

Completed acquisition by Unifrax I LLC of Saffil 2011 Limited and Saffil America

ME/5203/11

The OFT's decision on reference under section 22(1) given on 29 November 2011. Full text of decision published 4 January 2012.

Please note that the square brackets indicate figures or text which have been deleted or replaced in ranges at the request of the parties or third parties for reasons of commercial confidentiality.

PARTIES

1. Unifrax I LLC ('Unifrax'), which has its head office in the US, manufactures Alumina-Silicate wool ('ASW') and Alkaline-Earth-Silicate ('AES') fibres. It converts these fibres to produce high-temperature insulation products to a broad range of industries.¹
2. Saffil 2011 Limited and Saffil America (together 'Saffil') manufacture and sell polycrystalline wool ('PCW') fibres and automotive support mats ('automotive mats').² In 2010, Saffil's turnover was £[] million, of which £[] was generated in the UK.

TRANSACTION

3. The transaction involves Unifrax acquiring 100 per cent of the issued shares in Saffil from its existing shareholders. The parties completed the transaction on 31 October 2011.
4. The (extended) administrative deadline for the OFT to make a decision in this case is 29 November 2011.

¹ Unifrax has entered a joint development agreement with Isolite for automotive grade [] fibres. [].

² Saffil has an agreement with Denka for the exclusive supply of automotive grade PCW fibres.

JURISDICTION

5. As a result of this transaction Unifrax and Saffil have ceased to be distinct. The parties overlap in the supply of high temperature insulation wool (HTIW) with an estimated combined share of supply of [55-65] per cent in the UK. The share of supply test in section 23(3) of the Enterprise Act 2002 (the Act) is met. The OFT therefore believes that it is or may be the case that a relevant merger situation has been created.
6. This transaction was cleared by the Bundeskartellamt on 21 October 2011.

RATIONALE

7. The transaction will enable Unifrax to move into the expanding PCW automotive mats market and build a competitive position vis à vis existing suppliers.

MARKET DEFINITION

8. HTIW's are man-made mineral fibres used in high temperature applications (usually above 600 °C). There are three main fibre types:
 - Polycrystalline Wool (PCW)
 - Alumino-Silicate Glass Wool (ASW), also known as Refractory Ceramic Fibres (RCF)
 - Alkaline-Earth Silicate Glass Wool (AES).
9. PCW fibres differ from ASW and AES fibres (collectively 'non-PCW fibres') in several respects, namely chemical content,³ the production process,⁴ insulation performance,⁵ implications for human health and regulatory

³ PCW fibres are based on high alumina content and silica with a particular crystalline structure, whereas non-PCW fibres are amorphous fibres with less alumina content, combined with silica, calcium or magnesium.

⁴ PCW is manufactured by sol-gel technology using gel extrusion, spinning and/or drawing in controlled air streams. ASW and AES are produced by melting a combination of minerals.

⁵ PCW fibres are more suitable for higher temperature applications. PCW fibres can endure temperatures of up to approximately 1600 degrees Celsius. In respect of non-PCW fibres, AES wools are normally only used for temperatures of up to 1200 degrees Celsius. ASW fibres can be used for temperatures in excess of 900 degrees Celsius and up to 1200 degrees Celsius.

classification.⁶

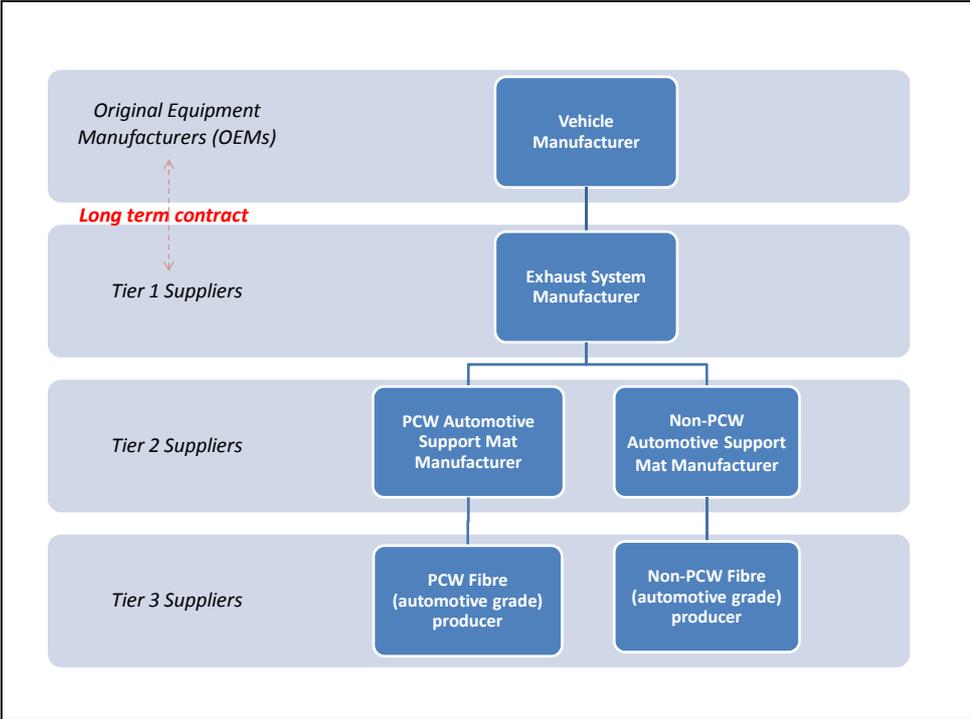
10. PCW and non-PCW fibres are broadly categorised as industrial-grade fibres and automotive-grade fibres, depending on their final application. As a result of their differing characteristics, the main application of PCW fibres is in the automotive industry (automotive mats), and non-PCW fibres are used in industrial thermal management (ITM) products as well as for automotive mats.

