IN THE COMPETITION APPEAL COURT

In the matter between	CAC Case No: 147/CAC/Oct16
	CT Case No: IM013May15
IMERYS SOUTH AFRICA (PTY) LTD	**FIRST APPELLANT**
ANDALUSITE RESOURCES (PTY) LTD	**SECOND RESPONDENT**

and

THE COMPETITION COMMISSION	**RESPONDENT**

Coram: DAVIS JP AND ROGERS & BOQWANA JJA

Heard: **15 DECEMBER 2016**

Delivered: **2 MARCH 2017**

JUDGMENT

ROGERS JA (DAVIS JP and BOQWANA JA concurring):

[This is a redacted version of the judgment from which confidential information has been deleted.]

Introduction

[1] In January 2015 the appellants ('ISA' and 'AR') notified the Competition Commission ('the Commission') of an intermediate merger in terms whereof ISA was to acquire all the shares in AR. In April 2015 the Commission prohibited the merger. The appellants referred the merger to the Competition Tribunal ('the Tribunal') for consideration. On 21 September 2016, and following a lengthy hearing, the Tribunal confirmed the prohibition. The appellants appeal to this Court, contending that the merger should have been permitted subject to tendered conditions.

[2] Mr Unterhalter SC leading Mr Moultrie appeared for the appellants and Mr Wilson SC leading Mr Marolen for the Commission.

[3] On 29 December 2016, ie about two weeks after the hearing of the appeal, the Department of Mineral Resources ('DMR') addressed a letter to the registrar and to the parties, intimating a wish to be admitted as an amicus curiae. In a letter dated 5 January 2017 the appellants' attorneys said that their clients had no objection. By letter dated 9 January 2017 the Commission objected to the DMR's admission as an amicus, setting out various grounds for the objection.

[4] We decided summarily to reject the DMR's request. In terms of rule 28 of this Court's rules read with rule 16 of the rules of the Supreme Court of Appeal, the application for admission should have been made not later than one month after the appeal record was lodged with the registrar. This was not done. Needless to say, an application for admission brought after an appeal has been argued is highly disruptive and would cause delay and additional expense for the litigants.

[5] Even if an application for admission had been timeously made, it would almost certainly have failed. In terms of SCA rule 16(8), an amicus is limited to the record on appeal, ie may not adduce fresh evidence. Yet it appears from the DMR's letter that the DMR wants to intervene precisely for the purpose of placing further facts before the court. The DMR's letter does not explain what those facts are or how they might affect the outcome of the appeal. The DMR has also not explained why it did not intervene in the proceedings before the Tribunal. According to the Commission, it engaged with the DMR prior to recommending the prohibition of the merger and also in the course of preparing for the Tribunal hearing. Information supplied by the DMR was placed before the Tribunal and forms part of the appeal record.

Background

[6] The appellants mine andalusite, a mineral from which refractories are made. Refractories are used to line furnaces, kilns and other containers exposed to high temperatures, abrasion and chemical attack in the course of manufacturing iron, steel, cement, ceramics and other products. Refractories may be shaped (bricks and blocks) or unshaped (also known as 'monolithics' – dry bagged material which the user can mix with water and apply to the surface in question).

[7] Vertically, the three levels of market activity most directly implicated in refractory minerals are (i) the mining of the minerals; (ii) the making of refractories; (iii) the making of goods whose processes require refractories. ISA conducts the first and second of these activities and is thus vertically integrated to that extent. AR conducts only the first activity. Demand for refractory minerals is determined by demand for refractories which is in turn driven by the demand for the goods manufactured by processes requiring refractories. Iron and steel typically constitute the major demand at the third level (about 60% in South Africa). Demand for the manufactured goods is, of course, driven by demand in a diffuse range of markets further downstream.

[8] Refractories can be made from various substances. Andalusite forms part of a group of refractory substances, known as alumina-silicates, in which alumina

(aluminium oxide) is the common dominator. The naturally occurring minerals in this group include, in order of increasing alumina content, various clays (45% or less), andalusite, silianite, kyanite (60%) and bauxite (90%). Alumina is a ‘neutral’ refractory oxide because it is resistant to chemical attack. Refractory oxides such as calcium oxide (lime) and magnesium oxide (magnesia) are ‘basic’ refractory oxides because they may react chemically with acids at high temperature. Depending on the application, a neutral or basic refractory might be required.

[9] South Africa is the world’s largest producer of andalusite. ISA and AR are the only producers in this country. The Imerys group, of which ISA is part, has an andalusite mine in France. The only other significant producer is Andalucita in Peru. Within South Africa, the merger is two-to-one and would thus give rise to a monopoly.

[10] China is the world’s largest bauxite producer though bauxite is also mined in Brazil and Guyana. Most of China’s bauxite is used to make aluminium. Only high-alumina bauxite is used for refractories. To be used as a refractory, bauxite must be calcined (the removal of moisture at high temperature). Andalusite does not require calcination.

[11] The refractory substance derived from flint clay is called chamotte. This is produced by firing and sintering the clay. Because of its relatively low alumina content (around 40%), chamotte is not normally used on surfaces which have direct contact with liquid slag and metal.

[12] The refractory substance derived from bauxitic or kaolinitic clays is known as mulcoa. Its alumina content is increased to about 60% by combining it with calcined bauxite.

[13] At high temperature, andalusite converts to mullite and silica while bauxite converts to mullite and alumina. This process of mullitisation is an important feature of the refractoriness of the minerals. Mullite does not occur naturally in exploitable quantities but can be synthesised from raw materials. Synthetic mullite has an alumina content of around 75%.

[14] Brown fused alumina, white fused alumina and tabular alumina (95% - 100% alumina) are refractory substances made by subjecting bauxite to further beneficiation.

[15] Apart from their varying alumina contents, the performance of these substances may be affected, prejudicially or beneficially, by the presence of impurities.

[16] The andalusite used in refractories consists of coarse, medium and fine granules. Coarse granules can be made smaller but not vice versa. ISA is able to produce all three sizes. Because of the nature of its ore, AR can only produce medium and fine granules. A refractory substance contains large granules (aggregate particles) and smaller granules (matrix particles). The smaller granules fill up the space between the large ones, reducing the substance's porosity.

[17] AR entered the market in 2002. For several decades before that, ISA was the sole producer of andalusite in South Africa. Domestic refractory manufacturers cannot consume all the andalusite which ISA and AR are able to produce. A substantial part of South Africa's andalusite output has always been exported, mainly to Europe, some to China. Prior to 2012 there was, in general, parity between the ex-works prices paid by domestic and foreign buyers though obviously the gross price paid by foreign buyers, inclusive of delivery, was considerably more. Because of rand depreciation, export sales have since 2012 become more profitable. A gap has thus emerged between the ex-works prices paid by foreign buyers and those paid by domestic buyers, ranging from 9% to 46%. The export parity price ('EPP') is the price which domestic buyers would have to pay if ISA and AR charged them the same prices as their foreign customers.

Substitutability

[18] There was a good deal of written and oral evidence about the extent to which andalusite could, from a functional perspective, be substituted by other refractory substances. The merging parties contended that andalusite could be substituted in all applications or at least most of them. The Commission contended otherwise.

There was no shortage of expert opinion to support both views. The answer may not be purely scientific. There are issues of perception. The Commission adduced evidence that manufacturers who use refractories perceive andalusite to have unique qualities and would be resistant to change.

[19] Furthermore, and notwithstanding the technical evidence of substitutability presented by the merging parties, they market andalusite inter alia on the basis of its particular qualities. As Imerys' Mr Parte said, one tries to 'educate the customer why andalusite is better'. […]

[20] […]

[21] There was also evidence about the extent to which other substances (assuming them to be functional substitutes) were economic substitutes for domestic consumers, ie whether it would be cost-effective for South African refractory manufacturers to switch. Bauxite and mullite, the most likely contenders, would have to be imported. The merging parties identified what they regarded as functional substitutes for ISA's top 12 andalusite-containing refractories. Their economist, Mr Murgatroyd of RBB Economics, did a cost analysis with a view to comparing the cost of the substitutes with the EPP of the andalusite-containing products. The comparison was based on the (higher) EPP rather than the actual (lower) domestic price because of the merging parties' fundamental thesis that within the next couple of years they will become capacity-constrained so that domestic prices will – with or without a merger – rise to EPP. In other words, in the scenario envisaged, neither of them would have any incentive to sell andalusite to domestic buyers at less than EPP if they could sell all their output to foreign buyers at EPP.

[22] Mr Murgatroyd's conclusion was that although some substitutes would cost significantly more than the andalusite-based products, others were close to EPP. If the merging parties were to increase the prices of the latter andalusite-based products by more than 5% of EPP, buyers would switch to substitutes. The lost profits on these sales would outweigh the enhanced profits which the merging parties could make by increasing the prices of those products for which no affordable substitutes existed.

