some of these sites cannot produce salmon cost effectively, taking account of anticipated selling prices for salmon.

6.4 Marine Harvest told us that there had been recent changes to the regulations affecting farms in Scotland. This effectively increased the capacity of certain farms and although in some cases the changes could reduce capacity, Marine Harvest told us that the overall effect was to increase capacity.

6.5 We surveyed rival Scottish salmon farmers about their expansion intentions, depending on a range of possible market prices for salmon, in order to estimate their likely future capacity. We received responses from farmers representing approximately 85 per cent of 2005 Scottish production in the hands of rivals. A summary of the responses is shown in Table 11. If prices were to drop below £2 per kg, production levels would be expected to fall, but at higher levels production is expected to expand, particularly if prices are in excess of £3 per kg. Because of the length of the production cycle for salmon, an expansion of production would not be realised until after 2007. We consider that the range from £3.50 to £4.00 per kg is indicative of recent market prices.

TABLE 11 Anticipated Scottish production of the largest rivals to the parties, dependent on market price

Production volumes (tonnes—gutted weight)

2005 production	57,400		
2006 production	57,545		
	<i>Year of harvest</i>		
	2007	2008	2009
<i>Prices (per kg of gutted Scottish salmon)</i>			
<£2	61,069	56,900	31,000
£2.00–£2.99	62,269	63,300	60,000
£3.00–£3.99	62,269	67,072	67,572
£4.00–£4.99	62,269	68,072	68,572
>£5.00	62,629	68,572	69,072

Source: CC.

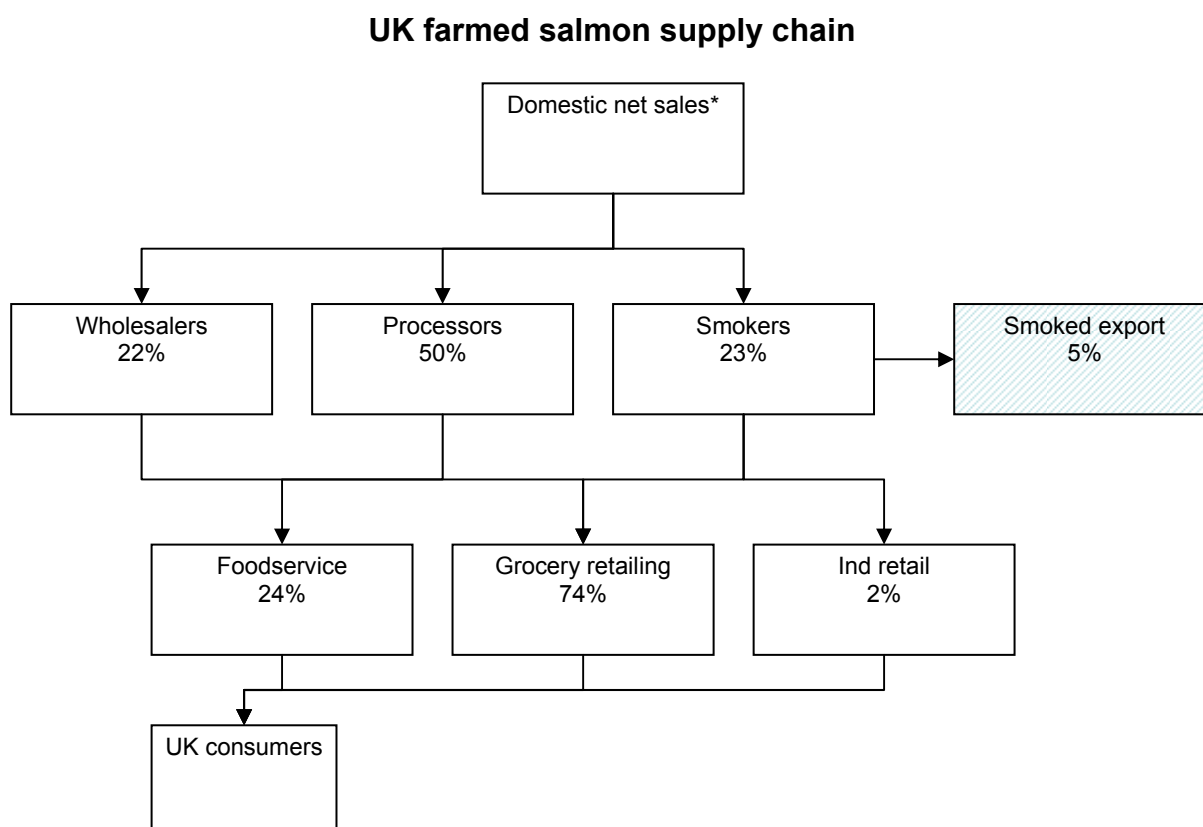
6.6 The main parties told us that there was significant spare capacity in Norway.

6.7 We spoke to the Norwegian Ministry responsible for salmon farming. This broadly confirmed the view put to us by the main parties. We also gathered from this that, following recent regulatory changes (in particular the removal of salmon feed quotas), there was scope to increase production at existing salmon farms. This suggested to us that expansion of Norwegian capacity was possible without high incremental costs.

Market structure

6.8 Most salmon farmed in the UK is sold to processors, smokers and wholesalers. This salmon then reaches the consumer via retailers or food service companies (restaurateurs, caterers etc). Figure 5 shows the UK farmed salmon supply chain with percentages based on estimated volumes for 2003.

FIGURE 5



Source: CC diagram based on the Ernst & Young Report.

*Domestic production minus exports plus imports.

6.9 Since 2003 Scottish production has fallen from around 161,000 tonnes to around 120,000 tonnes.⁴⁴ Scottish exports have risen slightly, to about 58,000 tonnes. There has been a considerable increase in imports to the UK from Norway; in 2005 these stood at 39,706 tonnes.⁴⁵

⁴⁴Source: Kontali.

⁴⁵Source: Eurostat.

- 6.10 There are few direct contractual relationships between retailers and farmers. However, some retailers do involve themselves in detailed specification of farming conditions (see also paragraph 2.15).
- 6.11 The main parties estimated that 12.5 per cent of EEA consumption of farmed Atlantic salmon was imported from outside Europe (in this context the EEA and the Faeroe Islands) and over 21 per cent of European production was exported to non-EEA countries.

Products and product differentiation

- 6.12 The main product offered by the salmon farmers is primary-processed fish: whole, gutted, head-on salmon. This is sold categorized by quality and size. According to the parties, fish are graded as superior, ordinary or production quality. We were also told that the difference between the quality grades is more concerned with the amount of final product (eg fillet) that can be derived from a whole fish of a certain weight, rather than the quality of the flesh.
- 6.13 Some of the salmon farmers also have secondary processing operations and offer products such as filleted portions. However, secondary processing tends to be conducted by specialized fish processors.
- 6.14 Pan Fish told us that the products of the main salmon farmers were virtually identical. According to Pan Fish, for the bulk of demand and sales, suppliers must meet certain quality standards and customers are not willing to pay for extra quality beyond this standard.
- 6.15 As noted in paragraph 5.18, some retailers offer several ranges of salmon product, varying from a basic to a 'premium' product. We were told that generally the

differences between the ranges were based on product preparation and packaging, not on the quality grade of the fish, as described in paragraph 6.12.

6.16 We obtained evidence from a variety of customers. Whilst they reported preferences among the large suppliers and some variation in product quality, they generally reported that for non-premium salmon there is little product differentiation.

6.17 For premium salmon, such as the premium ranges offered by some UK retailers (see paragraph 6.15), there is more differentiation and retailer-specific standards tend to apply. Very often these ranges use Scottish salmon only and retailers emphasize this in their marketing. Several ranges of premium salmon identify their source more closely, for example as the Orkney Islands or the Shetland Islands.

6.18 As described in paragraphs 5.58 to 5.63, organic certification is one means of product differentiation.

6.19 Many parties told us that consumers of smoked salmon, in the UK, Europe and elsewhere, exhibited a clear preference for smoked Scottish salmon. The smokers we spoke to, and most of the retailers of smoked salmon, told us that to meet customer expectations their smoked salmon had to have been farmed in Scotland. We note, however, that Tesco sells a range of smoked salmon originating from Norway.

Customer switching

6.20 The main parties told us that customers tended to multi-source, purchasing salmon from a number of suppliers. They told us that few customers took more than 5,000 tonnes per annum from a single supplier, so smaller producers would remain viable competitors to the merging parties.

- 6.21 In our customer questionnaire, we asked customers how many suppliers they used. Thirteen of the 17 customers that responded told us that they used at least five suppliers.
- 6.22 We also asked customers whether they had switched suppliers in the past three years. Eight of the 17 customers that responded told us that they had switched suppliers and five told us that they had not.⁴⁶
- 6.23 It appears that for most customers, their specifications can be met by many suppliers. Switching supplier is reasonably easy, as demonstrated by the fact that many purchases are on a spot basis giving customers flexibility in sourcing, and few customers enter long-term contracts for all their requirements.