Automotive mats and ITM products

11. Automotive support mats are used in emission control devices (for example, within catalytic converters and diesel particulate filters) for passenger cars and commercial vehicles. They have specific mechanical properties that enable them to withstand high gas temperatures and vibrations, while holding in place the fragile inner catalysed ceramic component within the expanding or contracting outer steel shell (while the engine is heating up/cooling down).
12. With reference to the diagram below, the OFT understands that car manufacturers (OEMs) usually tie exhaust manufacturers (Tier 1 suppliers) into long term contracts for the life cycle of the car platform, and the latter tend to reflect this into their contractual relationships with automotive mat suppliers (Tier 2 suppliers). The OFT also understands that a secure and reliable supply is highly valued within the supply chain.

⁶ ASW is considered Carcinogen category 2 under EU Directive 67/548/EC and as Carcinogen category 1B under European Regulation EC 1272/2008.

Figure 1 – The supply chain for automotive mats



Source: The OFT⁷

- 13. ITM products are used to insulate or to hold off heat from other objects in a wide variety of final applications, including: household appliances, aerospace applications, lining of metalwork furnaces, lining of cement, ceramic or glass kilns, and fire protection in buildings, plants and infrastructure projects. ITM products take various forms according to the intended final application. For example, they come as modules, blankets, papers, boards, bricks, vacuum formed shapes, mastics and textiles.

⁷ Note that, despite the layout of this diagram, the OFT refers in this decision to the fibres supplied by Tier 3 Suppliers as being 'upstream' of the automotive mats produced by Tier 2 Suppliers, which use fibres as an input product.

Product scope

14. The OFT's approach is generally first to consider if a narrow candidate product frame of reference can be widened through substitution on the demand-side, and then, if appropriate, to consider if substitution on the supply-side allows several products, which are not demand-side substitutes, to be aggregated into one wider frame.⁸

HTIW fibres

15. The parties submit that PCW and non-PCW fibres are not substitutable. On the demand side, the different chemistry, insulation performance and regulatory classification imply that the fibres are not equally suitable for specific applications.
16. The different raw materials and production process result in substantially different price levels, with PCW fibres much more expensive than non-PCW fibres. For example, the parties submit that PCW fibres sold in the UK are about [10-20] times more expensive than non-PCW fibres; £[20-30] per kg for PCW fibres compared to £[0-5] per kg for non-PCW fibres. The parties submit that the substantial price difference means that the fibres are not considered substitutes by customers: for those applications where non-PCW fibres are suitable, there would be no incentive to over-engineer by using PCW fibres.
17. The parties submit that from a supply side perspective, the different production process means it is not feasible to switch production between PCW and non-PCW fibres.
18. Generally, third parties agreed with the parties' view that the two different types of fibres are not substitutes. For example, two customers told us that the fibres have different performances and are unsuitable for the same final uses. The price differential between PCW and non-PCW fibres was also identified by third parties, although they quote a relatively smaller differential to that of the parties, of between two and five times.
19. The evidence available to the OFT strongly indicates that PCW fibres and non-PCW fibres constitute separate frames of reference. The OFT has therefore assessed the merger on the basis that PCW and non-PCW fibres form separate frames of reference.

⁸ See *Merger Assessment Guidelines*, Joint publication of the Competition Commission and the OFT, September 2010, paras.5.2.6 to 5.2.19.

20. As explained above, it is possible to distinguish between fibres that are suitable for automotive applications (automotive grade fibres) and fibres that can be used only for ITM products (industrial grade fibres). Some third parties confirmed that they can procure fibres for their automotive applications from only a limited subset of fibre producers.
21. On a cautious basis, the OFT has also considered separate frames of reference for automotive grade fibres and industrial grade fibres for each of PCW and non-PCW fibres.

Automotive mats

22. The parties submit that PCW and non-PCW automotive mats are not substitutable because of the different performance requirements (in terms of resistance to heat and corrosion, holding force, ease of assembly and durability) for different applications. More specifically, they consider that only PCW automotive mats can be used for the more demanding applications such as closed-couple devices (mounted very close to the engine in or near the exhaust manifold), diesel particulate filters or heavy duty diesel devices. Non-PCW automotive mats can be used for under-body devices where temperatures are less severe. With respect to Europe, the lack of substitutability is reinforced by regulatory restrictions: these prevent the use of ASW and leave AES as the only allowed non-PCW fibre, which is not suitable for applications involving very high temperatures.
23. The parties also consider that while in principle there is asymmetric substitutability from a technical point of view (PCW can substitute non-PCW, but not vice versa), in practice the substantial price differential between the two types of automotive mats means that customers would not see the two materials as substitutes. The OFT notes that Unifrax has developed a new product⁹ made of ASW fibre with higher performance capabilities but it is unclear to what extent customers consider it to be a direct substitute for PCW automotive mats.
24. Third party views were mixed. One competitor told us that PCW and non-PCW automotive mats compete with each other, albeit AES is only suitable for a limited range of applications (for example, not for petrol cars) while PCW is an 'all-rounder'. This view was generally consistent with the views of some customers. Another competitor told us that there is a high degree of

⁹ CC-maxHp4 non-intumescent mat.

asymmetric substitutability, because despite its higher price PCW is increasingly used so as to adhere to stricter environmental regulations. The same respondent also told us that mechanical properties, rather than pure heat resistance, define the suitability of automotive mats for specific applications and so there are more opportunities for substitutability.