<u>The economists' agreement</u>

[23] In the end, the issue of functional substitutability and the costing of potential substitutes receded into the background as a result of an agreement reached between the economic experts (Mr Murgatroyd for the merging parties and Dr Mncube from the Commission). This occurred midway through the hearing. They agreed (i) that for as long as one or both of ISA and AR had surplus production capacity, unilateral effects in the domestic market were likely (the power and incentive to increase prices above the level that would prevail but for the merger); (ii) that once both ISA and AR became capacity-constrained, the merger was unlikely to cause anti-competitive effects; (iii) that if both parties became capacity-constrained within five years (as the merging parties contended), the conditions of approval they proposed (as to which, see below) would adequately address the temporary unilateral effects of the merger; and (iv) that if the parties did not become capacity-constrained within five years, the proposed conditions would not adequately address the unilateral effects of the merger.

[24] In the light of this agreement, the economists opined that 'the competition issues of the matter' could be resolved 'by a determination of the relevant counterfactual'. The competing counterfactuals were those identified in (iii) and (iv) above. In argument, however, the merging parties indicated that the duration of the supply agreement could be extended if it were found that they would only become capacity-constrained after (say) six or seven years.

[25] Once this agreement was reached, the main focus of the case in the Tribunal became whether, and if so when, both ISA and AR would become capacity-constrained. This involved an investigation of two main issues, namely (i) the production capacities of ISA and AR; (ii) future demand for andalusite. These were the issues which remained in the forefront in the appeal.

[26] The proposed conditions of approval consisted of two parts. Part 1 comprised five-year supply agreements between the merged entity and domestic customers at current prices and annual increases not exceeding increases in the Producer Price Index ('PPI'). Part 2 was to become operative after the expiry of the five-year supply

agreements. At that point, and in perpetuity, the merged entity was not to charge domestic customers more than the weighted average export price for the product in question calculated on an ex-works basis. In other words, EPP would be the domestic price cap. There was also a volume guarantee for domestic consumers.

[27] The economists' agreement gave recognition to insights derived from the economic theory of Bertrand competition in duopoly as adapted for cases where one or both firms are capacity-constrained. The Bertrand model assumes that two firms supply undifferentiated products, that their marginal unit costs are identical, that customers will always choose to buy at the lowest price, that each firm can supply the entire demand, and that there can be no cooperation between the firms. The Bertrand model predicts that the equilibrium price in such a scenario equals marginal cost (neither firm makes a profit). If, on the other hand, both firms are capacity-constrained and between them cannot supply more than the total demand, one would expect the price to rise to the monopoly price. Given the capacity constraints of both firms, neither can produce further output to meet any increased demand caused by a price reduction. Neither firm has an incentive to charge less than the monopoly price because the firm cannot win further sales by this strategy. And by charging more, the firm would lose sales because of reduced demand. If one but not both of the firms are capacity-constrained, prices will be higher than when neither firm is capacity-constrained but not as high as the monopoly price.

[28] Although the economists' assumption seems to have been that the domestic price would rise to EPP once both ISA and AR became capacity-constrained, that is not necessarily so. The capacity constraints were investigated with reference to the total predicted output and demand, foreign and domestic. One would not expect uniform EPP pricing until foreign demand exceeded the parties' total sustainable capacities. Only at that stage would the firms be able to sell their entire output to foreign customers if domestic customers declined to pay EPP.

[29] However, it seems to me that the exact level of the domestic price is less important than the question whether the firms would have an incentive to compete on the domestic price. Once they both become capacity-constrained in the sense envisaged in the economists' agreement, domestic demand would exceed the firms'

output available to meet that demand (unless the firms diverted exports to the domestic market, something they would only do if they were paid EPP). At this point each firm could charge the domestic monopoly price without losing sales to the other. The domestic monopoly price might be less or more than EPP but domestic price competition would cease.

<u>The legal approach</u>

[30] The parties advanced competing contentions regarding the burden of proof and the approach to be adopted where the future state of the market is uncertain.

Incidence of onus

[31] Necessarily implicit in the economists' agreement was an acceptance by the merging parties that, because they are not both currently capacity-constrained, the merger is likely to give rise to a lessening of domestic competition. Based on their view of plausible ranges for ISA and AR's capacity and for demand growth, the merging parties estimated that they would both become capacity-constrained within a period ranging from 2,1 to 6,2 years though their case was that the period would be at the lower end of this range and definitely less than five years.

[32] The economists' agreement reflected an acceptance that the likely lessening of competition in this period would be a substantial lessening of competition ('SLC') for purposes of s 12A(1) of the Act; hence the tendered five-year supply agreements and the economists' agreement that, if one or both of the firms retained surplus capacity beyond the five-year period, the tendered supply agreements would be 'insufficient to address the anti-competitive effects of the merger'. At the beginning of Mr Murgatroyd's cross examination the following exchange occurred:

'ADV WILSON: Given the existing supply condition of five years, if it were the case that the merging parties only hit capacity and reach EPP pricing after the red line is hit, that is where the SLC would come in, which is why it is so important for this part of the analysis to determine when those two triggers would be hit?

MR MURGATROYD: That's correct.'

And at the beginning of his evidence in chief, the Commission's economist, Dr Mncube, said that, in the light of the agreement between the economists, he would not address those slides in his presentation which dealt with SLC. He was not cross-examined on these matters.

[33] I should add that the parties' internal documents […]. The Tribunal gave examples in paras 91-127 of its reasons. It is not necessary to repeat them here. The competitive dynamic influenced ISA's prices (even though the latter generally were higher than AR's prices) and spurred innovation. ISA's documents focus on andalusite competition from AR, not competition for supposed substitutes such as bauxite. […] The same is true of AR's strategic plans. […] Be that as it may, though, the precise extent of existing price competition was understood to have fallen away as a factual issue in the light of the economists' agreement.

[34] The merging parties' contention was that they would become capacity-constrained within the period of the tendered supply agreements, at which point – as agreed by the economists – a merger would no longer have unilateral effects. Although in the merging parties' view the evidence showed, on a balance of probability, that the constraints would be reached within the said period, they argued that it was in any event for the Commission to show the converse on a balance of probability. If the probabilities were equipoised, or if it was not possible to say which outcome was more likely, the Commission would not have shown that there was a likely SLC extending beyond the period of the tendered supply agreements and the Tribunal would thus have been bound to permit the merger subject to the tendered conditions.

[35] The Commission argued, on the other hand, that where a merger will, as here, give rise to an SLC having regard to the current state of the market, the onus rests on the merging parties to persuade the Tribunal that the merger should be conditionally permitted because market circumstances will change within a specified period.

[36] Section 12A(1) identifies the matters which the Tribunal must 'determine' when considering a merger:

(a) Firstly, the Tribunal must determine whether or not the merger is likely to substantially prevent or lessen competition, a determination which must be made by assessing the factors specified in s 12A(2).

(b) If the determination in (a) is 'yes', the Tribunal must determine (i) whether or not the merger is likely to result in any technological, efficiency or other pro-competitive gain which will be greater than, and offset, the effects of any likely prevention or lessening of competition; and (ii) whether the merger can or cannot be justified on substantial public interest grounds by assessing the factors set out in s 12A(3).

(c) If the determination in (a) is 'no', the Tribunal must determine whether the merger can or cannot be justified on substantial public interest grounds by assessing the factors set out in s 12A(3).

[37] The Tribunal's powers, once it has determined these matters, are contained in 16(2), which states that the Tribunal must approve the merger or approve it subject to any conditions or prohibit implementation of the merger. The Act does not expressly link these outcomes to particular determinations under s 12A but it can be accepted that, if the Tribunal determines that the merger is not likely to give rise to an SLC and that there are no substantial public interest grounds justifying a prohibition, the Tribunal is obliged in terms of s 16(2) to approve the merger. No other exercise of its powers would be rational. This Court said in *Schumann Sasol (SA) (Pty) Ltd v Price's Daelite (Pty) Ltd* [2001-2002] CPLR 84 that likely SLC is a 'threshold test' in the sense that if the test is not met the merger cannot be prohibited (subject, obviously, to the public interest override).

[38] Given the Tribunal's inquisitorial powers, it may not strictly be accurate to say that the Commission bears the burden of proving likely SLC. It is nevertheless so that, if on all the evidence before the Tribunal, a likely SLC cannot be found, the Tribunal must approve the merger unless the public interest override is operative. And in that respect I do not think it matters whether the Tribunal is dealing with an intermediate or large merger (a question left open in *Oceana Group Ltd & Another v Competition Commission* [2014] 2 CPLR 372 (CAC) paras 48-51).

[39] The position is less clear-cut where the Tribunal determines that the merger is likely to cause an SLC, that there are no likely pro-competitive gains outweighing the likely SLC and that there are no overriding public interest grounds justifying the merger. In this situation there are two potential outcomes, prohibition and conditional approval. To the extent that an onus rests on the Commission to establish a likely SLC, the Commission would in such a case have discharged the onus. The Tribunal's determinations pursuant to s 12A would give it the jurisdiction to exercise its powers of prohibition and of conditional approval.