Demand

- 6.24 There has been a significant increase in demand for farmed Atlantic salmon in recent years. In the EU, according to one report,⁴⁷ consumption of salmon increased by 5.4 per cent in 2005. A report [REDACTED] forecast that the growth of farmed Atlantic salmon demand in the UK would be in the region of 10 to 16 per cent a year, depending on price and promotion.⁴⁸ One report suggested that Norwegian salmon has seen the strongest growth in the UK, France, and Russia. Another report indicated that global salmon demand has seen a compound annual growth rate of 11 per cent in 1994 to 2005, highlighting the UK and France as countries which have had rapid demand growth despite having the highest per capita consumption already.⁴⁹ We were told that the growth in demand had been partly due to the promotion of fish as part of a healthy diet, in particular due to its Omega 3 content. New, innovative product

⁴⁶Not all respondents answered this question.

⁴⁷Carnegie Securities, 28 March 2006.

⁴⁸[REDACTED]

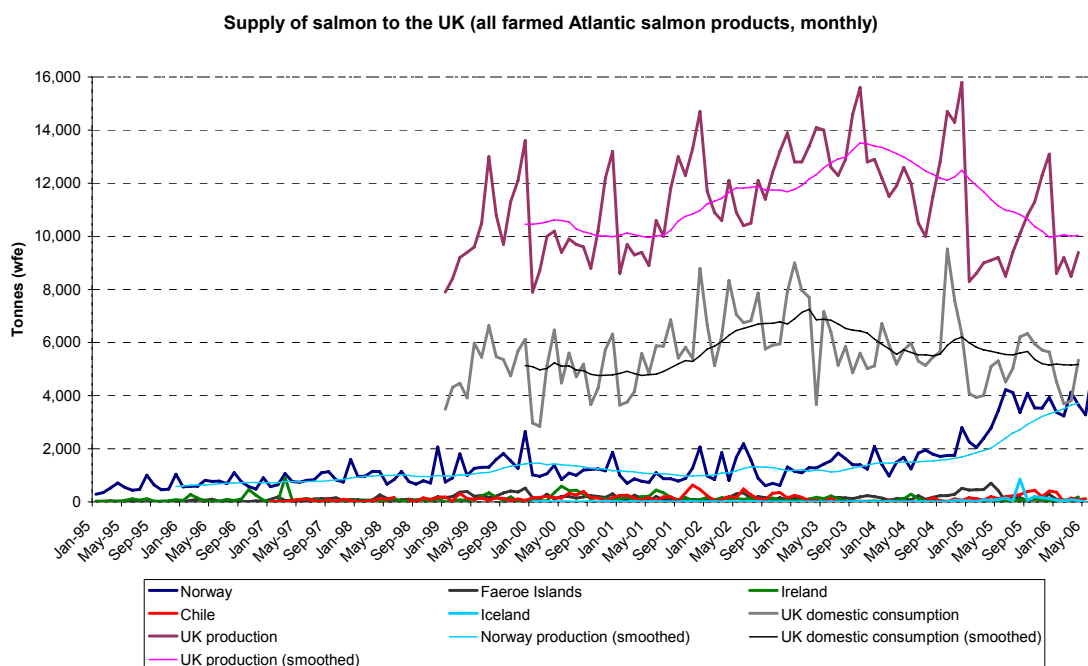
⁴⁹ABG Sundal Collier, 6 March 2006.

offerings have also helped to boost demand. Several third parties have also noted that consumer concerns about bird flu have helped increase the demand for salmon. Good availability of salmon, falling prices and rising incomes have contributed to the growth in demand in the UK. According to the Ernst and Young report around one quarter of UK consumption of salmon in 2003 was smoked.

- 6.25 Figure 1 shows world production of farmed Atlantic salmon. We were told that virtually all production was consumed and so production was a proxy for consumption. Thus consumption is increasing significantly year-on-year. In Europe, total production has increased over the past eight years, mainly driven by substantial increases in Norwegian production. However, total European supply has been flat since 2004, because Scottish production has declined over the past three years, and production in the Faeroe Islands has fallen, due to the disease outbreak.
- 6.26 Figure 6 illustrates the supply of farmed Atlantic salmon to the UK in recent years, based on trade data (ie imports of all farmed salmon products, plus UK production minus exports). Interpretation of patterns in demand is complicated by seasonality in the data; smoothed 12-month moving averages are presented for UK and Norwegian production, and UK domestic consumption, to ease comparison.
- 6.27 It can be seen that imports of Norwegian salmon have greatly increased as a share of supply in the UK over the last three years, while consumption of Scottish salmon in the UK has recently fallen, in common with production.

FIGURE 6

UK consumption and supply of salmon



Source: CC estimates based on Kontali data.

Sales and pricing

6.28 Salmon in Europe is sold on both 'spot' and contract bases. The main parties told us that the proportion of sales under contract varied depending on key customer requirements, but were usually somewhere between 20 and 60 per cent of a customer's requirements.

6.29 Supply contracts sometimes specify price and volume; sometimes they specify volume with an agreed mechanism for determining the price. The main parties told us that contracts were usually agreed for a fixed period of 3, 6 or 12 months.

6.30 In our customer questionnaire, we asked customers about their use of contracts. There was a significant range of practices, with some customers meeting all their

requirements via contracts, some just purchasing on a spot basis, and some using both approaches.

Market prices

6.31 We considered evidence on market prices over time using a number of data sources.

6.32 Figure 7 illustrates farm gate prices based on official Government statistics for Norwegian and UK salmon. Norwegian prices are ex-processing plant for superior grade salmon, and have been converted to sterling using average monthly exchange rates. UK prices are average, delivered whole, with a conversion factor applied for gutted weight. As pricing is subject to considerable variation, and this may be linked to seasonal patterns of demand or production,⁵⁰ a 12-month moving average of price is also plotted to ease comparison. UK prices were no longer collected after the end of 2003.

⁵⁰Seasonal influences on demand will include the Christmas and Easter celebrations. We were told that there was some variation in production through the year as smolts can only be put to sea at certain times due to the life cycle of the fish. Consequently the availability of different size classes of fish varied through the year, and supplies can particularly diminish from April to June.

FIGURE 7

Monthly farm gate prices for Scottish and Norwegian salmon



Source: The parties based on FHL/NSL/BIM/SSB data.

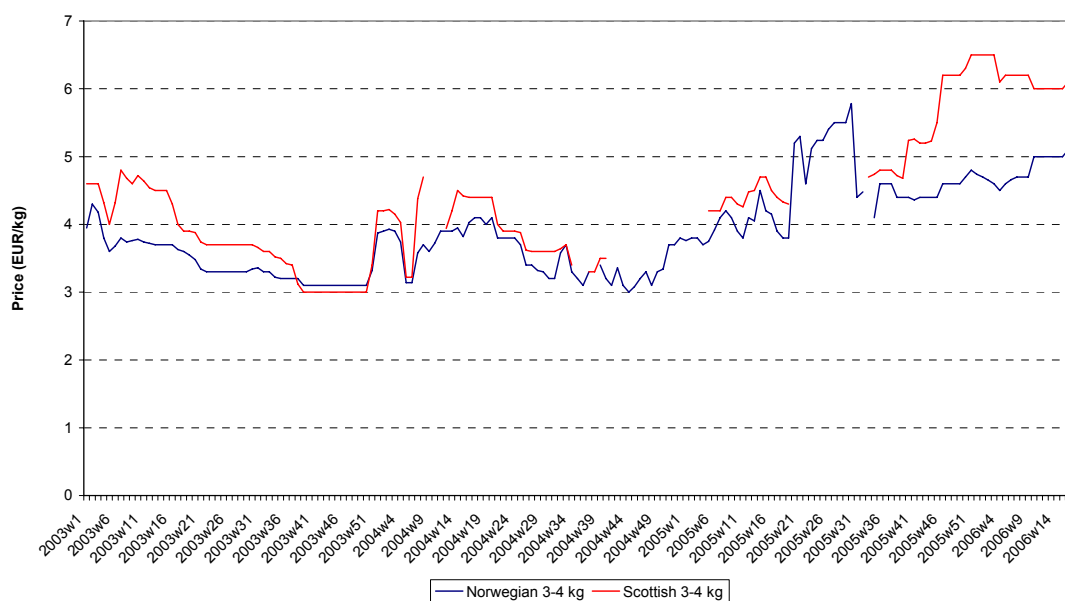
6.33 It can be seen that salmon prices fell from mid-2000 until early 2002, and then continued at a lower average level until the end of the UK data series in 2003. Norwegian prices appear to climb slowly from there until early 2006, after which prices have increased markedly.

6.34 Figure 7 also shows that Norwegian and Scottish salmon price movements appear to be very closely correlated over the period ending in 2003. There is also evidence of a premium for Scottish salmon over Norwegian salmon, of around 50p per kg throughout that period. However, some parties have told us that this premium has declined since then.

6.35 The existence of a Scottish pricing premium is supported by evidence from the French wholesale market at Rungis where prices of 3 to 4 kg Scottish and Norwegian salmon are recorded. This is shown in Figure 8 (although we were told this was a specialist market which might display atypical pricing patterns).

FIGURE 8

Weekly wholesale prices for Scottish and Norwegian salmon at Rungis



Source: The parties from SNM data.

6.36 The pattern for Scottish pricing is consistent with other data sources, eg price series provided by processors. Scottish prices have increased since 2005, rising substantially in 2006.