25. Price differentials also appeared to be less marked than in the upstream supply of fibres. According to the parties' data the average price of non-PCW automotive mats in the UK is £[10-20] per kg, compared to £[30-40] per kg for PCW automotive mats.¹⁰ One competitor estimated that the total price difference should not be more than a factor of two while another competitor suggested that the price differential may be as little as 20 per cent.
26. Due to the mix of evidence, the OFT has taken a cautious approach and has considered for its substantive assessment a frame of reference for the supply of all automotive mats (PCW and non-PCW) as well as separate frames of reference for the supply of PCW automotive mats and the supply of non-PCW automotive mats.

ITM products

27. The parties argue that, from a demand perspective, PCW and non-PCW ITM products are not substitutes, in that they can endure different temperatures and therefore have different applications.
28. One competitor explicitly commented about the substitutability of ITM products, arguing that the parties do not compete against each other in high temperature industrial products because of the different temperature requirements.
29. On balance, the evidence available to the OFT suggests that PCW ITM products and non-PCW ITM products fibres constitute separate frames of reference. While it is not necessary for the OFT to decide on this dimension of the product scope (since Saffil is not active in these candidate frames of reference), the OFT has considered PCW ITM products and non-PCW ITM products as separate frames of reference.

¹⁰ The parties' submission, para. 3.22(b).

Geographic scope

30. The parties submit that the upstream markets for PCW and non-PCW fibres are worldwide in scope, since suppliers have few centralised manufacturing operations and transport costs do not constitute a significant proportion of the total production and supply cost.
31. The parties also submit that the downstream markets for PCW and non-PCW automotive mats is worldwide, because of the relatively low transport cost, the substantially uniform price worldwide (once normal currency fluctuations are accounted for), and the global scale of major competitors. For the same reasons, they submit that the markets for ITM products are at least EEA-wide if not worldwide.
32. Feedback from third parties generally corroborates the parties' arguments who consider the markets to be global in scope.
33. For the purposes of this decision the OFT does not need to decide on the geographic dimension of the frames of reference. However, the OFT has taken a cautious approach and has assessed the transaction on three geographical frames of reference, that is, the UK, EEA and worldwide.

Conclusion on product and geographic scope

34. For the purposes of its competitive assessment, the OFT considers the appropriate product frames of reference to be:

Upstream:

- the supply of PCW ITM-grade fibres
- the supply of PCW auto-grade fibre
- the supply of non-PCW ITM-grade fibres
- the supply of non-PCW auto-grade fibres.

Downstream:

- the supply of PCW ITM products
- the supply of PCW automotive mats
- the supply of non-PCW ITM products
- the supply of non-PCW automotive mats
- the supply of all automotive mats (PCW and non-PCW).

35. Each of the product frames of reference identified above has been considered on a UK, EEA and worldwide basis. However, as no competition concerns arise as a result of the transaction, it has not been necessary to conclude on the precise product and geographic scope.

HORIZONTAL ISSUES

UNILATERAL EFFECTS

Shares of supply and closeness of competition

36. The parties provided share of supply figures for each of the frames of reference on a UK, EEA and worldwide basis for 2010. Overall, responses from third parties were consistent with the range of suppliers identified by the parties and their relative market strength.
37. The OFT notes that supply of these products is generally concentrated, with a limited number of suppliers, and that some suppliers, including the parties, are active at both the upstream and downstream level.
38. The OFT has identified two horizontal overlaps between the parties, namely:
- the supply of PCW ITM-grade fibres on a EEA and worldwide basis, and
 - the supply of all automotive mats (PCW and non-PCW) on a UK, EEA and worldwide basis.

Each of these overlaps is considered in detail below.

39. The OFT notes Unifrax's recent joint venture with Isolite to supply PCW auto-grade fibres. However, their worldwide share of supply is estimated to be less than [0-five] per cent and therefore will not be considered further under unilateral effects. Given the lack of horizontal overlaps in the other frames of reference identified, the OFT has not considered these further under unilateral effects.