[40] Where, in the situation just mentioned, the Tribunal is asked to approve the merger with conditions rather than prohibit it, the choice of remedies is in the nature of a discretion. I reject the proposition that the Commission bears the burden of proving that the proposed conditions will not adequately address the likely SLC. The Tribunal has the power to prohibit the merger if it is not satisfied that the conditions will adequately remedy the likely SLC. And regardless of where the onus lies in respect of proposed conditions (if it is accurate to speak of onus at all), I do not think that the Tribunal is obliged to approve a merger just because it finds it more probable than not that the conditions will neutralise the likely SLC. One should bear in mind, in this regard, the real problem in such cases will not necessarily be competing views as to the probable future state of the market but an inability to make reliable predictions at all. I think it is permissible for the Tribunal to reason thus: 'The merger will likely give rise to an SLC. Although the proposed conditions are more likely than not to remedy the likely SLC, there is a reasonable possibility that they will fail to do so. Therefore we prohibit the merger.'

[41] Particularly where the uncertainty about the adequacy of the conditions concerns the likely duration of the SLC rather than the nature and content of the SLC, prohibition has this advantage over conditional approval: it does not necessarily represent the final word. If the merger is conditionally approved and the conditions turn out to be inadequate to neutralise the SLC, the harm cannot be reversed. If, on the other hand, the merger is prohibited and with the passing of time it becomes clear that the merger will no longer give rise to SLC, the transaction can be renewed.

[42] I do not say that the Tribunal would be obliged to reject conditional approval just because there was a reasonable possibility (falling short of a preponderance of probability) that the conditions would fail to remedy the likely SLC. The Tribunal might properly exercise its discretion in such a case to give conditional approval. In exercising its discretion, the Tribunal could be expected to take into account, on the one hand, the precise likelihood and extent of the SLC; and, on the other, the precise extent of the risk that the conditions will fail to remedy the likely SLC. The public interest may also enter into the balancing exercise, particularly the public importance of the markets which would be directly or indirectly prejudiced if the conditions failed to remedy the likely SLC.

Appellate assessment of choice of remedy

[43] This characterisation of the nature of the Tribunal's function when choosing between prohibition and conditional approval has implications for appellate assessment of the Tribunal's decisions in such cases. Where a determination of the Tribunal on a matter identified in s 12A(1) is brought on appeal, this Court will, apart from the well-known restrictions on appellate interference in factual findings, show a measure of deference to the Tribunal. The matter was put thus in the *Schumann Sasol* case:

'The approach which this Court adopts to an appeal against the decision of the Tribunal in respect of a merger should take cognizance of the composition and role of the Tribunal as a specialist body which consists not only of lawyers but also of members possessed of the necessary financial and economic knowledge and thorough grasp of the relevant policy issues required in these kind of deliberations. Section 12A requires that the Tribunal make a determination after a holistic inquiry into whether the proposed merger is likely to substantially prevent or lessen competition. In assessing such a decision, this Court should take account of the composition and expertise of the Tribunal as well as the nature of the enquiry which entails an element of probabilistic investigation into the effect of the proposed merger… In its decision as to whether to set aside, amend or confirm the decision of the Tribunal, this Court must be cautious before imposing its own conception of the policy considerations upon the decision adopted by the Tribunal. The Court should seek rather to examine and test rigorously the justifications offered by the Tribunal for the decision to which it has arrived before it invokes its power in terms of s17.'

[44] When, however, it comes to the Tribunal's power to choose between prohibition and conditional approval, one is no longer dealing with a factual determination but with a choice between outcomes. The test for appellate interference depends on whether this power is regarded as a discretion in the narrow or loose sense (for the distinction, see inter alia *Media Workers Association of South Africa & Others v Press Corporation of South Africa Ltd* 1992 (4) SA 791 (A) at 800C-J; *Trencon Construction (Pty) Ltd v Industrial Development Corporation of South Africa Ltd & Another* 2015 (5) SA 245 (CC) paras 83-89). If the power of selection is a discretion in the true (or narrow) sense, ie a power to choose between two permissible outcomes, this Court could only interfere if satisfied that the Tribunal exercised its discretion on a wrong principle or as a result of a misdirection on the facts or because its decision was one that could not reasonably have been reached.

[45] A discretion in the loose sense, by contrast, does not involve a choice between permissible alternatives; once all the evidence is considered, there is only one right answer, even if the decision-maker is entitled to have regard to a number of disparate and incommensurable features in coming to a decision. Even in this case, an appellate court's power to interfere may be curtailed by broader policy considerations arising from the nature of the decision or the composition of the tribunal.

[46] I think there is much to be said for the view that a true discretion is involved in deciding whether to prohibit or conditionally approve a merger. One is not dealing with a single determination (for example, in *Media Workers Association*, whether conduct was or was not an unfair labour practice) but with a choice between two remedies arising from determinations made under s 12A. In many cases there will be no obviously right or wrong answer to the question whether a merger should be prohibited or permitted subject to conditions. For policy reasons, merger proceedings, including merger appeals, should be decided expeditiously. This might be hampered if this Court were required to determine afresh, with reference to what might be a voluminous record, whether prohibition or conditional approval is to be preferred.

[47] However, It is unnecessary in this case to reach a definite conclusion on the nature of the discretion. Even if the power of selection were a discretion in the loose sense, the nature of the decision and the composition of the Tribunal justify caution and restraint by this Court on appeal.

The meaning of 'likely'

[48] It is also appropriate to say something about the word 'likely' in the phrase 'likely to substantially prevent or lessen competition' in s 12A(1). The appellants submitted that this calls for proof that SLC is more likely than not to occur, ie that proof is required on a balance of probability. They also referred to s 68 which provides that the standard of proof in proceedings in terms of the Act is (save in respects not here relevant) proof on a balance of probability.

[49] Depending on its statutory context, the word 'likely' may mean 'more likely than not' or 'reasonably possible' or 'reasonably probable'. For example, in trade mark legislation the phrase 'likely to deceive' has been held to connote a reasonable possibility of deception rather than a probability (*Bristol Laboratories Inc v Ciba Ltd* 1960 (1) SA 864 (A) at 870 E-G); and in safety legislation the phrase 'likely to cause danger of fire' has been held to connote an appreciable or reasonable risk rather than that that which is likely to occur on a balance of probability (*S v Protea Medical Supplies (Pvt) Ltd & Another* 1972 (2) SA 386 (RAD) at 390B-D; and see also *S v Madlavu & Others* 1978 (4) SA 218 (E) at 221A-222G). In England, the phrase 'likelihood of harm' in relation to orders for the protection of children has been held to mean a real or substantial risk of harm, not that harm is more probable than not (*Re H & Others (Minors)* [1996] 1 All ER 1 (HL) paras 18-25 and 64-69; *Re J (Children)* [2013] 3 All ER 1 (SC) paras 15-21).

[50] The fact that the burden of proof in proceedings is proof on a balance of probability is not inconsistent with interpreting the word 'likely' as meaning something less than a balance of probability. That is to confuse the burden of proof with that which must be proved, a point trenchantly made in the English decisions previously mentioned (*Re H* paras 85-96; *Re J* paras 48-49). The facts from which the conclusion is drawn that there is a reasonable possibility of a future risk

eventuating must be established on a balance of probability. In personal injury cases, for example, a victim who has suffered injury X may claim (say) 20% of the future cost of treating condition Y on the basis that because he has suffered injury X he has a 20% risk of developing condition Y. What he has to prove is the 20% risk. How he proves it is by establishing on a balance of probability that the defendant negligently caused injury X and that persons with injury X have a 20% risk of developing condition Y. In business rescue proceedings the applicant must prove that there is a reasonable prospect of the company being restored to financial health. This assessment must be made with reference to facts duly established. If those facts are disputed, the *Plascon-Evans* rule applies (*FirstRand Bank Ltd v Normandie Restaurants Investments & Another* [2016] ZASCA 178 para 16), implicit in which is that if the factual disputes are referred to oral evidence they must be decided on a balance of probability.

[51] There is a considerable body of case law in Australia dealing with the interpretation of the word ‘likely’ in the Australian Competition and Consumer Act, including a likely lessening of competition. In *Tillmanns Butcheries Pty Ltd v Australasian Meat Industry Employees’ Union* [1997] FCA 85, Deane J interpreted ‘likely’ as meaning ‘a real chance’ (paras 10-13), a view followed in in a number of later competition cases.[1] The issue was discussed at some length by Yates J in *ACCC v Metcash Trading Ltd* [2011] FCAFC 151. He considered that the standard was proof on a balance of probability. The other two judges said that it was unnecessary to decide the question. In my respectful view, Yates J’s discussion appears not to appreciate the distinction I have highlighted between the burden of proof and that which must be proved. The same criticism can be made of the decision of the Canadian Supreme Court in *Tevita Corporation v Canada (Commissioner of Competition)* 2015 SCC 3 (CanLII) para 66.