Price variation

6.37 As noted in paragraph 6.12, salmon are graded by size, and as superior, ordinary or production quality. We were told that superior fish were typically priced around 20p per kg more than ordinary grade fish. Salmon can be differentiated in other ways such as whether the product is organic, and whether it has Label Rouge certification.

6.38 Particular processors may have needs for different types of fish. For example, we were told smokers tended to prefer fish between 2.5 and 5 kg, particularly 3 to 4 kg and 4 to 5 kg class fish, and that fat content was important: fat levels needed to be in the 10 to 15 per cent range whereas some fish, particularly larger fish, could be above this level. We were told that larger fish generally realized a lower price per kg.

We were also told that smokers were only able to take superior grade fish, whereas customers for fresh fish may be able to take ordinary grade fish.

6.39 We considered whether prices varied according to the ability of producers to meet specification requirements. The large UK retailers insist on specifications concerning stocking densities, husbandry, traceability etc, although most other customers do not have similar requirements. However, because these retailers are so important in the industry, almost all suppliers have to meet these standards. We were told processors typically audit farms to ensure standards are met.

6.40 Prices varied depending whether customers were purchasing on spot markets or on contract. While contract prices may be linked to the spot market, this need not be the case. One customer told us that it paid higher prices for larger contracts. This suggests that some suppliers may see the ability to guarantee supplies as a source of competitive advantage. Some customers told us that they had limited ability to use a spot market or to purchase through wholesalers, as this would not give them the traceability or specification assurances that retailers require. Therefore, in these cases, spot purchases tend to be made solely from the companies that supply contracted volume, and consequently some processors told us that they sought to contract with a variety of suppliers.

Scottish premium

6.41 We have noted that a premium is often paid for Scottish fish over Norwegian fish. We were told by a smoker that the Scottish premium was normally 15 to 20p per kg, but in 2006 had varied between 50p per kg, through to being negative. This reflects a perceived quality difference (see paragraphs 5.4 to 5.41).

6.42 Some processors which rely on Scottish product told us that they suffered higher prices as a result. Some of their customers insist, at least at current market prices, on a Scottish sourcing policy. This appeared to apply particularly to smokers but also applied to other customers. It may apply to high-end products where retailers stock a range of products from a basic range to premium range, where the basic range may be sourced from the cheapest origin whereas premium ranges may come from particular regions such as the Orkney Islands or Shetland Islands.

Analysis of price discrimination against Scottish-only customers

6.43 Some processors that purchased Scottish-only product for smoking told us that they paid more for such product than for their other needs, and it was suggested to us that this could be because of price discrimination. One processor told us that it believed threats to switch to non-Scottish alternatives were not effective in driving down its prices because suppliers believed they could still sell Scottish product at a higher price than these alternatives. However, price differences could also arise for reasons related to costs; one processor said that it believed this was because its purchases were for lower volumes, the fish were of prime sizes, it could only purchase superior grade fish (rather than normal or production grades), and in contrast to its purchases for its fresh fish operations, it could not threaten to switch to Norwegian supplies.

6.44 We therefore considered whether there was evidence that users of Scottish product paid higher prices and if so whether this was the result of price discrimination, or was linked to cost differences arising from the type of fish they were purchasing and their buying methods or other factors.

6.45 Price discrimination is said to exist when prices vary across customer segments that cannot be entirely explained by variations in marginal cost, ie there is price

discrimination between customer groups when the price difference between them is not attributed to any cost differences.

6.46 Here we consider whether there is evidence that discrimination is occurring against a class of customers on the basis of some observable characteristic—known technically as third degree price discrimination. Some customers can be identified as having a Scottish-only purchasing policy. Therefore, their options for switching demand to alternative sources of supply are more limited than other purchasers', creating an opportunity to take advantage of their lower price sensitivity. We also considered whether discrimination might be possible against smokers that again may form a group whose switching options may be more limited than others due to their product specification requirements and/or a preference for Scottish production.

6.47 We were provided with transaction data by Pan Fish and Marine Harvest that allowed us to identify transactions, prices, specifications and quantities from mid-2004 to mid-2006 by customer, who could be characterized by class of customer (processor, wholesaler, retailer, smoker, or re-exporter) and by whether they were a single source customer of these suppliers (ie they only purchased Scottish salmon from Each main party), or whether they dual sourced Scottish and Norwegian product from each main party.

6.48 First we examined whether smokers, on average, paid higher prices than other customers. However, we did not observe a systematic positive price difference between smokers and other categories of customers; smokers paid higher prices than others in one year for each of Pan Fish and Marine Harvest, but in other years retailers or wholesalers paid higher prices.

- 6.49 We then looked at whether customers that single-sourced Scottish salmon paid more than those that dual-sourced. Based on average price, we did not observe a systematic positive price difference between single-source customers and other categories of customers. There was a slight premium in 2004 and 2006 for Pan Fish, and 2004 and 2005 for Marine Harvest.
- 6.50 It is possible that price differences could be the result of different product mixes, different product quality, different characteristics, different volumes and/or different marginal cost. We therefore undertook an econometric analysis, to attempt to control for some of these variables.
- 6.51 For each party's data, we carried out a regression on price per kg for superior grade non-filleted Scottish salmon on a number of variables including weight, volume of purchases, regional variables, whether the customer was a smoker, and whether the customer was buying both Norwegian and Scottish salmon, or just Scottish salmon. We aggregated weekly purchase data into longer time periods for this analysis.
- 6.52 Based on yearly data, our initial regressions suggested for Marine Harvest that single-source customers paid a premium (around [X]p per kg). The result was statistically significant, but we found no statistically significant evidence of a separate premium paid by smokers (whether single-source or not). For Pan Fish, there was no statistically significant evidence that single-source customers paid a premium, although there was evidence that smokers paid a premium (around [X]p per kg).
- 6.53 We asked the parties for their views on the results of the initial regressions. They observed that these initial regressions omitted a number of potentially important factors which could influence the determination of prices for individual transactions. For example, purchases may differ in whether they are based on fixed-price

contracts, whether the salmon met particular quality specifications, whether customers were willing to be more or less flexible on delivery dates, quantities and qualities, and whether customers were also purchasing large quantities of Norwegian salmon from the same companies. The data was not available from the parties' transaction records to conduct an analysis using these factors as additional explanatory variables. The parties also argued that the results were sensitive to the inclusion of particular observations for larger customers, and certain points could be explained by exceptional pricing factors.

6.54 We also found that the results of the model were sensitive to the period of aggregation. When we tested robustness by examining an alternative, six-monthly aggregation period (rather than yearly data as set out in paragraph 6.52), the estimated premium for Marine Harvest's single-source customers is markedly lower (around [✂]p per kg) although still statistically significant, but the evidence that smokers pay a premium for Pan Fish salmon is reduced, as this variable is no longer statistically significant even at the 90 per cent level.

6.55 Because the results of this initial analysis are not robust to aggregation, we do not consider that they are reliable in providing strong evidence of third degree price discrimination. In particular, we are concerned that the omission of relevant variables may have led to a mis-specification bias, ie the parameter estimates could be biased either up or down because of the omission of relevant variables, if any of these important factors are correlated with explanatory variables in the model, so the coefficients on those variables also reflect the impact of the missing variables.. For example, a customer may be able to negotiate discounts on Scottish purchases if it is also purchasing large quantities of Norwegian salmon. This would be positively correlated with the observations for dual sourcing, ie dual sourcing customers are more likely to get a volume discount on their Scottish purchases, and so omitting

Norwegian purchase volumes would lead to the premium for single-source customers being overestimated. The omission of a categorization for Label Rouge salmon, which is likely to carry a price premium and to be negatively correlated to dual sourcing, may mean a negative bias, ie the degree of price discrimination would be overestimated.

6.56 We find that the empirical evidence on the existence of past price discrimination against single-source customers, or smokers, is not strong. Overall, we conclude that the evidence does not support the existence of any significant element of price discrimination against Scottish-only customers. Such customers could be expected to shop around to realize their purchases from other Scottish suppliers, and we did not discover evidence of barriers to mobility for customers with standard specification requirements. We note that many already multi-source their requirements. Some customers choose to purchase their Scottish-only requirements for smoking separately from their fresh fish requirements, which can be multi-sourced. This suggests that any loss of bargaining power from combining these purchases has little adverse effect on them.

6.57 We address whether the merger may increase the possibility for price discrimination in paragraphs 8.50 to 8.69.

Seasonal supply variation

6.58 One aspect of concern raised by some processors is the shortfall in supply around April and August each year due to the changeover from one class of fish to another. We were told that smaller companies may have no supplies available at this time, and so processors are obliged to deal with larger suppliers in this part of the year. One smoker illustrated this with reference to its supply contract with a salmon producer which specified the lowest volume in April, higher volumes in July and

August, and yet higher volumes in all other months. Two smokers said they believed that producers were now deliberately withholding fish at these times to exacerbate market price rises. Consequently larger fish were available after these months, which were less suited to smoking.