PCW ITM-grade fibres

Table 1: Turnover (£ or € million) and shares of supply of PCW ITM-grade fibres 2010

Providers	WW	EEA	UK	WW %	EEA %	UK %
Saffil	£[]	€[]	£[]	[10-20]	[20-30]	[30-40]
Unifrax	£[]	€[]	£[]	[0- 5]	[10-20]	0
Combined	£[]	€[]	£[]	[10-20]	[30-40]	[30-40]
Rath	£[]	€[]	£[]	[10-20]	[30-40]	[20-30]
Mitsubishi	£[]	€[]	£[]	[20-30]	[20-30]	[20-30]
Isolite	£[]	€[]	£[]	[10-20]	[0-5]	[5-10]
Denka	£[]	€[]	€[]	[20-30]	0	0
Total	£[]	€[]	£[]	100	100	100

Source: the parties (differences in totals due to rounding)

40. Unifrax does not supply PCW ITM-grade fibres in the UK. Therefore the parties' estimated combined share of supply in PCW ITM-grade fibres is [30-40] per cent in the EEA (with an increment of [10-20] per cent) and [10-20] per cent worldwide (with an increment of [0-five] per cent). There was no suggestion by any stakeholder that the parties are especially close competitors in the supply of PCW ITM-grade fibres.
41. It is expected that existing and well-established suppliers of PCW ITM-grade fibres such as Mitsubishi Plastics ('Mitsubishi'), Rath and Denka will continue to act as a strong competitive constraint on the merged parties post merger. The OFT notes that no third party concerns were raised in relation to unilateral effects in the supply of PCW ITM-grade fibres. One UK customer considered that they would switch to Denka in the event of a five per cent price rise, which suggests that Denka is a credible potential entrant in the EEA. The OFT therefore considers that the constraint from existing competitors is sufficient for the merger not to raise concerns over unilateral effects in the supply of PCW ITM-grade fibres.

All automotive mats (PCW and non-PCW)

42. In the UK, the merger results in a reduction from four to three in the number of suppliers of automotive mats and six to five at the worldwide level. In terms of share of supply (see table below), the merged entity would have an estimated [20-30] per cent share (with an increment of [5-10] per cent), but 3M would remain the main supplier with an estimated [70-80] per cent share of supply in the UK. The parties' estimated combined share of supply is [20-30] per cent in the EEA (with an increment of [5-10] per cent) and [20-30] per cent worldwide (with an increment of [5-10] per cent). The parties will face competition from both Ibiden and 3M, both of which are strong global suppliers.

Table 2: Turnover (£ or € million) and shares of supply of all automotive mats in 2010

Providers	WW	EEA	UK	WW %	EEA %	UK %
Saffil	£ []	€ []	£ []	[5-10]	[5-10]	[10-20]
Unifrax	£ []	€ []	£ []	[10-20]	[10-20]	[5-10]
Combined	£ []	€ []	£ []	[20-30]	[20-30]	[20-30]
Ibiden	£ []	€ []	£ []	[30-40]	[40-50]	[0-5]
Mitsubishi	£ []	€ []	£ []	[0-5]	[0-5]	0
3M	£ []	€ []	£ []	[30-40]	[20-30]	[70-80]
Nichias	£ []	€ []	£ []	[0-5]	0	0
Others	£ []	€ []	£ []	[0-5]	0	0
Total	£ []	€ []	£ []	100	100	100

Source: the parties

43. As explained above, it is unclear to what extent PCW and non-PCW automotive mats compete. In this sense, the OFT considers that the parties would not be especially close competitors, in that Unifrax mainly supplies non-PCW automotive mats and even the PCW based mat it is developing with Isolite is expected to be a closer competitor to Mitsubishi and 3M rather than Saffil. However, the OFT received responses from two customers of ITM-grade fibres that consider the parties to be close competitors in automotive mats for the same applications.
44. No third party concerns were received in relation to unilateral effects in the supply of automotive mats; some third parties considered that the merger could be pro-competitive, in that it enables Saffil to carry out the required investments to expand capacity in its automotive business. The OFT notes

that the merger will bring the merged entity onto a more equal footing with 3M, which is currently the only supplier of both PCW and non-PCW automotive mats.

Unilateral effects from the loss of a potential entrant

45. The OFT also considered whether the merger represented the loss of a potential entrant. The parties confirmed that Saffil has not considered entering the market for the supply of non-PCW fibres, products or automotive mats. [], Unifrax had considered manufacturing PCW automotive fibres but concluded that it would be too difficult and too costly and instead entered a joint venture with Isolite. The OFT received no evidence from third parties during its investigation that indicated that the parties should be viewed as potential entrants into the markets in which they were not currently active. The OFT therefore concludes that the merger has not resulted in the loss of a potential entrant.

Conclusion on unilateral effects

46. The OFT considers that the parties' worldwide combined share of supply of PCW ITM-grade fibres and the supply of all automotive mats are not sufficiently high to raise prima facie competition concerns but notes that the parties have an estimated combined share of supply of [30-40] per cent in the supply of PCW ITM-grade fibres in the EEA. Nevertheless, third parties have indicated that that the merging parties are not considered to be particularly close competitors. Further, the OFT considers that the existence of strong well-established suppliers such as Mitsubishi, Rath and Denka in the supply of PCW ITM-grade fibres, and Ibiden and 3M in the supply of all automotive mats (PCW and non-PCW) present in the EEA or worldwide will provide a sufficient competitive constraint on the parties post-merger. The OFT also notes that no third party concerns were raised in relation to unilateral effects resulting from the merger. As a result, the OFT does not consider there to be a realistic prospect of a substantial lessening of competition in the supply of PCW ITM-grade fibres or in the supply of all automotive mats (PCW and non-PCW) at any geographical level.