[52] In the Australian cases the interpretation of ‘likely’ as meaning a ‘real chance’ is strengthened by the fact that in the Australian legislation the phrase is ‘has the

[1] *News Ltd v Australian Rugby Football League Ltd & Others* [1996] FCA 1256 paras 565-571; *Monroe Topple & Associates Pty Ltd v Institute of Chartered Accountants in Australia* (2002) 122 FCR 110 para 111; *Australia Gas Light Company v ACCC* [2003] FCA 1525 paras 341-356; *Universal Music Australia Pty Ltd v ACCC* [2003] FCAFC 193 para 247; *Seven Network Ltd v News Ltd* [2009] FCAFC 166 paras 749-750.

effect or is likely to have the effect'. If 'likely' were interpreted to mean more likely than not, the preceding words ('has the effect') might be rendered nugatory. Although this distinction is not present within s 12A itself, it is not without significance that whereas s 12A uses the phrase 'likely to substantially prevent or lessen competition', the prohibitions in ss 4 and 5 refer to conduct which 'has the effect of substantially preventing or lessening competition'. This is the same difference in phraseology emphasised in the Australian cases. On a parity of reasoning, it would suggest that for purposes of the prohibitions in ss 4 and 5 a substantial preventing or lessening of competition must be proved on a balance of probability whereas the test is less exacting in s 12A. This would not be an irrational distinction.

[53] There is thus much to be said for the view that 'likely' in s 12A(1) means reasonably probable rather than more probable than not. One is concerned with a predictive exercise where future outcomes cannot be measured with fine callipers. At the level of policy, I see no objection to prohibiting a merger where there is a reasonable probability that it will give rise to SLC and where there are no countervailing pro-competitive gains or public policy considerations. Of course, the stronger the probability of SLC, the more weighty the pro-competitive gains or public policy considerations would have to be in order for the merger to be approved and vice versa.

[54] However, in the absence of full argument I am reluctant to express a final view, given the importance of the point. In the present case it is unnecessary to reach a definite conclusion. The case proceeded on the basis that the merger would bring about a likely SLC, even if the SLC were relatively short-lived. The real question is whether the Commission bore the onus of proving the likely duration of the SLC and thus whether the proposed five-year supply agreements were or were not adequate to address the likely SLC. For reasons I have explained, I do not think the Commission bore such an onus. If the Tribunal was satisfied that there was a likely SLC for at least some future period and if the Tribunal had grounds for regarding it as reasonably possible that the SLC would persist beyond the period of the proposed supply agreements (or any modest extension thereof), a prohibition of the merger was a permissible outcome, even if it was not the only permissible

outcome. (I leave aside, for present purposes, questions of public policy and countervailing pro-competitive gains.)

Projected demand for andalusite

Introduction

[55] The merging parties contended that global demand for andalusite would enjoy compound annual growth rate ('CAGR') of between 2,5% and 4,5%. Based on their view as to their sustainable capacities, they predicted that they would both become capacity-constrained by 2018 at the earliest or 2022 at the latest.

[56] Mr Parte testified that growth was expected to come from increased demand for refractories and increased penetration of andalusite in the alumina-silicate mix of refractory raw materials (ie in substitution for mullite, bauxite etc).

Historic demand for andalusite

[57] Mr Parte presented a graph of andalusite sales from 2005-2014 showing that, following a period of instability between 2009-2011, the CAGR from 2012-2014 was 4,7%.[2] The CAGR is affected by the period over which it is measured. Over the period 2005-2008 the CAGR was 7,6%. There was a slump in 2009 following the global financial crisis of late 2008. Global sales in 2014 had not yet recovered to the levels of 2007 and 2008 (298 KT as against 307 KT and 318 KT), so that if one had done the measurement from 2007 or 2008 to 2014 the CAGR would have been negative. If one measured 2011-2014 the CAGR was 0,9%. Over the full period (2005-2014) the CAGR was 1,7%. Apart from the significant differences arising from the selected period, Mr Murgatroyd testified that historical figures were a very poor predictor of future performance, inter alia because historically demand for andalusite and for steel had been volatile.

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[2] In respect of the period 2010 to 2014 the figures were subsequently adjusted in the light of AR's actual sales as against those which Parte had previously estimated. These adjustments do not materially affect the picture.

[58] It is impossible to say whether, within the period 2018-2022 or within a few years thereafter, there will be another event similar to the global financial crisis of 2008. If such an event were to occur, resulting in a significant drop in demand for andalusite (the drop from 2008 to 2009 was 36%), it might take some years for demand to recover. The reaching of the parties' capacity constraints would be deferred or capacity constraints already reached would be released, leaving the parties with excess supply capacity.

[59] It is noteworthy that as recently as 2012 and 2013 Imerys was perturbed by estimated global surplus andalusite capacity of 35%. In strategic documents from that period Imerys […]. As Mr Parte frankly said, the way to address overcapacity is to 'consolidate the industry'. Barely three years later the merging parties were asking the Tribunal to approve the merger on the basis of a completely different vision for the andalusite market.

Internal Imerys forecasts

[60] In an internal strategic review of January 2013, Imerys forecast CAGR of 1% for alumina-silicates over the period 2015-2016. Mr Parte dismissed this as an unfinished working document. The CAGR of 1% p/a was, however, repeated in Imerys' Project Dias report of December 2013 which evaluated the proposed AR acquisition. Mr Parte said that this was Imerys' 'best guess at the time'. In Imerys' five-year plan of April 2014 the projected CAGR for alumina-silicates in the 55-70% alumina range over the period 2014-2018 was 2,4%. The Tribunal was unimpressed by the latter projection because it did not relate specifically to andalusite and because it did not take into account the post-April 2014 softening in steel demand. While there is merit to these criticisms, perhaps the more important point is that the documents show that projections can change significantly within the space of a couple of years. In the present case the conditional approval of a merger to monopoly rests on a projection of CAGR made in 2016 for a period of five years or more.

The Roskill report

[61] A similar observation can be made about the Roskill report published in December 2012 in which steel production was forecast to grow at a CAGR of 3,1% until 2017. As the Tribunal observed, this forecast turned out to be very inaccurate. This does not mean that the Roskill report was a bad one (it is a voluminous analysis running to 446 pages) but it does suggest that long-term projecting is a mug's game.

The GIA report

[62] The merging parties placed considerable reliance on a refractories report issued by Global Industry Analysts Inc ('GIA') in May 2014. The report projected that global market for refractories would grow at a CAGR of 4,6% over the period 2013-2020. Mr Parte adopted this figure in his witness statement (as a 'high level assumption') because, in his view, it was the most recent independent market report available. The projection did not relate specifically to refractories using andalusite or even alumina-silicates; it related to refractory demand as a whole. Mr Murgatroyd conceded that the 4,6% projection was 'a very general number' and could 'dramatically underestimate or dramatically overestimate growth'. In fairness, I should observe that if one focused on non-clay refractories (of which andalusite is part), global demand growth was projected at 5,2%. Nevertheless, non-clay refractories in the GIA report cover a wide variety of refractory materials including magnesia, chrome, zirconia, alumina-silicates, extra high alumina and graphite.

[63] Most of the parties' exports go to Europe. GIA projected European demand growth for all refractories at 3,4% and for non-clay refractories at 4%. The projected non-clay refractory demand in the parties' main European export destinations (Germany, Spain and Poland) ranged from 3,3% to 3,7%. The other main export destination is China, where GIA projected non-clay refractory demand of 5,7%.

[64] When Mr Parte was asked why he adopted GIA's figure of 4,6% when his own earlier forecast had been 2,4%, he replied that his earlier figure assumed that andalusite would only enjoy its pro rata share of refractory growth and did not allow

for penetration (ie persuading non-andalusite customers to switch to andalusite). To this I would observe that GIA's figure of 4,6% was a high-level projection for refractory demand as a whole, unrelated to andalusite penetration. Any correspondence between GIA's figure of 4,6% and Mr Parte's earlier projection of 2,4% as adjusted for andalusite penetration would be entirely fortuitous. As the Tribunal observed, Mr Parte's answer implied that penetration would almost double the pro rata projected growth.

[65] Even if one or other of the GIA projections were accepted as a reasonable proxy for andalusite growth (despite the fact that about a year previously Imerys had projected 2,4% for a more focused group of products), they remain projections at a point in time. I think it can be taken as certain that GIA's projections did not allow for the possibility of a global financial crisis within the projection period. The report was introduced with the caveats one might expect: GIA did not accept responsibility for the information in the report, observing that it was constrained by the credibility of the primary and secondary research sources; several analytics and presentations in the analysis were said to be of a speculative nature and had to be used with careful consideration of the limitations.