6.59 The parties have indicated to us that production can only be delayed or brought forward by four to eight weeks (see paragraph 8.22), and also said that there were costs in doing so; fish would either be too small or too large to realize optimal prices, and delays in harvesting would incur further costs, eg feed. Thus higher prices in the short term would need to be offset against the costs of selling sub-optimal fish later on. We also note that if a policy of delaying supply was rational during the April and August supply shortfalls, it is unclear why it would not also be rational at other times. As noted in paragraphs 8.70 to 8.75, it appears unlikely that firms would be able or willing to coordinate output plans. Therefore it would be open to other suppliers to take advantage of periods of higher price by seeking to supply as much product as possible at these times of shortfall.

6.60 For these reasons, we consider it unlikely that firms would find it rational to behave in the way indicated. Moreover, it is not obvious that the merger of the parties would change the applicable incentives.

7. The counterfactual

Introduction

7.1 The CC's Merger Guidelines⁵¹ state that:

In applying the SLC test, the Commission will evaluate the competitive constraints on firms with the merger compared to the situation that would have been expected to prevail without the merger (sometimes referred to

⁵¹CC2: *Merger References—Competition Commission Guidelines*.

as the 'counterfactual'). The counterfactual will be that situation which the Commission expects to arise in the absence of the merger under consideration.

- 7.2 This section sets out the counterfactual for this anticipated merger. It draws on evidence from the merging parties and more widely from the industry and considers the likely strategies that the merging parties and others might pursue.
- 7.3 The CC's Guidelines say that the counterfactual 'will, in many cases, relate to the existing, pre-merger competitive conditions. However, in certain circumstances the Commission may need to take account of other factors, such as expected changes in the structure of the market or alternative developments that may be expected in the absence of the merger'.⁵²
- 7.4 The starting point for the assessment of the counterfactual is the existing pre-merger conditions. In this case, these conditions can be determined relatively easily as the merger is still anticipated. However, changes in the structure of the market (and in particular the consolidation of the industry) must also be evaluated to determine conditions in the absence of the merger.

Timescale

- 7.5 The period to be considered in the counterfactual should be similar to the period during which the effects of the merger are being considered. Given the long growth cycle for salmon, this would initially suggest that the period under consideration should be longer than usual.

⁵²CC2: *Merger References—Competition Commission Guidelines*, paragraph 1.22.

7.6 An important source of evidence when trying to assess future conditions is the forecasts of the parties and of industry analysts. Pan Fish produced a strategic plan to 2008 and Marine Harvest produced a strategic plan to 2010. Much of the industry analysis goes no further into the future than 2007. Although we are concerned with effects of the merger that may occur in two or three years' time, these effects are connected to output volumes which are largely determined by the number of smolts which are raised and put to sea in the next one to two years. We will therefore consider the situation that might be expected to prevail in the absence of the merger for approximately the next two years to reflect the salmon growth cycle.

Pan Fish

Acquisition of Fjord

7.7 As noted in paragraph 2.43, Pan Fish acquired 26 per cent of Fjord on 6 March 2006, the same day as the Marine Harvest acquisition was announced, and after a succession of further purchases now owns 100 per cent of the company. The integration of Fjord with Pan Fish is underway.

7.8 As is evident, the acquisition of Fjord was not contingent on the acquisition of Marine Harvest and in terms of the counterfactual it would have taken place in any event.

Further acquisitions

7.9 We must also evaluate the likelihood of Pan Fish making further acquisitions in the absence of the Marine Harvest merger.

7.10 The Chief Executive of Pan Fish told us that Pan Fish had also looked at acquiring other producers.

7.11 Pan Fish's strategy was to 'possibly control [redacted] per cent of global salmon production'. In the absence of a merger with Marine Harvest, this target could only realistically be achieved through further acquisition.

7.12 The finance raised for the Fjord acquisition and the anticipated Marine Harvest acquisition, and the previous investment by Geveren in Pan Fish, demonstrates that it is likely that Pan Fish would have had access to capital to make further acquisitions in the absence of the Marine Harvest merger.⁵³

7.13 We therefore consider that it is likely that Pan Fish would have had both the finances and the incentive to acquire other fish farming operations. However, we note that these alternatives would, on their own, be significantly smaller than Marine Harvest.

Pan Fish's strategy

7.14 Pan Fish's [redacted] vision is to '... supply the world with high quality salmon products at the lowest cost'.⁵⁴

7.15 It seems reasonable to assume that this strategy would continue in the absence of the Marine Harvest merger. In this scenario, Pan Fish could reduce its costs by exploiting economies of scale (for example, in processing capacity and feed purchase) and density (for example, through geographic clustering of farms) arising from the merger with Fjord and any other acquisitions that might be made.

Marine Harvest

7.16 When the Pan Fish/Marine Harvest merger was announced on 6 March 2006 Marine Harvest's shareholders faced two other options to divest all or part of their stake. We

⁵³Pan Fish noted that the absence of the proposed Marine Harvest merger would impact its attractiveness to investors and its ability to raise finance for other acquisitions.

⁵⁴[redacted]

examined these options, which were an Initial Public Offering (IPO) on the Oslo Børs, and a trade sale [REDACTED].

IPO

7.17 In the second half of 2005 Nutreco's strategy for Marine Harvest was to divest some or all of its shareholding through an IPO. [REDACTED]⁵⁵

7.18 [REDACTED]^{56,57}

7.19 Plans for the IPO continued through the autumn and winter of 2005/06. Shortly before the Pan Fish acquisition was announced on 6 March 2006, a provisional IPO date was set for May 2006.⁵⁸ [REDACTED]

7.20 [REDACTED]^{59,60}

7.21 [REDACTED], there were no serious problems that would have affected an IPO of Marine Harvest in May 2006. Salmon prices rose higher than expected and did not peak until July, equity markets generally were stable in this period, and Marine Harvest did not suffer any major operational difficulties.

The alternative to the IPO

7.22 [REDACTED]⁶¹

7.23 [REDACTED] the Pan Fish offer was the preferred option.⁶²

55 [REDACTED]
56 [REDACTED]
57 [REDACTED]
58 [REDACTED]
59 [REDACTED]
60 [REDACTED]
61 [REDACTED]

7.24 [REDACTED]

7.25 [REDACTED]

Marine Harvest's strategy

7.26 Marine Harvest told us that in the absence of the merger it would continue to follow its strategic plan prepared in November 2005. [REDACTED]⁶³

7.27 [REDACTED]

7.28 [REDACTED]

7.29 Marine Harvest would have had access to capital to make further acquisitions after an IPO. It is possible that management capacity and regulatory issues would have prevented further acquisition on a large scale. The lack of sizeable European targets suggests that significant expansion by Marine Harvest in Europe would not be very likely.

7.30 Marine Harvest included production plans to 2010 in its strategy plan. [REDACTED] Marine Harvest told us that reducing volatility was 'more of our preoccupation than just growing. We have said that we would grow in Chile because of the lower costs But beyond that, a lot of the actions that we were focused on were about reducing our volatility'.

⁶²[REDACTED]
⁶³[REDACTED]

Other industry trends—market structure

- 7.31 There is evidence from several sources that consolidation of salmon companies was expected to be a feature of the market even in the absence of the anticipated Pan Fish/Marine Harvest merger.
- 7.32 The salmon farming industry is relatively unconcentrated, possesses potential economies of scale, and in the recent past has suffered several years of low returns. Against this background, consolidation of companies to improve cost efficiency and profitability might reasonably be expected, especially during an upturn in the price cycle.
- 7.33 Of the large salmon producers in Norway and Scotland, Pan Fish and Marine Harvest both said that it was likely that further acquisitions would be pursued in the absence of the merger. [✂] Lerøy acquired Fossen AS (a salmon smoking company) in April 2006, and acquired control of Hydrotech Gruppen AS (a Norwegian salmon producer) in August 2006.
- 7.34 Consolidation was also predicted by banking analysts in research notes. For example, DnB NOR said in November 2005 that it expected ‘continued consolidation in the salmon farming industry, especially in Norway’.⁶⁴

Conclusion

- 7.35 It appears likely that in the absence of the Marine Harvest merger Pan Fish would in any event have acquired Fjord and continued its low-cost producer strategy. It is also likely that it would make further acquisitions, though none on its own as large as Marine Harvest, and that consolidation would continue more generally in the salmon farming industry globally.

⁶⁴Source: DnB NOR update—seafood industry, 17 November 2005.

7.36 In the absence of the merger with Pan Fish, we expect that Marine Harvest would have [redacted] or sold via an IPO. We examined evidence concerning both options in order to decide which was the more likely.

7.37 [redacted]

7.38 Given the advice from Nutreco's advisers and the relative risks of the options, it is reasonable to expect that there would be a preference for an IPO over [redacted]. We therefore consider that in the absence of the Pan Fish merger, the expected counterfactual situation would be the disposal of at least a majority of Marine Harvest's shares through an IPO.

8. Effects of the merger

8.1 The principal effects of the merger are to increase concentration in the market for farmed Atlantic salmon and to increase concentration in the supply of Scottish salmon. These effects are considered below, followed by a number of other effects.