CO-ORDINATED EFFECTS

47. During the investigation, the OFT did not receive any evidence suggesting that there is existing co-ordination between suppliers of PCW ITM-grade fibres or PCW/non-PCW automotive mats. However, given the limited number of suppliers, the OFT has considered whether the merger could make it more likely that co-ordination will take place going forward. Given the (lack of) horizontal overlaps in other areas of supply, the OFT has considered whether co-ordination could arise in the supply of PCW ITM-grade fibres and the supply of all automotive mats (PCW and non-PCW).
48. The OFT considers that three conditions must be satisfied for co-ordination to be possible.¹¹ First, firms need to be able to reach and maintain the terms of co-ordination. Secondly, co-ordination needs to be internally sustainable. Thirdly, co-ordination needs to be externally sustainable.

The supply of PCW ITM-grade fibres

49. The OFT notes that there is no overlap in the supply of PCW ITM-grade fibres in the UK but the merger will create an overlap outside the UK. There are five suppliers at the EEA level and more than six globally: four of these suppliers (Unifrax, Denka, Raft and Isolite) are vertically integrated, while Mitsubishi, Saffil and others are not.
50. The OFT also considers that several factors make it difficult to be able to reach a co-ordinated agreement. First, the complex and differentiated nature of the product (the various forms and technical characteristics that PCW fibres can take). Secondly, the diverse range of customers that purchase different products and thirdly, the many dimensions on which suppliers compete (not only price, but also performance and reliability of supply).
51. The OFT also considers that the merger does not increase the degree of transparency since Unifrax was already vertically integrated and the additional information Unifrax would obtain from Saffil would be limited to the latter's own products and customer portfolio. In this sense the OFT does not consider that the merger increases the ability for firms to co-ordinate.

¹¹ See Merger Assessment Guidelines, Joint publication of the Competition Commission and the OFT, September 2010, paragraph 5.5.9.

52. In terms of internal sustainability, for the same reasons considered above, the OFT considers that it would be difficult to distinguish deviations by a co-ordinating firm from the general competitive dynamics influenced by specific customer preferences. The difficulty in detecting and punishing deviations can make co-ordination internally unsustainable.
53. In general, co-ordination is easier among symmetric firms; in this respect, the OFT notes that symmetry among suppliers of PCW ITM-grade fibres is increased as a result of the merger, since one of the non-vertically integrated competitors is eliminated, which ceteris paribus may facilitate co-ordination.
54. However, coordination arising as a result of the firms being vertically integrated would be externally unsustainable since Mitsubishi (which is not vertically integrated) and other PCW ITM-grade fibre suppliers would have an incentive to compete fiercely. The OFT notes that the non vertically integrated 'fringe' of firms accounts for an estimated [40-50] per cent of the global supply (including Mitsubishi which has an estimated [20-30] per cent share) and [20-30] per cent of EEA supply (entirely from Mitsubishi).
55. The OFT notes that no concerns have been expressed by third parties about the impact of the merger in terms of potential co-ordination in the supply of PCW ITM-grade fibres. On the evidence available, therefore, the OFT does not consider that this merger would create the conditions for co-ordinated behaviour.

The supply of all automotive mats (PCW and non-PCW)

56. In terms of ability to reach co-ordination in the supply of all automotive mats, the OFT understands that exhaust systems are tailored for the specific vehicle platform they are intended to equip, and hence the specifications for the automotive mats requirements vary from contract to contract, as shown in Figure 1 above. This makes it more difficult to reach and monitor an agreement in terms of pricing levels. Similarly, the lumpy and long term nature of such contracts, the uncertainty about developments of future vehicle platform and the different preference of different vehicle manufacturers is likely to make it difficult to agree on terms for market sharing.
57. Co-ordination will only be internally sustainable where the additional profit from co-ordination is sufficiently high, and there is an effective mechanism

to punish deviation. One third party explained that exhaust manufacturers tend to enter into long-term agreements with both vehicle manufacturers and automotive mats providers, so that they can ensure a reliable supply over the lifetime of the vehicle platform. In this sense, there is a strong incentive to deviate on any agreement, and it would be very difficult for other co-ordinating firms to punish the deviating firm in a timely manner.

58. Since the first two conditions for co-ordination to be possible are not met, the OFT has not needed to conclude on external sustainability. The OFT notes that no concerns have been expressed by third parties about the impact of the merger in terms of the possibility of co-ordinated effects in the supply of all automotive mats (PCW and non-PCW). On the evidence available, the OFT does not consider that this merger would create the conditions for co-ordinated behaviour.

VERTICAL ISSUES

59. During the investigation, concerns were raised that third parties may be foreclosed by the merged entity refusing to supply PCW fibres to customers downstream, specifically that the merged entity may increase the price or reduce the availability of fibres or may give priority to self-supply over customers.
60. Vertical concerns are potentially relevant in terms of the supply of PCW fibres (automotive and industrial grade) as the parties are collectively present both upstream in the supply of PCW fibres and downstream in the supply of automotive mats and ITM products. The OFT has therefore considered whether vertical concerns could arise in respect of the merger in relation to the supply of PCW fibres. No vertical concerns arise in relation to non-PCW fibres because Saffil is not present either upstream or downstream.
61. In assessing the likelihood of such a foreclosure strategy resulting from the merger, the OFT considers in turn the ability of the parties to foreclose; the incentive to engage in such a strategy; and the effect on competition in the foreclosed market of such action.