[66] To these caveats I may add that GIA did not say, and I am sure did not intend to convey, that, on a balance of probability, demand for refractories would grow at the rates specified in the report. GIA was providing its best estimate. The authors observed, for example, that the industries which used refractories were rapidly transforming and that refractory technologies were undergoing significant improvement. There was increasing demand for advanced and long-lasting refractory products, factors which were expected to curtail the use of refractories.

[67] The unreliability of even the best-informed projections is illustrated by the global GDP estimates for 2014 and 2015. In a section headed 'Improving Global GDP to Drive Global Refractories Market', GIA said that the 'recovering global GDP' was forecast to provide 'a fertile environment for demand growth in the coming years'. Global GDP growth, recorded at 3% in 2013, was forecast to continue to improve to 3,7% and 3,9% respectively in 2014 and 2015. A country breakdown of the projection was given.

[68] These GDP estimates have turned out to be significantly higher than actual GDP growth. According to the World Economic Outlook reports published by the International Monetary Fund in the latter part of 2015 and 2016, global GDP growth in 2014 and 2015 was 3,4% and 3,2% respectively. The world's largest economy, the USA, had actual growth in 2014 and 2015 of 2,4% and 2,6% as against GIA's projections of 2,8% and 3%. Other discrepancies for 2014 and 2015 include the UK (2,8% and 2,2% as against the projected 2,8% and 3%), Japan (-0.1 percent and 0,5% as against the projected 1,7% and 1%), China (7,3% and 6,9% as against the projected 7,5% and 7,3%) and Mexico (2,1% and 2,5% as against the projected 3% and 3,5%). In the case of Russia and Brazil, GDP growth was actually negative (in the case of Russia, 0,6% and -3,7% as against the projected 2% and 2,5%; in the case of Brazil, 0,1% and -3,8% as against the projected 2,3% and 2,8%). The projections for the European Union were relatively close to the mark (actual growth of 0,9% and 2% as against the projected 1,4% and 1,7%). Only India significantly outperformed the projections (7,3% and 7,6% as against the projected 5,4% and 6,4%).

[69] There is a further reason, not mentioned by the Tribunal, for being cautious about the GIA projection. South Africa represents a negligible part of global demand for refractories but is a significant part of domestic demand for the merging parties' andalusite (about […%] for ISA and […%] for AR). In the GIA report South Africa is part of the region Middle East & Africa (which includes Iran, Iraq, Israel, Kuwait, Saudi Arabia, Syria, the UAE 'and Africa'), which in total is only 3,64% of global demand for all refractories and 4,17% of global demand for non-clay refractories. South Africa is in turn only a fraction of the Middle East & Africa region. Demand for non-clay refractories in this region is projected by GIA to grow by a CAGR of 5% over the period 2013-2020 but it is not possible to discern what growth GIA has attributed to South Africa. The report does not explain how the authors arrived at 5%.

[70] The only country-specific information for the Middle East & Africa region concerns historic crude steel production which, according to GIA data, makes up about 75% of the demand for the region's refractories. GIA gives historic data for Egypt, South Africa, Saudi Arabia and the UAE. Although South Africa as at 2013

was still the largest steel producer of these four countries (just above Egypt), its production declined by more than 20% from 2007 (9,098 million tons) to 2013 (7,22 million tons). Egypt and Saudi Arabia enjoyed modest growth (CAGR of 1,4% and 2,4% respectively) while UAE seems to have entered the market in 2007, increasing from 90 000 tonnes in that year to 2,878 million tons in 2013.

[71] If industrial growth in South Africa is positive over the next few years, it may well be below global and regional demand. According to the IMF reports previously mentioned, South Africa's GDP growth in 2014 and 2015 was 1,5% and 1,3%. The IMF estimates growth of 0,1% and 0,8% in 2016 and 2017. It might not be unreasonable to assume growth of 1% or less over the next five years for the South African component of the parties' andalusite demand.

[72] The Tribunal was dubious about the value of the GIA projections, given that they did not relate specifically to andalusite and were not separated by country of sale. The merging parties' thesis was that, in the absence of a detailed independent report relating specifically to andalusite, growth projections for refractories in general, and for non-clay refractories in particular, was the best proxy for andalusite demand growth, the assumption being that andalusite would enjoy its pro rata share of demand growth.

[73] The potential frailties of the assumption include those arising from the controversial questions of functional substitutability. If, as the Commission contended, customers do not regard andalusite as functionally substitutable in certain applications, projections for andalusite would need to take into account demand for refractories in those particular applications. If, as the merging parties contended, andalusite is functionally substitutable across the board, andalusite would be at risk of losing out to mullite, bauxite and other raw materials. Whether that would happen might depend on how aggressively the suppliers of other refractory materials price their products. That would depend, in turn, on the existence and extent of surplus production capacity for these other materials. If foreign customers sense that andalusite production will become constrained, they might prefer to commit to other materials for which supply is expected to remain plentiful.

Concluding observations on growth projections

[74] It is easy to snipe at GIA's report, yet in the absence of anything more specific it might, despite its frailties, be the best independent guide to andalusite demand growth. Where a court has to make an economic projection (eg in assessing a damages claim for loss of future profits), it must do the best it can on the available evidence. The Tribunal was not placed in that position. It did not have to make a projection. The Tribunal needed to decide whether to prohibit the merger or allow it conditionally. If the Tribunal considered, on all the evidence, that there was a reasonable possibility that matters would so turn out that the proposed conditions did not neutralise the SLC, it was entitled to prohibit the merger.

[75] The Commission's economist, Dr Mncube, considered that, on the limited evidence available, an appropriate global growth forecast for andalusite was between 1% and 2,4% (though his view was that even these figures could not be used beyond 2018 – the more distant future in his opinion was simply not foreseeable or predictable). This is the range provided by the two internal Imerys documents mentioned earlier. Although, like the Tribunal, I would not regard either of those documents as cogent evidence of future demand growth, the GIA report, for the various reasons I have given, is also not a secure foundation for concluding that domestic andalusite competition would face no real risk if the proposed conditions were assessed on the basis of an annual CAGR ranging from 2,5% to 4,5%. A conservative though plausible scenario would be a domestic CGAR of 1% and an international CGAR (excluding China) of 2%. (China is a special case which I deal with separately below.) A global shock (whether caused by economic or political developments or natural disaster) might throw even this conservative scenario into disarray.

[76] If one of AR or ISA were to become capacity-constrained at a significantly earlier stage than the other, one would need to take into account, as Mr Murgatroyd observed, that the share of demand growth which would otherwise have been attributed to the capacity-constrained firm would shift to the unconstrained firm, thus absorbing the latter's surplus capacity sooner than would otherwise have been the case. Put differently, the CGAR attributable to the unconstrained firm would, as from

the date on which the other firm became capacity-constrained, be significantly higher than the estimated global CGAR (eg it might rise from 2% to 3,5%). The same principle would apply if, for example, Imerys' French mine or Andalucita became capacity-constrained earlier than the South African firms. (The information regarding Andalucita's output and sustainable production capacity is unclear. Mr Parte, who believed Andalucita had been capacity-constrained since 2013, estimated Andalucita's 2014 output at 40 KT. Mr de Hemptine of Vesuvius put its output at 35 KT. In reply to questions from the Commission, Andalucita stated that its production capacity was […])

Growth from penetration - China

[77] Mr Parte testified that, apart from ordinary projected growth, ISA and AR could expect further growth by penetrating foreign markets, particularly China. (The European andalusite market is more mature and stable.) Although andalusite makes up only 0,5% of the Chinese market, the market is very large. The andalusite consumed in China probably exceeds the whole of the South African andalusite market. So even modest penetration could be significant for andalusite producers. Andalusite consumption in China increased from 15 KT in 2004 to 31 KT in 2014 (a CAGR of 13,3%).

[78] The evidence as to how likely this growth is to continue was equivocal. Steel production in China is no longer growing. Mr Murgatroyd referred to World Steel Association figures indicating that Chinese steel production in 2015 decreased by 2,3% and projecting negative Chinese steel demand growth for 2016 of -2%. He conceded that there did not seem to be a reasonable foundation for believing that demand for andalusite in China would grow as a consequence of increased steel production. According to Mr de Hemptinne, Vesuvius did not observe an evolution in China towards andalusite. Chinese refractory customers generally produce lower grades of steel where the performance offered by andalusite-based refractories is not highly valued. His view was that andalusite was not price-competitive, particularly in relation to Chinese bauxite. Even if Chinese steel producers began to place greater emphasis on quality, the critical refractory component relevant to steel

quality was in the continuous casting process, a process in which andalusite-based refractories are not used.

[79] The position might be different if andalusite were a superior raw material for which bauxite was not a functional substitute. Functional substitutability is not an issue we have been asked to decide so I merely observe that the appellants' case was one of general substitutability and that bauxite constrained andalusite prices.