Effect on competition in the supply of fresh farmed salmon sold in the EEA

8.2 As shown in Table 12, the merger will create an entity with a market share in the supply of salmon farmed and sold in the EEA of 37 per cent (an increment of 16 per cent). The increase in market concentration as measured by the Herfindahl-Hirschman Index (HHI) is 677.⁶⁵

⁶⁵The HHI is a measure of market concentration calculated as the sum of squared market shares. Paragraph 3.10 of the *CC Merger Guidelines* notes that 'In its guidelines, the OFT states that it is likely to regard any market with a HHI in excess of 1,800 as highly concentrated, and any market with a HHI in excess of 1,000 as concentrated.'

TABLE 12 Pre- and post-merger market shares

	<i>2005 volume (tonnes WFE)</i>	<i>2005 market share %</i>
Pan Fish + Fjord	88,202	16
Marine Harvest	123,354	22
<i>Pan Fish and Marine Harvest</i>	211,556	37
Rivals	<u>355,544</u>	<u>63</u>
Total	567,100	100

Source: Pan Fish/Marine Harvest.

Note: Totals do not sum due to rounding.

8.3 We considered whether the concentration, in removing a significant competitor, would enable the merging parties to raise prices for salmon farmed and sold in the EEA. Because fish, once put to sea, have to be harvested, and the spot market for salmon serves to clear the market, the merging parties would have to be able to restrict the supply of fish in order to cause market prices to increase. Therefore we examine whether the merger would enable the parties to restrict output.

8.4 Such a supply reduction strategy will be beneficial if the increase in price realized for the entity's remaining production, and any savings in cost, more than counter the loss in revenue from sales forgone. The effect of a merger is to increase market share and hence the proportion of the benefit from the market price increase that accrues to the merged entity if it sought to restrict the supply of salmon.

8.5 The viability of such a strategy, and the extent to which it will raise market prices, will depend on:

- the market share increment of the merger—the higher the increment the larger the potential unilateral effect;
- the degree of countervailing buyer power
- rivals' reaction—if rivals can respond by increasing their output, this will moderate increases in price; and
- patterns of demand—the higher the elasticity of demand the smaller the unilateral effect.

- 8.6 The first point shows that a larger market share increment arising from a merger will create a greater incentive to restrict output as the externality of competitors benefiting from a price increase is internalized. It also implies a lower share of productive capacity held by rivals where production could be increased. The market share increment from the merger is shown in Table 12. The increment at 16 per cent shows that while there will be internalization of the benefits from price increases, the majority of these will still accrue to competitors.
- 8.7 Second, customers may have some countervailing power which will allow them to resist price increases, for example because of their size, ability to switch to other suppliers or other products, ability to use the threat to switch purchases in other markets as a bargaining tool, and their ability to sponsor market entry. However, we did not generally receive indications that any particular customers held exceptional negotiating power, and we note that the customer base is fairly fragmented.
- 8.8 If, as indicated by the third point, rivals are able to easily and cheaply increase output, then the price rise would incentivize them to do this, which will to a greater or lesser extent offset the reduction in output by the merged entity. We discuss short and long term responses by rivals in paragraphs 8.16 to 8.27 and 8.28 to 8.30 respectively.
- 8.9 The fourth point shows that patterns of demand shape the viability and extent of any unilateral strategy. The less price-sensitive customers are, the greater the incentive to increase prices through unilateral quantity reductions. We therefore consider evidence on the price elasticity (responsiveness to prices) of demand for fresh salmon.

Market elasticity of demand

- 8.10 We examined a number of academic studies that have attempted to estimate the price elasticity of demand for salmon. These studies cover different product groups, time periods and geographies, which makes them difficult to compare, according to the main parties.
- 8.11 The main parties told us that two studies were particularly relevant for the study of unilateral effects in this case: DeVoretz and Salvanes (1993), who investigate the demand for Norwegian farmed salmon in the USA and Europe, and generate price elasticities for Europe of -1.92 or -2.24 (depending on the estimation method applied),⁶⁶ and Herrmann and Lin (1998), who carry out a similar study, which calculates an own-price elasticity in the EU of -1.83 .⁶⁷
- 8.12 The main parties told us that more recent studies have tended to focus on estimating demand systems limited to higher-value fish, such as smoked salmon. These studies have still found the demand for salmon to be elastic. For example, Asche (1996) found an elasticity in the EEA of -1.73 ,⁶⁸ Asche Salvanes & Steen (1997) found an elasticity of -3.73 ,⁶⁹ and Asche, Bjørndal & Salvanes (1998) found an elasticity of -1.33 .⁷⁰
- 8.13 Our own econometric modelling examined the price elasticity of demand for Scottish salmon rather than all salmon. The results also found demand was price elastic (see paragraph 5.33 and Appendix C). Overall the market price elasticity for all salmon will be substantially lower than the estimated elasticities from our modelling, as our

⁶⁶DeVoretz & Salvanes 'Market Structure for Farmed Salmon' *American Journal of Agricultural Economics* 75 (February 1993) pp 227–233.

⁶⁷Herrman & Lin, 'The Demand and Supply of Norwegian Atlantic Salmon in the United States and the European Union' *Canadian Journal of Agricultural Economics* v28 (1998) pp 459–471.

⁶⁸Asche, 'A System Approach to the Demand for Salmon in the European Union' *Applied Economics* v28 (1996) pp 97–101.

⁶⁹Asche, Salvanes & Steen, 'Market Delineation and Demand Structure' *American Journal of Agricultural Economics* 79 (February 1997) pp 139–150.

⁷⁰Asche, Bjørndal & Salvanes 'The Demand for Salmon in the European Union: The Importance of Product Form and Origin' *Canadian Journal of Agricultural Economics* 46 (March 1998), pp 69–81.

results pick up the potential to switch between Scottish and Norwegian production, but the results do not indicate that the results for DeVoretz and Salvanes, or Herrmann and Lin, appear implausible.

- 8.14 Given that demand appears to be responsive to prices (elastic), the feasibility of an output restriction policy appears less likely, as loss of sales would offset gains from higher prices.

Possible output restriction policies

- 8.15 We now consider whether the merging parties might be able to (a) pursue a short-term output restriction strategy within the current production cycle, with particular consideration of whether output could be profitably withheld, and (b) restrict the output of future production cycles by laying down fewer eggs or putting fewer smolts to sea, with particular consideration of the ability of rivals to respond.

Short-term output restriction

- 8.16 We considered whether the merged entity would have the ability and the incentive to restrict output within the current production cycle(s). Such a strategy would, if profitable, give rise to a price increase in the next one to two years. In order to generate a price increase, the merging parties would need to restrict the volume of salmon made available to customers.
- 8.17 Within the existing production cycle, the ability of rivals to respond by increasing production is severely limited, because more fish cannot be raised in this time. Any production response (eg by more intensive feeding and delaying harvesting so fish can grow to a larger size class) would have a very marginal impact. Therefore we concentrate on whether the firm could profitably withhold fish from the market.

- 8.18 We considered that the following alternatives were available to a farmer to reduce output within current production cycles: flexing the production process to reduce harvest levels; destroying fish; freezing fish; and selling salmon for alternative uses.
- 8.19 The main parties told us that there was limited flexibility within current production cycles. They told us that feed strategies aimed at growing the fish as fast as possible for the lowest possible costs and therefore were not designed to manipulate output levels; reducing feeding levels might delay production but would affect the quality of the meat, be uneconomic (by prolonging production overheads), imprecise and might present animal welfare issues. They also told us that water temperatures could not be altered to modify production.
- 8.20 The main parties told us that manipulating harvesting dates to reduce output would not be economically attractive. Whilst bringing forward harvesting dates would bring about a net loss of output over the production cycle, the strategy would involve harvesting fish at suboptimal shapes and sizes to meet market requirements. These factors would outweigh any benefits from saving feed costs and restricting supply.
- 8.21 Nor would reducing output by postponing harvesting dates be economically attractive, according to the main parties, because of increased risk of breaching biomass limits, fish maturation, mortality and disease. They also noted that delaying harvesting would increase costs of production, whilst decreasing the value of the fish produced as fish grow to sizes outside suitable range for secondary processing. They also told us that such a strategy would simply delay production, be visible to knowledgeable salmon buyers, and if anything increase output over the cycle.
- 8.22 These views were, in the main, corroborated by competitors. One competitor told us that when prices rise, producers tried to hold on to their fish for as long as possible

but confirmed that there was little room for flexibility in harvesting practices due to the life cycle of salmon and estimated that the maximum period over which harvesting could be advanced or delayed would be four to eight weeks. Another competitor told us producers could take advantage of the fact that smokers would take a fish a little bigger or smaller, to hold back slightly on the harvest subject to the fact that consistency of supply, volume, quality fish size were very important to customers.

8.23 A third competitor told us that once the smolts have been put to sea a producer has no ability to restrict output, except by harvesting at a smaller size (eg 1 to 2 kg) than one would normally. This competitor told us it thought it unlikely that a producer would adopt this strategy, since this would flood the market with small fish. It stated that the easiest way to influence output would be to put fewer smolts to sea (ie pursue a long-term restriction strategy).

8.24 We note that the regulatory environment might permit the merging parties to exercise greater flexibility over the production cycle in Norway than producers can in Scotland, and therefore biomass constraints may be less binding when considering a restriction in EEA-wide production. Nevertheless, we consider that any strategy on the part of the merging parties to restrict output via flexing the production cycle is unlikely to be profitable. We consider that the ability to manipulate harvesting levels via the production process is limited. To the extent that the merged entity would be able to make marginal modifications to its production processes, delaying harvest will only give rise to a temporary impact on output whilst advancing harvesting or starving fish will likely give rise to large opportunity costs associated with producing fish that fail to meet customer needs.