Input foreclosure in the supply of PCW automotive-grade fibres to PCW automotive mats producers

62. The parties submitted that the merged parties would not have the ability to foreclose downstream rivals for the following reasons. First, there are very few downstream rivals that would purchase a portfolio of products from them post-merger; the parties confirmed that there are no sales of automotive fibre in the UK and there is only one common significant automotive fibre customer – [].¹² Secondly, the parties' shares of supply indicate that neither party's automotive fibre is a 'must have' fibre; globally, Saffil's PCW automotive fibre share of supply is less than [20-30] per cent and it has no sales in the UK. Thirdly, the parties identify a number of alternative suppliers, including Mitsubishi, that could quickly and easily supply downstream rivals.
63. On the basis of the reasons given above, the parties submitted that they do not have the ability or incentive to foreclose downstream rivals in the supply of PCW automotive-grade fibres and hence did not consider the potential effect on competition.
64. The OFT notes that Saffil is already vertically integrated pre-merger, and as such it is important to consider what the change is that the merger brings about in terms of either ability or incentive to foreclose rival automotive mat producers. The OFT also notes that one of the largest automotive mat manufacturers ([]) is not supplied by Saffil, and the largest one ([]) only purchases from Saffil [], which clearly limits the scope of vertical foreclosure.
65. Neither of the parties supply PCW automotive-grade fibres in the UK or EEA. Worldwide, Saffil¹³ has an estimated [20-30] per cent share of supply of PCW automotive-grade fibres. The OFT notes that this is below the prima facie 30 per cent threshold in the European Commission's Vertical Guidelines.¹⁴ Nevertheless, the OFT adopts a cautious approach and has considered the parties' ability to foreclose downstream rivals in the supply of PCW automotive mats.

¹² [].

¹³ Saffil and Denka have an exclusive supply agreement for PCW automotive fibres.

¹⁴ See *Merger Assessment Guidelines*, Joint publication of the Competition Commission and the OFT, September 2010, paragraph 5.3.5.

66. The evidence on the parties' ability to foreclose is mixed. On the one hand, there are other suppliers of PCW fibres that downstream competitors can switch to: rival automotive mat manufacturers can rely on alternative suppliers, namely Mitsubishi and Rath who are all currently global suppliers of PCW automotive grade fibres. One downstream competitor commented that, in reality, the parties are unlikely to raise prices of fibres because of the expected reaction of Mitsubishi. On the other hand, there may be costs to switching: one automotive mat manufacturer considered that, at least in the short term, switching supplier of PCW fibres requires costly re-qualification and time. However, one downstream competitor confirmed that in response to a five per cent price increase it would seek to switch to an alternative supplier of PCW fibres.
67. The OFT has therefore considered the parties' incentives to engage in such a strategy.
68. The extent to which the parties may have an incentive to foreclose is largely determined by the trade off between those profits lost in the sales of PCW fibres to competitors downstream and the profits gained from supplying automotive mats as a result of foreclosing rivals.
69. On the basis of its share of supply worldwide, Safill is one of a number of suppliers of PCW automotive mats. Third parties have commented that Saffil's automotive mats are not a strong substitute for Ibiden and 3M needled-based automotive mats. Unifrax's PCW automotive mats under development with Isolite are a closer substitute to [] but are not envisaged to be sold in the UK and have so far achieved [] EEA wide and worldwide. For these reasons, the OFT considers that the diversion ratios to the merged entity's automotive mats would be low, giving it a weak incentive to foreclose at any geographical level.
70. The parties also provided details of their profit margins, which indicate that the incentive to foreclose is weak. Given the relative level of profit margins, even an extremely low diversion ratio from the foreclosed competitor to another third party supplier would be sufficient to make the foreclosure unprofitable (and in fact, such diversion to suppliers other than the merging parties would be expected to be significant – see paragraph 69 above). Hence, the OFT does not consider that the parties would have sufficient incentive to foreclose downstream rivals if these firms can turn to alternative suppliers of PCW fibres.

71. Although the evidence on the parties' ability to foreclose is mixed, the evidence indicates that the parties will not have the incentive to foreclose downstream rivals. As a result, it has not been necessary for the OFT to consider the potential effect on competition. On the basis of the evidence available, the OFT does not consider that the merger creates a realistic prospect of a substantial lessening of competition in relation to foreclosure of downstream suppliers of PCW automotive mats.