[80] A point made by the Tribunal is that in September 2015 Imerys mothballed its Yilong andalusite mine in China, having already cut back on production in early 2014. If Imerys believed that China was ripe for further penetration, one might have expected Imerys to keep the Yilong mine going since andalusite imported into China from South Africa would cost Chinese customers more than andalusite produced at Yilong. […].

[81] As a fact, ISA and AR have historically exported andalusite to China and the volume of these exports has grown. According to data contained in RBB's first report, ISA and AR's Chinese exports in 2014 were […] KT and […] KT respectively, making up 13% and 10% respectively of their total sales. This indicates that the negative factors mentioned by Mr de Hemptinne are not a complete bar to Chinese penetration. It is not plausible that, following nine years of penetration at a CAGR of 13,3%, there would be no further penetration after 2014. Mr Bain testified that there were Chinese andalusite mines on the Mongolian border which could only operate for eight months in the year and which produced poor quality material. He thought that AR could take volumes from them.

[82] Quite how hard ISA and AR will work to achieve increased sales in China may depend, inter alia, on the value of the South African currency relative to the euro and the dollar. AR uses a financial metric called 'on-mine contribution' ('OMC') to assess the profitability and relative merits of sales to different regions. Mr Bain was cross-examined on AR's OMC figures for China. […].

[83] Nevertheless, and in the light of the history of sales to China, It might not be unreasonable to assume that the parties' Chinese exports will grow at a CAGR of,

say, 8% (this would be a blend of overall refractory demand growth and penetration).

Sustainable capacity

ISA's sustainable capacity

[84] The parties are agreed that ISA's sustainable capacity is […] KT. Its 2015 sales were […] T, giving it surplus capacity of […] T. I should, however, observe that the figure of […] KT is the midpoint of an agreed sustainable range of […] KT – […] KT. If one were obliged to choose a specific number, eg for purposes of assessing a claim for damages, one would probably choose the midpoint. Merger assessment is different. For purposes of determining whether the proposed conditions are adequate, the Tribunal was entitled to consider whether the conditions would prevent a SLC in all reasonably possible future scenarios. There would thus be a case for testing the adequacy of the conditions with reference to the upper limit of the sustainable range, namely […] KT.

[85] The merging parties argued that for purposes of determining ISA's surplus capacity one should add to ISA's 2015 sales a portion of the sales previously made by the closed Yilong mine. Yilong's 2015 sales amounted to […] T. The merging parties contended that these sales would be retained within the Imerys group, half being supplied by ISA, the other half by Imerys' French mine.

[86] The Tribunal rejected the proposed adjustment, noting that because Yilong was closed in September 2015, ISA should have been able to produce evidence that it was now supplying Chinese customers previously supplied from Yilong. No such evidence was adduced. (Imerys' strategic document of July 2015 for the closure of the Yilong mine envisaged […].) The Tribunal observed that other suppliers, such as Andalucita in Peru and some smaller Chinese mines, could plausibly win a significant part of the business. The loss of business to other suppliers was a risk identified by Imerys when closing Yilong. Furthermore Imerys has contemplated the sale of the Yilong mine, which would place its andalusite production in the hands of a potential competitor. To this may be added the

possibility that, on the merging parties' view of functional substitutability, some of the Chinese customers might switch to bauxite.

[87] I do not think there is a basis for differing from the Tribunal on the Yilong adjustment. It is reasonably possible that ISA will pick up some of the Yilong sales but the converse is also reasonably possible. The possibility of such additional volumes is sufficiently accommodated by the 8% CAGR which I have suggested for the parties' Chinese volumes.

AR's sustainable capacity

[88] The merging parties contended that AR's sustainable capacity is between […] KT and […] KT p/a ([…] T and […] T p/m). The Commission's position was that AR's sustainable capacity is in the range of […] KT – […] KT p/a ([…] T – […] T p/m) and that certain efficiencies might increase the upper limit to […] KT p/a […] T p/m).

[89] The actual production achieved by AR over the three years from August 2012 – July 2015 was […] T, ie […] T p/a or […] T p/m. The best 12-month period was the most recent (August 2014 to July 2015) – […] T p/a or […] T p/m. The table setting out these figures shows that there is no necessary correlation between the volume achieved in a particular month and the extraction yield (ie the percentage of andalusite extracted from the mined ore). For example, in December 2013 there was a low volume of […] T yet the yield of […]% was the best achieved over the three years. The highest monthly volume was […] T in July 2014 where the yield was only […]%.

[90] Mr Bain, testified that AR currently faced two operational constraints in achieving higher production, namely […]. Having regard to those constraints, he considered AR's sustainable capacity to be […] KT – […] KT p/a. Although AR had not yet reached that level, this was its expectation (as reflected inter alia in internal documents) and AR priced its andalusite accordingly. Mr Bain said that although AR had not achieved all of its targets, this did not mean that it was not 'forward-looking' or was not trying to achieve those levels of production: 'We've set ourselves up and spent the capital to try and achieve those levels of output.'. […] KT p/a was the

budgeted level which AR furnished to Imerys in the course of the merger negotiations.

[91] In assessing the evidence, I think it proper to bear in mind that, by the time of the Tribunal's hearing, AR's shareholders wanted the transaction to proceed. Mr Bain and Pete Kolbe, AR's financial director and CEO respectively and also shareholders, were reaching retirement age. The merger provided an elegant exit opportunity for them. The other corporate shareholders were keen to realise a profit from their investment. Mr Bain was aware of the important issues on which merger approval would depend. He may thus have been predisposed (without any intention to mislead) to view AR's production capacity more conservatively than was previously the case.

[92] Another observation is that Imerys' contention in the merger proceedings that AR was for all practical purposes already at its sustainable capacity is difficult to square with one of Imerys' professed reasons for the transaction, namely to capture a greater share of export demand. If AR were already capacity-constrained, its acquisition could not enhance the merged entity's ability to increase export volumes. When asked about this, Mr Parte said that in his view the primary rationale for the transaction lay in the synergies which could be achieved, ie enhanced profitability for the merged entity (lower cost base), but he immediately added that this would enable the merged entity to be more competitive in foreign markets. His evidence on the subject was not altogether coherent

[93] In the merger discussions which took place in the latter part of 2013, AR told Imerys that its projected production for 2014 was […] KT. Mr Parte understood that the achievement of this figure did not require capital investment. AR's strategic plan for 2014/2015 noted that […], with annual production at […] KT. The 2015 year was […], hence budgeted sales of […] – […] KT. Mr Bain testified that at the time they thought this was sustainable. The same strategic plan recorded that the company's objective was […]. The forecast for the next five years was for production of […] KT in 2016/2017 and […] in 2018/2019.

[94] AR's 2015-2016 strategic plan, prepared in June 2015 (by which time the shareholders had approved the merger), is somewhat more muted. Nevertheless AR recorded the total capacity of its mine at […] KT p/a. The document stated that […]. This was the capacity which Imerys used in its assessment of the acquisition. In the executive overviews prepared by AR during 2015, management said that the company was aiming to achieve […] T p/m or […] KT p/a.

[95] Annual production of […] KT would equate to […] T p/m. Over the three-year period August 2012 to July 2015, AR only achieved or exceeded that monthly level on […]. Mr Bain thought that currently AR could in theory achieve […] KT but that, taking into account Christmas and Easter shut-down, […] KT – […] KT was more realistic. In re-examination he said that currently management's forecast of what AR could achieve on a sustainable basis was between […] KT and […] KT.

[96] AR did, however, have plans to address the […] issues. […].

[97] Although there is no necessary correlation between yield rates and production volumes in any given month, one would nevertheless expect – all else being equal – that improved yields would be accompanied by improved production volumes. In other words, if one mines a certain quantity of ore, a yield rate of […]% will result in more andalusite than a yield rate of […]%. If the yield in a particular month were high but the andalusite production low, it must mean that other operational problems prevented the company from mining the targeted amount of ore. Bain thought that a […]% yield was feasible for AR, even though its annual average yields over the last three years was somewhat below this (in the range […]% - […]%). AR has exhibited a pattern of improved annual yields.[3]

[98] Although […] KT p/a may represent the upper limit of what is sustainable, and although that production level has not yet been reached, it is reasonably possible that, but for the merger, and even without further expansionary capital (but after taking the steps identified by Bain to address the […] issues), AR could achieve

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[3] See 10/4729. The yields were […]% in 2007, […]% in 2008 and […]% in February 2009. There was a setback in February 2010, probably associated with an expansion of capacity, with yields again improving to […]% in February 2014, […]% in February 2015 and […]% in August 2015.

[…] KT p/a. (This is still below levels which management have in the recent past projected with apparent confidence.) The point must again be made that if one had to select a specific figure, one might select the midpoint of a reasonable range. In assessing a merger, however, one is entitled to take into account all reasonable possibilities. These include the upper limits of reasonable ranges. (If one took the reasonable range to be […] KT – […] KT, the midpoint would be […] KT.)