8.25 Nor do we consider that destroying fish currently in the water offers a plausible strategy to restrict output. Aside from the public relations aspects this strategy would

invoke, we considered that the strategy would be unlikely to be profitable. On the one hand, rivals are highly restricted in their ability to react and undermine any restriction strategy. However, the strategy relies on reducing output late in the life cycle of the fish. By this point, many of the costs of producing the fish have already been incurred. In restricting output, these costs are therefore unavoidable, reducing the profitability of the strategy. Across any range of reasonable assumptions in relation to cost structure, and the elasticity of demand likely to be faced by the merged entity, this strategy is unlikely to be profitable.

8.26 We considered whether or not the merged entity might seek to restrict output by freezing fish (which could be slowly released in to the market at a later date). The main parties told us that freezing fish would not only yield a temporary reduction in output as fish can not be kept in a frozen state indefinitely. The main parties estimated that the maximum period such an output reduction could be sustained over is 6 to 12 months. Additionally, the strategy would require large freezing stores to be built close to the primary processing plants, at significant capital costs, increasing production and working capital costs, and potentially reduce the value that could be obtained from the fish (in its frozen state). The parties also noted that knowledgeable buyers would use high levels of frozen fish stocks to negotiate lower fresh salmon contract prices. For these reasons, we consider that freezing fish would not be a profitable strategy.

8.27 We understand from the parties that the only alternative use for which salmon could realistically be sold (without depressing prices in the main salmon market) is fish meal/fish oil which recently has been priced at between \$750 and \$900 per tonne. We consider it unlikely that this strategy would offer sufficient recoupment to make a strategy of restricting output profitable.

Longer-term output restriction

8.28 We then considered whether the merged entity would have the incentive and ability to restrict output in the longer term, beyond the current production cycle. By reducing its planned output, the merged entity might be able to raise market prices in a period two to three years hence and thereafter. In contrast to the consideration of short-term output restrictions, a far higher proportion of costs can be avoided, through not raising smolts or putting them to sea. It would be possible to cut production by reducing the intensity of production at existing sites, but it would appear more rational to leave entire sites unused, as then all costs other than those associated with maintenance of the site can be avoided.

8.29 These costs savings increase the incentive to reduce output relative to the option of short-term output restriction where many costs are already sunk. Apart from the avoidance of cost, the feasibility of a strategy to restrict output in the longer term depends on two key driving factors: the ability of rivals to react; and the market elasticity of demand. If there is either a low elasticity of demand, or if there is a limited ability among competitors to respond to any price increase and fill the shortfall in supply, then it is possible that a significant increase in price may result which may make such a strategy profitable for the merged entity.

8.30 We therefore consider evidence on the market elasticity of demand, and particularly the ability of rivals to respond to any reduction in supply in the market in the longer term. As noted in paragraphs 8.10 to 8.14, evidence suggests that the demand for salmon appears to be relatively elastic, which reduces the price increase that could be achieved through a strategy of output restriction.

Rivals' long-term output responses

8.31 We considered the extent to which rivals could increase production in the longer term. We examined the extent to which the ability to expand production in Scotland, and in Norway, appeared to be limited by regulatory controls.

Output response in Scotland

8.32 The production capacity of the salmon industry in Scotland is potentially constrained by regulation, particularly SEPA's limits on the consented biomass (see paragraph 2.26). Nonetheless, it appears that a significant proportion of licensed capacity is not in use (see paragraph 2.27). This may be because some licensed sites were found to be unsuitable, or are too small to operate profitably. It is therefore unclear to what extent there are viable sites that could be quickly brought into production if market prices were to rise.

8.33 The parties estimated that production capacity was 220,000 to 235,000 tonnes, based on the assumption that 20 to 25 per cent of sites were not usable for the reasons highlighted in 8.32. This suggested a spare capacity of 96,500 to 111,500 tonnes. The parties added that Scottish production had peaked at around 160,000 tonnes in 2003 and that there was no reason to believe that production could not reach that level again. This suggested a spare capacity of at least 36,500 tonnes. We noted however that the Scottish salmon industry has suffered considerable financial difficulties between 2003 and 2005 which may have resulted in a decrease in capacity.

8.34 In order to test the parties' estimates, we surveyed rival Scottish farmers about their intended production volumes under various future price scenarios; see paragraph 6.5. These results, covering some 85 per cent of Scottish production, indicate that planned production for 2007 could not be increased even if prices rose to high levels

(over £5 per kg), because of the length of the production cycle for salmon. If expected prices increased to £3.00 to £3.99 per kg, then the planned output for 2008 increased by 9,500 tonnes relative to 2006 production, and by 7,500 tonnes to output levels planned if prices were in the range from £2.00 to £2.99 per kg. If expected prices increased to over £5 per kg, planned production increased by 11,500 tonnes relative to 2006 levels and by 9,000 tonnes relative to planned production if expected prices were between £2.00 and £2.99 per kg. This indicates some potential to expand capacity, and because production has previously been in excess of this figure we anticipate that such an increase would be feasible. However, the survey responses indicate that potential for expansion appears to be rapidly exhausted as prices increase above £3 per kg. There was no suggestion made by rival producers that substantial extra capacity would come into production even if expected prices were at high levels.

8.35 Therefore we consider that the unused licensed sites in Scotland are unlikely to provide potential for a large output response in the event of a market price rise.

8.36 We also considered whether there was a likelihood that regulatory restrictions would be relaxed, for example by increasing consented biomass limits, issuing new licences, or allowing production processes that allowed limits to be more effectively utilized. We note that some increases in capacity have been recently approved in Scotland, for example where new modelling work has shown sites have a greater capacity to disperse and breakdown waste than was previously believed. However, we were told that there would be substantial costs involved in applying for consent for modifications and the process could be lengthy. We were told producers would want to run the modelling themselves in order to check the revisions would not produce a reduction in capacity. Although it has been possible to apply for revised consents since June 2005, we were told only 10 per cent of sites had been through this

process. As noted in paragraph 2.24, the costs in applying for a new licence are substantial. Because of environmental concerns, it appears unlikely that there is any significant potential for an increase in the number of licensed sites in Scotland. For similar reasons, it appears unlikely that there will be a significant number of consents to change farming practices, such as raising more than one age class of fish simultaneously, or applying licenses over several sites, both of which would allow a higher biomass utilisation level, ie site utilisation could be nearer its biomass consent limit at all times, rather than being constrained only at the end of the production cycle.

- 8.37 We therefore consider that potential for rivals to respond to price increases from capacity withdrawal would be limited in Scotland.

Output response in Norway

- 8.38 As noted in paragraph 2.29, while regulatory constraints exist in Norway, the feed quota system was abolished from January 2005. We were told the maximum production capacity has increased as these quotas, rather than maximum total biomass licenses, previously limited production. In contrast with the usual case in Scotland, licences can be applied across a number of sites in Norway, which provides producers with much greater opportunity to produce up to their licence limits on a continuous basis, rather than once per production cycle. More intensive production practices appear to be tolerated in Norway because of a belief that environmental concerns are less relevant at many Norwegian sites, for example because the depth of water and speed of sea currents typically found at these sites greatly increases the capability of the environment to cope with discharges from salmon production, compared with Scottish sites.

- 8.39 The main parties provided estimates of the potential productive capacity for Norwegian salmon. The parties told us that each 780 tonnes licence can produce somewhere between 1,000 and 1,300 tonnes a year. Based on the observation that there are 900 issued licences in Norway, of which 683 are in the hands of rivals, they calculated potential productive capacity above the level of production in 2005 to be between 230,000 and 435,000 tonnes. This is discussed further in paragraph 8.58.
- 8.40 These calculations may overstate the true potential for production, but nonetheless indicate considerable potential for expansion. As our analysis indicates that at times the binding constraint on production in the past was the feed quotas (and production has increased since the removal of feed quotas), it appears that this unused capacity does not necessarily carry a high marginal cost.
- 8.41 We also note that a number of Norwegian licences, issued in 2002, 2003 and 2005 have not been taken up. This may be because sites in Northern Norway are seen as higher cost, but were the Norwegian Government minded to reissue these licenses in the event of an anticipated price rise for salmon, these could be taken up.
- 8.42 Regulatory restrictions in Norway would restrict any potential for strategic behaviour, in that no one company is allowed to own more than 25 per cent of licensed capacity, and licences can be lost if they are not used.
- 8.43 As noted in paragraph 6.7, the Norwegian Government believes there is capacity to increase production at existing salmon farms.
- 8.44 We therefore believe that there is considerable scope for expansion of Norwegian production beyond existing planned growth. The removal of feed quotas may mean that production will increase in any event, regardless of any potential production

restrictions by the merging parties. However, we believe that other producers would still be able to further increase production to offset any withdrawal of capacity by the merged entity at low cost.