Input foreclosure in the supply of PCW ITM-grade fibres to producers of PCW ITM products

72. The parties submitted similar reasons to those set out above (at paragraph 62) in support of their view that the merged entity would not have the ability to foreclose downstream rivals in the supply of PCW ITM-grade fibres. First, there are very few downstream rivals that would purchase a portfolio of products from them post-merger; the parties confirmed that both in the UK and globally, Unifrax and Saffil have no significant common PCW ITM-grade fibre customers. Secondly, the parties' shares of supply indicate that neither party's ITM-grade fibre is a 'must have' fibre; globally, the parties' PCW ITM-grade fibre share of supply is [10-20] per cent. Thirdly, the parties identify a number of alternative suppliers that could quickly and easily supply downstream rivals including Mitsubishi, Denka, Rath and Isolite.
73. On the basis of the reasons given above, the parties submitted that they do not have the incentive to foreclose downstream rivals in the supply of PCW ITM-grade fibres and hence did not consider the potential effect on competition.
74. The OFT notes that the major suppliers of ITM products are vertically integrated and therefore would not be directly affected by the parties engaging in a foreclosure strategy.
75. The merged entity has an estimated [30-40] per cent share of UK supply of PCW ITM-grade fibres, a [30-40] per cent share ([20-30] per cent Saffil and [10-20] per cent Unifrax) of EEA supply and a [10-20] per cent of global supply. On the basis of these share of supply figures, the OFT has gone on to consider the parties' ability and incentive to foreclose downstream rivals in the supply of ITM products and the effect of this strategy.

76. There are alternative providers of PCW ITM-grade fibres – notably Rath and Mitsubishi – although there is some uncertainty as to whether the fibres produced by the different suppliers are direct substitutes. One customer commented that the fibres have a different chemical formulation and that they currently dual source for different applications. However, no third party considered that Saffil's PCW fibres were 'must have' fibres and suppliers appear to offer a range of several PCW bulk fibres.¹⁵
77. Further, the parties submitted that [] whereas third parties, including Mitsubishi, are expanding their manufacturing capability in fibres. On this basis, the parties' share of supply may overestimate their position in the market, and competitors would be able to cater for additional demand from foreclosed customers.
78. Due to the mixed evidence on ability, the OFT went on to consider whether the parties have the incentive to foreclose downstream rivals.
79. The extent to which the parties may have an incentive to foreclose is largely determined by the trade off between those profits lost in the sales of PCW fibres to competitors downstream and the profits gained from supplying ITM products as a result of foreclosing rivals.
80. On the basis of the profit margin figures provided by the parties, the OFT does not consider that the parties have the incentive to foreclose rivals downstream; the downstream gross profit margin would not be sufficiently high to make a foreclosure strategy profitable. Further, the OFT considers that the diversion ratio from a foreclosed customer to Unifrax would be low, with other suppliers able to capture the vast majority of diverted sales. The OFT notes that Unifrax currently has a share of supply of less than [0-five] per cent in the supply of PCW ITM products on a UK,¹⁶ EEA and worldwide basis, whereas Rath and Isolite are significantly larger suppliers; Rath has an estimated share of supply of [70-80] per cent in the UK and EEA and Isolite has an estimated share of supply of [50-60] per cent worldwide. The OFT did not receive evidence from third parties to

¹⁵ See for example offering from Rath and Isolite at the following links:

www.rath-group.com/Rath.aspx?target=25587&l=2&
www.itm-cf.com/en/fibrexcels/products/other/fiber.html.

¹⁶ Unifrax resells Isolite PCW ITM products in the UK (less than £[] in 2010).

refute the analysis that the parties would not have the incentive to foreclose downstream competitors.

81. Finally, in terms of effect of any foreclosure strategy on competition, the parties indicated that in some cases downstream rivals are able to self-supply or enter into exclusive deals with fibre suppliers in order to ensure supply. [].
82. On the basis of the evidence available, the OFT does not consider that the merger creates a realistic prospect of a substantial lessening of competition in relation to foreclosure of downstream suppliers of PCW ITM products.

BARRIERS TO ENTRY AND EXPANSION

83. The OFT notes that there has been limited entry either upstream in the supply of fibres or downstream in the supply of automotive mats. The parties estimate that entry into the manufacture of PCW automotive fibres would require [several] years of research and development and cost between \$[0-5] million. The construction of a new production facility would cost a further \$[10-20] million and take an additional 12-18 months to construct. The OFT notes that Unifrax's recent entry into the supply of PCW fibres for automotive mats was via a joint venture with an existing supplier, Isolite. [].
84. The parties provided evidence that indicated that existing suppliers are expanding their facilities.¹⁷
85. There is some evidence to suggest that there may be barriers to entry but the OFT notes that there is also evidence of expansion by existing suppliers. Given the competitive assessment it has not been necessary to conclude on the extent of any entry barriers.

BUYER POWER

86. The OFT has considered whether there is evidence of buyer power either upstream in the supply of fibres or downstream in the supply of ITM products and automotive mats.

¹⁷ See: www.mitsubishichem-hd.co.jp/english/ir/pdf/20101102-1.pdf

87. Upstream, the customer base of ITM-grade fibres (both PCW and non-PCW) includes some large producers of ITM products (some of them vertically integrated) and a fringe of 'other' ITM product manufacturer. Similarly, the customer base of automotive-grade fibres (both PCW and non-PCW) includes large and small automotive mat manufacturers. While the larger among these ITM or automotive customers may enjoy contractual strength (especially in the automotive sector, where contracts tend to be long term), this would not benefit other smaller customers.
88. Downstream, the customer base of ITM products varies with the different applications such products are used for and is likely to include some large customers (for example, household appliance manufacturers, large manufacturers or users of kilns and furnaces). The customer base of automotive mats certainly includes very large automotive companies such as Faurecia and Bosal. While the larger among these ITM or automotive customers may enjoy contractual strength, this would not benefit other smaller customers.
89. However given that no competitive concerns arise as a result of the merger, it has not been necessary for the OFT to conclude on the extent of countervailing buyer power.