Further investment in capacity

[99] If one assumes no further capital investment by ISA or AR to expand capacity, the limits of […] and […] KT would be the reasonably possible sustainable capacities most favourable to the Commission.

[100] However, the ordinary reaction of market participants to demand in excess of supply is to invest in additional supply capacity. In regard to Imerys, Mr Parte said that there would need to be a very substantial increase in demand to justify further investment. Without much amplification, he put the threshold at an additional 40 KT of demand (ie above current capacity).

[101] Accepting Mr Parte's threshold of 40 KT, this additional demand would obviously not have to arise over only one or two years. What one would expect in the mining industry is that investment in capacity expansion would be based on projected demand over a reasonably lengthy future period. Upon completion of the capacity expansion, there would initially be surplus capacity which would diminish over time. It would be impossible, after reaching full production capacity, to wait for andalusite demand to grow by another 40 KT before expanding capacity. In the absence of additional capacity, demand for andalusite would not grow at all – potential andalusite customers would look elsewhere for refractory products.

[102] If ISA invested in additional sustainable capacity of 40 KT, how long would it take for demand to reach the new sustainable capacity of […] KT ([…] KT + 40 KT)? On the basis that one should have regard to all reasonably possible scenarios, one would make the merging parties' Yilong adjustment, thus giving ISA a current output

of […] ([…] T + […] T),[4] to which one would apply the upper limit of what the parties regard as a reasonable range for CAGR, namely 4,5%. On that basis, ISA would reach its current sustainable capacity of […] KT in 2018. If by then it had undertaken the capacity expansion, it would reach the new sustainable capacity of […] KT by 2024 (ie within six further years). This would seem to be an attractive investment opportunity, given the premium ISA enjoys on its exports and the likely continued depreciation of the rand in the longer term. (If one assumed a more modest CAGR of 3,5%, it would take until 2028 to reach the new sustainable capacity.)

[103] If, as the merging parties contend, the likely future scenario is towards the upper limit of their demand growth estimates, I am deeply sceptical of the assertion that the growth in demand would not attract investment in capacity expansion from one or both of ISA and AR. If there were no increase in their capacity, customers who currently use andalusite, and who have quite possibly been persuaded by the firms about the advantages of andalusite, would be unable to source the increasing quantities of andalusite which (on the parties' growth projections) the customers will need.

[104] AR has already expanded its capacity on one occasion. Bain testified that when AR entered the market in 2002 its objective was to reach […] KT p/a, which was only achieved in 2008. In 2009 the shareholders decided to expand capacity to […] KT and to address the quality issues which had dogged AR's early years. Most of this expansionary capital was spent in 2010 and 2011. There have also been operational improvements directed at enabling AR to reach production of […] KT.

[105] AR's internal documents show that further capacity expansion has been envisaged. In their due diligence performed on behalf of Imerys, Deloitte & Touche noted AR's management forecast capacity of […] KT in 2015, rising to […] KT by 2017, attributable to R[…] of expansionary capital expenditure in 2014 and

[4] Mr Murgatroyd's annual volume calculations are not in the record but both sides appear to have accepted that on the latest available data ISA's 2015 production was […] T, the starting volume used by Dr Mncube in his calculations. Although Dr Mncube provided volume calculations with and without the Yilong adjustment, I have difficulty in following his method since he seems to account for the additional Yilong volumes only in the final year of any particular set of calculations. The Yilong adjustment should be added to ISA's volumes in the first year of the calculations.

assuming a […]% yield (which management believed could be improved to […]%). […]

[106] AR's financial statements for the 2011, 2012 and 2013 financial years stated that […].

[107] AR's current strategic shareholders self-evidently would prefer […].

[108] In their merger filing the parties stated that the rationale for the transaction was to enhance the competitiveness of South African andalusite in international markets, particularly Europe and Asia, something they expected to achieve by sharing know-how and expertise, sharing fixed costs and operational efficiencies and optimisation. The merger would enable them to secure a greater proportion of projected demand growth for andalusite. If the merged entity were to become capacity-constrained within two or three years (as the parties contended), the fruits of the merger would be quite modest, since any demand thereafter would be diverted to other suppliers of andalusite or substitutable refractory raw materials. I would be surprised if the merging parties did not have expansion in mind.

[109] If, absent the merger, one or both of the parties were to invest in capacity expansion, there would be a period of some years (perhaps an additional six to eight years) during which there would be surplus capacity and thus a likelihood of pricing competition in the domestic market. If the merged entity undertook the same capacity expansion, there would during this period be a likelihood of unilateral pricing effects. Depending on andalusite demand in the long-term, there might be further cycles of investment.

[110] I should add that while capacity expansion is plausible for one or both of the merging parties, barriers to new entry are extremely high. The Tribunal's analysis of these barriers was not questioned on appeal. The merged entity would thus be most unlikely to face competition from a new entrant.

[111] Surprisingly the question of capacity expansion was not explored by the Commission's counsel in cross-examination. The Tribunal, however, raised the question with Mr Murgatroyd:

'CHAIRPERSON: Can I just ask another, what might be a very obvious question to everybody else, a non-economist asking the economist, your theory about capacity constraints is based on an assumption that no new investments will be made by either merger party?

MR MURGATROYD: Yes, no exactly. So if there was a reason…

CHAIRPERSON: So it's static?

MR MURGATROYD: Well the capacity position is static, yes. In other words, there is no regional [?] basis of expanding that capacity.

CHAIRPERSON: And not even at existing mines?

MR MURGATROYD: Yes, no, exactly, that's right.

MR WESSELS: And why should we accept that assumption that there is not the ability to add capacity and that investments would not be made, for example, by AR when it becomes capacity constrained and as you pointed out, according to you, there is room of growth especially in the export market? Why would it not invest extra money and add capacity?

MR MURGATROYD: That's certainly not my factual submission on that. I'm only basis that [?] on the fact that I've not heard any factual evidence that such investments are possible or likely, but I agree that's a factual determination for the Tribunal.'

[112] The fundamental point which I make was highlighted, in a different context, during Mr Unterhalter's cross-examination of Dr Mncube. The latter had cited declining steel capacity utilisation ratios as evidence pointing against significant growth in demand for refractories. Mr Unterhalter put to him that a decline in utilisation ratios could be explained by capacity expansion rather than declining production. Mr Unterhalter developed this point further as follows:

'So the important point about this is that what's driving capacity utilisation ratios is because those in the industry are actually putting more capacity into the market, not less, and more capacity in the market is generally a driver towards a view that you will make those investments because you think there's going to be growth. That's why you put capacity into the market… It's not based on the fact that steel, the people who are involved in the steel industry, are pessimistic about the future, they are putting in more capacity because they think there are good prospects for growth. Why else do you invest in capacity?'

The factual accuracy of what was put to Dr Mncube in relation to steel production is not for present purposes germane but the logic of the underlying principle is indisputable.

Conclusion on counterfactual

[113] I can now draw the threads together. Of the reasonably plausible scenarios, the one which tests the adequacy of the proposed conditions most severely is the lowest reasonably plausible estimate of demand growth and the highest reasonably plausible estimate of current sustainable capacity. I take the former to be 1% for South African demand, 8% for Chinese demand and 2% for the rest of foreign demand. I take the latter to be […] KT for ISA and […] KT for AR. The total sales made by ISA and AR in 2015 were […] T and […] T respectively. I disregard the Yilong adjustment. Based on data contained in RBB's first report,[5] I assume the following split for the parties' respective sales: ISA – […]% domestic, […]% Chinese and […]% remaining foreign sales; AR – […]% domestic, […]% Chinese and […]% remaining foreign sales.

[114] On these assumptions, ISA would become capacity-constrained in 2022 while AR would become capacity constrained in 2023. If one assumed total sustainable capacity of […] KT for ISA and […] KT for AR, they would both become capacity-constrained in 2021. This does not allow for the possibility that Imerys' French mine and/or Andalucita might become capacity-constrained at an earlier time, thus resulting in an increase in the global demand for the andalusite produced by ISA and AR.

[115] In the foregoing scenario, and assuming everything else in the parties' favour, an eight-year supply agreement (reckoned from the beginning of 2016) would, on the logic of the economists' agreement, neutralise the merger's unilateral pricing effects. We do not know for certain that the appellants would implement the merger

[5] Table 2 at 2/465.

if an eight-year supply agreement were stipulated as a condition but they might well do so.