8.45 On the assumption that rival salmon producers were able to expand production without capacity constraints, the main parties submitted a merger simulation model which sought to demonstrate potential market price effects arising from the merger. The model simulated a Cournot market where the outcome depends on the elasticity of demand for the product, and the reaction of rivals. The model assumed that rivals were able to respond without capacity constraints and at low cost, as we have concluded in paragraph 8.44 is likely to be the case. Consequently, across a range of possible market price elasticities, the predicted price increase from the merger was found to be low, even if competitors were assumed to behave strategically, ie they factored the impact their own output decisions would make on market prices into their choice of production levels.

Evaluation of the potential for an output restriction policy

8.46 For the reasons described above, we conclude that the potential to profitably restrict output in order to force up market prices is likely to be very limited.

8.47 In the short term, where many costs are already sunk because the production cycle has already commenced, there would be a high opportunity cost in not releasing fish on to the market, or in using them for alternative uses. We do not think there would be a financial incentive to reduce output in the short run sufficient to markedly raise market prices.

8.48 In the longer term, even though substantial costs can be avoided by restricting output, we think that rivals have the potential to increase production, particularly in

Norway, if prices were anticipated to increase because the merged entity was planning to reduce future output, which would largely offset the effects of any such strategy. Further, demand appears to be reasonably elastic, suggesting that large output reductions would be required by the parties to realize significant price increases.

- 8.49 We note the rationale for the merger is partly in order to seek economies of scale and other productive efficiencies. This is not consistent with a capacity reduction strategy.

Concentration in the supply of Scottish salmon

Effect on competition of the supply of Scottish salmon

- 8.50 As discussed in paragraphs 5.19 to 5.21 and 6.43 to 6.56, there is a group of customers who have a strong preference for Scottish salmon. We considered whether the concentration would enable, or enhance an existing ability of, the merging parties to successfully pursue a strategy of price discrimination and raise prices towards this group of customers. As noted in paragraph 4.4, the main parties, together, currently account for 41.1 per cent of the supply of Scottish farmed Atlantic salmon. First, we consider whether there is potential for price discrimination.

- 8.51 In paragraphs 6.43 to 6.56, we examined whether there was evidence of price discrimination prior to the merger. The evidence was inconclusive on this point; while some customers for Scottish-only product appear to pay more for their supplies, this may be linked to a demand for certain types of product, particular quantities and qualities or an inflexibility in their requirements, which may to a greater or lesser extent reduce their negotiating strength.

- 8.52 The merging parties supply both customers that would be ready to take salmon from origins other than Scotland and customers that would be reluctant to do so. In order

that the merging parties could raise prices to the latter group of customers it would be necessary that the following conditions hold:

- (a) the parties could identify those customers that had a strong preference for Scottish salmon;
- (b) those customers do not have good alternatives to purchasing from the parties; and
- (c) scope for arbitrage is limited.

The profitability of such a strategy would depend on the degree to which these conditions hold. We explore each of these conditions in turn and then assess the likely overall effectiveness of such a strategy.

Identification of Scottish-loyal customers

8.53 Salmon farmers will, in general, have fairly good information about their customers' businesses. They are likely to be able to identify smokers (which tend to have a strong preference for Scottish salmon) and suppliers to retailers that have a Scottish-only sourcing policy (that policy being visible from the marketing of their products), and suppliers may be notified through the retailers' requirements for traceability and conformity with production standards.

8.54 Farmers will, nevertheless, have certain informational gaps:

- (a) some customers will want Scottish salmon for some needs, but be ready to use other sources for other needs; in this case the farmer may not have good information about the balance of these requirements and may be unable to raise prices to these customers);
- (b) it will not be clear how high prices could be raised to any given Scottish-loyal customer; and

(c) it will not be clear what the effects of a price rise would have further down the supply chain; in particular it would be difficult to predict the circumstances under which a retailer might change its sourcing policies.

8.55 Based on our customer survey, additionally supported by data from discussions, we examined the position of each of the merging parties' UK customers to determine the extent to which they should be considered less able to resist a price increase in Scottish salmon by modifying (or credibly threatening to modify) their sourcing policies. We examined the position of those customers who stated they would not switch their custom in the event of a price rise for Scottish salmon (see the description of the SSNIP test in paragraph 5.28 and Table 7). We considered whether other possibilities would be open to these customers, taking account of their individual circumstances including information gained from discussions with these customers. In a few cases, there was reason to consider that these customers would be likely to source salmon from non-Scottish sources because of the behaviour of their customers and competitive responses. Some of these customers already process some salmon from non-Scottish sources. It is not possible to evaluate customers' potential behaviour with certainty, and it is difficult for customers to know how the market would develop under various hypothetical scenarios; it is possible that these companies' responses would be more or less flexible in reality. However, in the light of the balance of the responses, we considered that, as a reasonable mid-range estimate, less than 10,000 tonnes of the merging parties' UK customer base should be considered as Scottish-loyal, ie unable to switch to non-Scottish sources in response to changes in the relative price of Scottish salmon compared to other sources. We consider this to be low compared to estimated UK production of 125,000 tonnes in 2006 (see paragraph 6.2).

Alternatives available to Scottish-loyal customers

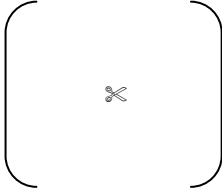
8.56 We considered whether, even if they could be identified, Scottish-loyal customers might have good alternatives to resist price increases.

Alternative sources of Scottish salmon

8.57 If facing a price increase, a customer is likely to look for alternative sources of Scottish salmon and to transfer, or threaten to transfer, some or all of its business to an alternative supplier. Because most customers multi-source we expect the cost of switching between suppliers to be low.

8.58 We considered whether there were likely to be sufficient supplies of Scottish salmon available from other suppliers. Table 13 shows the volumes supplied by Scottish farmers. The volume of Scottish production available from rivals is estimated at 68,000 tonnes.

TABLE 13 Scottish estimated production, 2005

	<i>Estimated 2005 harvest Tonnes</i>	<i>Share %</i>
Marine Harvest	34,322	28
Pan Fish	15,622	13
Fjord Seafood	5,319	4
<i>The main parties, combined</i>	<i>55,263</i>	<i>45</i>
SSF		
Hjaltland Sea Farms Ltd		
Mainstream		
Lakeland Marine (Marine Farms)		
Orkney Seafarms		
Loch Duart		
West Minch/Hebrides Harvest		
Others	123,500	100
Total		

Source: CC from information from the parties

8.59 As discussed in paragraph 6.5, based upon an expected salmon price of £3 to £3.99 per kg, rivals (accounting for around 85 per cent of 2005 production) estimate that they would increase their production by 9,500 tonnes from 2005 levels over a period

of two to three years. This would therefore leave at least 78,000 tonnes of Scottish production in the hands of rivals.

- 8.60 Some of the capacity expansion is likely to be used to meet any growth in demand from these farmers' current customers. However, it is plausible that some of the additional capacity might be used to sell salmon to any Scottish-loyal customers wishing to move from the merging parties.
- 8.61 We were told that there were some barriers to customer mobility. Suppliers need to meet retailers' specification requirements, although it appears that most will meet standards for the majority of retailers. There are a few cases where particular retailers impose tighter rules or restrictions on origin, eg to a particular region of Scotland, but this is generally for a premium product.
- 8.62 As noted in paragraph 6.58, there may be restrictions at certain times of year on the ability to switch supplier due to shortfalls in availability. We were also told that the larger customers have little choice but to deal with the largest salmon farmers if they are to guarantee supplies.
- 8.63 Whilst a significant amount of the supply of rivals is likely to be used to serve Scottish-only customers, these rivals also sell to customers that are prepared to buy from other sources. The main parties have told us that they would expect that any attempt to exploit Scottish-loyal customers would lead the Scottish-loyal customers to migrate to rivals, whilst those that will accept salmon from a variety of origins would move to other suppliers. Scottish-loyal customers would be willing to pay a small premium whilst such realignment was taking place, but this would be a temporary factor.

Other methods of resisting price rises

- 8.64 Customers that have only a partial requirement for Scottish salmon can threaten to move the whole of their business to other suppliers. Those that are part of large groups may have strong negotiating positions. However, we note that at least two processors who could have amalgamated their purchases of salmon for their Scottish-only smokers, and their fresh fish operations, had not chosen to do so despite telling us that they paid higher prices for their Scottish-only needs. This may indicate that they are not sensitive to these prices or there are other advantages in purchasing separately.
- 8.65 Major retailers, particularly those with a strong reputation with their customers, may have some ability to influence consumer preferences and, over time, become less dependent on Scottish salmon.

Scope for arbitrage

- 8.66 We were told that there was unlikely to be significant scope for customers to source a significant proportion of their requirements through wholesalers that would not normally be identified as Scottish-only customers, because of the need to ensure traceability and conformity to production standards on behalf of the major retailers.

Evaluation of the effectiveness of a price discrimination strategy

- 8.67 We consider that the merging parties could identify a significant number, but not all, of the Scottish-loyal customers. Whether a price discrimination strategy would be profitable would depend on whether the additional revenues gained would offset any losses arising from such a strategy.
- 8.68 It appears that the volumes bought by Scottish-loyal customers is relatively modest compared with the current and projected capacities in the hands of rivals. Although

we do not necessarily accept that there would be an easy migration of Scottish-loyal customers away from the merging parties, we do believe that a significant proportion of business could move away from the merging parties, at least through substantial proportions of the year. Rivals might meet this demand from new capacity or by displacing some existing sales (eg those made on a spot basis). Whilst some of the displaced sales might be met by the merging parties, some might not be. Thus if the merging parties were to adopt a price discrimination strategy they would expect to lose some sales volumes.