THIRD PARTY VIEWS

90. The OFT received comments from customers and competitors of the parties. Third party views have been discussed in other parts of the decision where appropriate.
91. The majority of UK customers were unconcerned about the merger. However, the OFT received a number of concerns from downstream competitors; some noted that the merger would result in the reduction in the number of suppliers of PCW/non-PCW fibres. Nevertheless, on a European and global basis, the OFT notes that there are a number of strong, well-established competitors in the supply of fibres such as Mitsubishi, Rath and Denka and in the supply of automotive mats, 3M and Ibsen. The OFT considers that these competitors will continue to act as an effective competitive constraint on the parties post merger. One customer suggested that the merger may be pro-competitive allowing the merged

entity to be a more effective competitor in the supply of PCW fibres and PCW automotive mats.

92. A specific concern was raised in relation to whether the merged parties, as a vertically integrated supplier, would foreclose the supply of PWC fibres to competitors downstream. As discussed under 'Vertical Issues' above, the OFT considered carefully whether the parties would have the ability and incentive to foreclose the supply of PCW fibres to competitors downstream in each of the industrial and automotive sectors. However, it concluded that the merged entity would not engage in such a strategy due to the existence of alternative well established suppliers of PWC fibres that customers would be able to switch to and the lack of an incentive to engage in such a strategy given the relative profits obtained at the different levels of the supply chain. The OFT notes that the third party who raised these concerns did not provide evidence to refute the analysis that the parties would not have the incentive to foreclose downstream competitors.

ASSESSMENT

93. The parties overlap in the supply of PCW ITM-grade fibres and the supply of all automotive mats (PCW and non-PCW). The OFT assessed the merger on a UK, European and global basis.
94. Unifrax does not supply PCW ITM-grade fibres in the UK. The parties have an estimated combined share of supply of PCW ITM-grade fibres of [30-40] per cent in the EEA (with an increment of [10-20] per cent) and [10-20] per cent worldwide (with an increment of [0-five] per cent). In terms of all automotive mats (PCW and non-PCW), the parties have an estimated combined share of supply of [20-30] per cent both on an EEA and worldwide basis (with an increment of [five-10]/[five-10] per cent); the UK estimated share of supply is [20-30] per cent (with an increment of [five-10] per cent).
95. Third parties do not consider the parties to be particularly close competitors. Saffil only supplies PCW fibres and PCW automotive mats whereas Unifrax has traditionally focused on the supply of non-PCW fibres and non-PCW ITM products and automotive mats.

96. The OFT considered horizontal overlaps between the parties in respect of the supply of PCW ITM-grade fibres on an EEA and worldwide basis and the supply of all automotive mats (PCW and non-PCW) on a UK, EEA and worldwide basis. A number of strong well-established competitors were identified that would continue to act as a competitive constraint on the parties both upstream (Mitsubishi, Denka, Rath) and downstream (3M and Ibsiden) post merger. In addition, the OFT notes that no third party concerns were raised in relation to unilateral effects resulting from the merger. On this basis, the OFT did not identify horizontal unilateral effects arising from the merger.
97. Due to the relatively small number of suppliers in the market, however, the OFT considered whether the merger could make it more likely that co-ordination could take place going forward. The OFT identified a number of difficulties that firms would still face in reaching and maintaining an agreement including, the complex and varied nature of the customer requirements and hence competition drivers (technical performance, price, reliability) which would make it difficult to reach an agreement. Similarly, the relatively limited degree of market transparency (unaffected by the merger) and the long-term nature of contracts with exhaust system manufacturers would make it difficult to monitor and enforce any agreement. Furthermore, the external pressures from non-vertically integrated suppliers would make coordination unstable. The OFT also notes that no third parties had raised co-ordination as a possible concern. Therefore, the OFT does not consider that the merger would create the conditions for co-ordinated behaviour in the supply of PCW ITM-grade fibres or the supply of all automotive mats (PCW and non-PCW).
98. A third party concern was however raised in relation to possible foreclosure in the supply of PCW fibres to competitors downstream in the supply of ITM products and automotive mats. The OFT considers that whilst there is mixed evidence on the parties' ability to foreclose, there is no incentive for the parties to engage in this strategy given first, the relative profit margins obtained in respect of the sale of upstream PCW fibres and downstream PCW ITM products and automotive mats and secondly the fact that it is expected that a high proportion of sales would be diverted to stronger competitors of the parties downstream, making any foreclosure upstream unprofitable. The OFT therefore does not consider, on the basis of the evidence available, that the merger creates a realistic prospect of a

substantial lessening of competition in relation to the foreclosure of downstream suppliers of PWC automotive mats or PCW ITM products.

99. Consequently, the OFT does not believe that it is or may be the case that the merger has resulted or may be expected to result in a substantial lessening of competition within a market or markets in the United Kingdom.

DECISION

100. This merger will therefore **not be referred** to the Competition Commission under section 22(1) of the Act.

ENDNOTE

1. With reference to the term 'joint venture' included in paragraphs 39, 45 and 83 of the decision, the parties clarified that the current co-operation between Unifrax and Isolite is a development agreement, not a joint venture. This clarification does not impact on the OFT's conclusions in this case.