8.69 In so far as customers told us they were currently paying higher prices, none attributed this to the size of any single producer. One processor expressed concern the merger would allow the merged entity to control prices of Scottish fish. However, it is not clear that this would diminish customers' ability to resist any attempted discrimination in the way that they do now because alternative sources of supply continue to be available and no processors told us that the ability to specifically play Marine Harvest and Pan Fish off against each other was currently important in resisting higher prices for Scottish produce.

Coordinated effects

8.70 We considered whether the merger would lead to an increased likelihood of coordination in the industry. We examined whether the conditions for successful coordination would be met, with particular reference to the three conditions outlined in the CC's *Merger Guidelines*:⁷¹ the market must be transparent; there must be an alignment of incentives such that the costs of deviating from coordinated behaviours exceed the benefits of deviation; and the market must be subject to weak external competitive constraints.

⁷¹CC2: *Merger References: Competition Commission Guidelines*, June 2003.

- 8.71 We considered that coordination on either price or sales was unlikely to be successful due to the volatility in the industry arising from both supply and demand shocks. This may disrupt the ability of producers to identify cheating on any coordinated outcome. However, coordination may be possible on planned production as the usage of sites is usually observable.
- 8.72 The second condition for coordination, on alignment of incentives, is unlikely to be sustainable. The time lags involved in production mean that there would be a long delay in any punishment for deviation being implemented. If an increase in capacity were observed, other coordinating parties would need to revise their production plans, but the effect on market prices to punish the deviating firm would not be realized for a further two to three years. This delay in punishment reduces the credibility of sustained coordination, although the benefits from deviation would also not be realized for a considerable time lag.
- 8.73 Further, we found that firms in the industry were not symmetric, which reduces the likelihood of coordination, as incentives are not aligned. The merger increases the degree of asymmetry between firms. The rationale for the merger is partly the opportunities to achieve economies of scale, and the merging parties would forgo these efficiency gains if they voluntarily restricted output. We received no evidence to suggest that any of the merging parties were mavericks that would have disrupted any coordination absent the merger.
- 8.74 With regard to the third condition, we note that there appears to be potential for capacity expansion, particularly in Norway (see paragraph 8.40). Where this is utilized by new market entrants, or by firms that judge that there is more to be gained through expansion than coordination, this capacity may serve as a constraint on

potential coordination. Countervailing power or other external competitive constraints are unlikely to be strong enough to additionally challenge this condition.

8.75 We therefore do not expect that the merger would lead to an increased likelihood of coordination.

Effects on potential competition in other markets

8.76 We considered whether the merger would lead to a substantial lessening of competition in any other market.

Smolts

8.77 We considered the impact of the merger on the market for smolts.

8.78 Pan Fish and Marine Harvest told us that they were active in the production, distribution, and supply of mature salmon, and only produced smolts for the purpose of engaging in activities in the downstream market for mature salmon. The parties also told us that there was no incentive for the merged entity to enter the commercial smolt trade because the intermediary smolt market was less commercially profitable than the merged entity's core business of salmon production.

8.79 We estimated that the merging parties' share of supply of smolts to third parties in the UK was under 3 per cent in 2003-2005.⁷² [X]

8.80 No evidence was received to suggest that the merging parties could exercise market power in the sale of smolts and restrict the supply of smolts to rivals. Third parties told us that they were not currently dependent on the merging parties for their smolt supplies. There are a number of alternative smolt suppliers in the market.

⁷²CC estimates based on data from the parties and third parties.

8.81 Pan Fish and Marine Harvest are largely self-sufficient in smolts. Therefore we do not expect that the merger would create a monopsony buyer. We do not consider it plausible that the merged company would seek to purchase its smolt requirements in the open market in order to disrupt the smolt market and harm its competitors; we would expect other vertically integrated producers to supply the market, or for non-vertically integrated salmon producers to seek to vertically integrate or enter into long term supply contracts with smolt farmers.

8.82 We therefore conclude that the merger will not result in a substantial lessening of competition in the supply of smolts.

Feed

8.83 We considered the impact of the merger on the market for salmon feed.

8.84 There are three main suppliers of salmon feed—Biomar, EWOS and Skretting, accounting for approximately 95 per cent of feed supplies in the UK.

8.85 Neither Pan Fish nor Marine Harvest engages in the production of salmon feed. The parties told us that the merger would separate Skretting, Nutreco's fish feed subsidiary, and Marine Harvest; they argued that breaking the ownership link between Marine Harvest and Skretting would provide a more open market once Marine Harvest's current feed contract with Skretting expires.

8.86 It was put to us that the merged entity would be able to secure favourable terms from the manufacturers and that this might distort the market. There was also a concern that the merger might involve a long-term contract with Skretting which could effectively keep much of the feed volume out of the open market, making trading volumes difficult for other feed manufacturers..

8.87 We received no evidence to suggest that there would be any change in the method through which the parties sourced feed post-merger. Pan Fish's and Fjord's current feed contracts expire in 2007, whilst Marine Harvest's contract expires in 2008. These companies have not chosen to source from a single supplier in the past: Fjord and Marine Harvest currently source the majority of their requirements from Skretting, whilst Pan Fish sources from a number of feed suppliers. There was no evidence to suggest that the merger was linked to any intention to agree a long-term contract with Skretting for the supply of feed to the merged entity. In the absence of such a contract, we accept that cutting the vertical linkage between Marine Harvest and Skretting could if anything be beneficial to competition in the feed market.

8.88 We did not consider it likely that feed suppliers would increase prices or reduce product or service quality to the rest of their customers as a result of competition to serve the merged parties. If suppliers were not serving the merged entity, we would expect them to be anxious to obtain custom from other salmon producers.

8.89 As a result, we conclude that the merger is not likely to lead to a substantial lessening of competition in the market for feed.

Secondary processing

8.90 We examined whether the merger would have any impact on competition in secondary processing.

8.91 Pan Fish is not active in secondary processing within the UK, but operates two secondary processing companies in France. Fjord is active in smoking and filleting in Scotland and also engages in both smoking and other secondary processing in France and Belgium. Marine Harvest ceased secondary processing in Scotland in

2005, but still engages in secondary processing in Norway, France, Ireland and Poland, and also owns a smoking operation in Belgium.

8.92 In smoking, Fjord is the only main party active in the UK. Pan Fish's French smoking operations are sizeable: it is estimated by the parties to be the sixth largest smoker in the EEA. Marine Harvest's smoking activity is, however, much more limited. Considering other secondary processing, the activity of the merging parties accounts for a small proportion of total activity at a UK level and a number of larger secondary processors will remain post merger. At an EEA level, the merging parties' activity in secondary processing is more substantial, and they are the fourth and seventh largest in the EEA. However, a large number of secondary processing operations, including some substantive competitors, will remain independent of the merging parties.

8.93 Overall we consider that the gain in market share of the merged parties in secondary processing would not be sufficient to increase the likelihood that they would be able to exploit any market power arising, such as by restricting output. We received no evidence to suggest that this would be the case.

8.94 We also considered whether the merger would give the merging parties the ability to raise the price of primary processed salmon to rival secondary processors in order to raise their rivals' costs. However, as already noted we consider that the parties' ability to affect the market price of salmon would be limited due to the number of alternative suppliers and their potential to expand. We also found that the activity of the main parties in both smoking and other processing was not sufficient in size at a UK or EEA level to provide a strong incentive to pursue a foreclosure strategy.

8.95 We therefore conclude that the merger will not lead to a substantial lessening of competition in secondary processing.

New product markets

8.96 We considered whether the merger would lead to the loss of a potential competitor in any adjacent or developing market. Marine Harvest has developed technology to farm fin-fish other than salmon and also produces organic salmon. Pan Fish has not diversified into these areas.

8.97 We found no evidence to suggest that Pan Fish would have entered any of these areas absent the merger. Further, we did not find that Pan Fish was uniquely placed to enter these sectors. We consider there to be a number of other companies that could potentially enter the farming of fin-fish and the production of farmed organic salmon in the future. Therefore, we consider that the merger will not lead to the removal of a likely potential competitor.

8.98 We therefore conclude that the merger will not lead to a substantial lessening of competition in new product markets.

Provisional conclusions on the SLC test

8.99 In answer to the questions in section 36 of the Act, in paragraph 4.5 we concluded that the anticipated acquisition by Pan Fish ASA of Marine Harvest NV is a relevant merger situation under section 23 of the Act and that we therefore have jurisdiction to consider the competitive consequences of the merger.

8.100 For the reasons set out in paragraphs 8.2 to 8.98, and in comparison to the situation expected to prevail in the absence of the merger, set out in paragraph 7.38, we conclude that the anticipate merger is not expected to resulted in an SLC in the

market for the supply of European farmed Atlantic salmon in the United Kingdom, or the related markets for the supply of smolts and feed or the secondary processing of salmon.