[116] I should add that the discussion up to now assumes that – absent the merger – domestic EPP pricing would occur simultaneously with the reaching of capacity constraints. The assumption is not strictly accurate. For reputational and other reasons, the individual firms would need to implement domestic price increases in reasonable increments. This would be particularly so in the case of AR's largest customer, Vesuvius. Mr Murgatroyd acknowledged that the achieving of EPP pricing might lag behind the reaching of capacity constraints but said that it was extremely difficult to quantify the lag. Dr Mncube shared this view. It was put to Dr Mncube that even if there was this lag, it had nothing to do with competition, since rivalry would cease once both firms became capacity-constrained. Again that may not strictly be accurate. A substantial increase in domestic prices might, at least in the short term, cause a decrease in domestic demand, thus freeing up some capacity which would otherwise be fully used. This dynamic might thus generate at least some price competition until both firms were satisfied that their domestic customers would accept EPP prices.

[117] There are two further possibilities which need to be taken into account when deciding whether an eight-year supply agreement would suffice. The first is the possibility of a global shock of similar magnitude to the 2008 financial crisis. Such an event would cause a significant step-down in demand. If such an event were to occur within the eight-year period of the supply agreement or reasonably shortly thereafter (say within three years), surplus capacity could again be a reality. Naturally nobody can predict whether such an event will occur but it must be accepted as a reasonable possibility within the 20-year period following the 2008 crisis.

[118] The other possibility is that, absent the merger, one or both of the parties might undertake capacity expansion. For reasons I have explained, I regard that as a reasonable possibility, particularly if over the next two or three years demand for andalusite grows at the levels the parties themselves predict. If capacity expansion

were to occur, there are likely to be a number of years of surplus capacity during which domestic price competition could take place.

[119] The draft order put up by the merging parties in the Tribunal, and repeated in this Court, contained a clause that either the merged entity or the Commission could, at any time after the merger, approach the Tribunal for a reconsideration of the conditions and that, in such an event, the Tribunal could on good cause shown lift, revise or amend any of the conditions. Mr Murgatroyd, who agreed that the reaching of capacity constraints was not a 'once-off and irreversible event', pointed to this clause when asked what would happen if, after the expiry of the supply agreements, circumstances arose which would, but for the merger, have caused domestic prices to fall below EPP. He said that an 'unforeseen market event' (some 'huge hit to export demand') was exactly the kind of situation that would trigger the reconsideration clause.

[120] There would, however, be considerable practical difficulty in applying the reconsideration clause if there were a global shock in, say, nine or ten years' time. There would probably be considerable contestation on what impact the event in question would have had on the firms' prices had the merger not occurred. It might be very difficult to reach a definite conclusion as to how the firms' prices would have evolved but for the merger. There might have to be a lengthy trial, with factual and expert evidence, just to decide whether the conditions need to be varied. In the meanwhile the merged entity would be entitled to continue pricing domestically free from the competitive constraint which the separate firms would have placed on each other.

[121] Even if the reconsideration clause were able adequately to address the effects of a global shock, it would not address the concerns arising from the possibility that, absent the merger, one or both of the firms might undertake capacity expansion. The Commission would not be entitled to a reconsideration merely because the merged entity were to undertake capacity expansion. The Commission would need to prove that, but for the merger, one or both of the firms individually would have undertaken a similar capacity expansion, something that might be very hard to prove.

[122] There is another observation I wish to make regarding the Part 1 remedy. It will be recalled that during the period of the Part 1 remedy (whether it be five or eight years), domestic customers' current prices will not be increased by more than PPI per annum. This was the remedy which the economists agreed would be sufficient during that period. If, during the period of the proposed supply agreements, there were no significant freeing up of production capacity (such as might be caused by a global shock or capacity expansion), it is probably fair to say, given current production levels and anticipated demand growth, that domestic customers would not, absent the merger, be likely to enjoy prices from ISA and AR which are lower than their current prices plus PPI. (It was put to Dr Mncube that increases in administered prices such as water and electricity and increases in mining wages have historically been well above PPI.) If, however, there were a significant freeing up of production capacity during the period of the proposed supply agreements, competition between ISA and AR coupled with a decrease in EPP might – absent the merger – result in lower annual increases than PPI or even a reduction in prices. The proposed remedy would deprive domestic customers of this beneficial outcome.

[123] In summary, the Tribunal was asked to approve a merger which would irreversibly change the structure of the domestic market (from duopoly to monopoly), on the basis of conditions which would (subject to the caveat mentioned in the previous paragraph) protect the domestic market for five years (perhaps extended to eight years) but deprive it of the price competition which would occur in the event of plausible future events such as a global shock and capacity expansion. In the absence of countervailing pro-competition gains or public interest considerations, prohibition rather than conditional approval is in the circumstances a legitimate choice of remedy.

<u>Public interest considerations against the merger</u>

[124] The main public interest consideration against the merger arises from its alleged rationale, namely to enhance the merged entity's ability to capture anticipated demand growth for andalusite, particularly export demand. This means that in due course all the parties' production would be diverted to the export market

unless domestic customers were willing to pay EPP. This might eventually happen even without the merger but the merger will enable the parties (on their view of its benefits) to reach this point sooner, to the detriment of refractory manufacturers and downstream consumers. Witnesses from these manufacturers and consumers, such as Vesuvius, ArcelorMittal, Scaw and Magdol, gave evidence of the prejudice they would suffer if andalusite ceased to be available to them or was only available at significantly higher prices.

[125] The proposed conditions do not entirely address this concern. If there were no reasonable possibility of its taking longer than eight years for both parties to become capacity-constrained, an eight-year supply agreement would neutralise the unilateral price effects of the merger because, absent the merger, the duopoly's domestic prices would rise to the domestic monopoly price once they were both capacity-constrained.

[126] If the domestic monopoly price were higher than EPP, the merged entity would be able to charge the higher price as soon as the eight-year supply agreement ended. Absent the merger, the firms would be incentivised to compete on domestic pricing because they could divert export volumes to the more profitable domestic market. Given the large quantity of export volumes that would be available for this purpose, competition of this kind would continue for many years and would prevent the domestic price from rising significantly above EPP. This eventuality (a domestic monopoly price which is higher than EPP) is addressed by the Part 2 condition (the EPP price cap). What is unattractive about the solution is that whereas the Part 1 condition is time-bound (say eight years at the most), the Part 2 condition has to operate in perpetuity. The condition has to be monitored by customers and the Commission.

[127] What if the domestic monopoly price were lower than EPP in five or eight years' time? In that event the individual firms would have a strong incentive to divert volumes to the export market[6] but it would take much longer than eight years for

[6] As Mr Murgatroyd said, 'you could in principle have a situation where a move of domestic prices to export parity levels could result in no domestic sales, but that would only be the case if domestic customers were unwilling to pay those export parity prices".

both of them to reach the stage where they could sell their entire output to the export market. If one were to apply an 8% CAGR to Chinese exports and 2% CAGR to other exports, ISA could only achieve export sales equal to its midpoint sustainable capacity ([…] KT) and highest sustainable capacity ([…] KT) in 2026. AR would only reach its midpoint and highest sustainable capacity ([…] KT and […] KT) in 2030 or 2031. Given the rationale for the merger, the merged entity expects to reach that point sooner than the individual firms could do. Accordingly, if the domestic monopoly price were lower than EPP, domestic customers and downstream consumers would be prejudiced by the merger because domestic volumes would be lost to export markets sooner than would be the case absent a merger. (The domestic volume guarantee requires domestic customers to pay EPP which, on this scenario, is higher than the domestic monopoly price. So the volume guarantee would not prevent a diversion of domestic volumes to the export market.)

[128] It is not possible to say whether, after the expiry of the eight-year period, the domestic monopoly price will be lower or higher than EPP. It would be purely coincidental if the domestic monopoly price equalled EPP. Mr Parte thought that in the current state of the market the domestic monopoly price would not be higher than EPP. Mr Bain said that although AR's aim was to increase domestic prices to the EPP level, it would take more than five years to do so at annual increases of […]% p/a. I think one has to allow as a reasonable possibility that the domestic monopoly price could be lower than EPP, particularly if there were a significant depreciation in the rand's value against the euro and dollar. In that event, as I have explained, domestic customers and consumers would be prejudiced by the merger if it achieves the parties' objective of enabling them to increase their export sales more rapidly.

[129] Of further relevance to the public interest is that the merged entity will have as its object not only to increase its export sales but to maximise its sales to those markets paying the highest export premium. If the merged entity achieves this objective, EPP – which in terms of Part 2 of the conditions will be the price cap after the lapsing of the supply agreements – will be higher than would have been the case without the merger.

[130] These concerns in the public interest are substantial. For present purposes, however, the question is not whether those concerns are sufficiently substantial to constitute an independent basis for prohibiting the merger. Given the likely SLC in the short to medium term, the public interest considerations can legitimately be taken into account in deciding whether prohibition or conditional approval is the appropriate outcome.

Countervailing considerations in favour of the merger

[131] The merging parties do not seem to have argued that there were pro-competitive gains or public interest considerations which justified the merger if it should otherwise be found that there were grounds to prohibit the merger. The Tribunal did not deal with this in its reasons nor was it covered in the parties' heads of argument before us.

Conclusion

[132] In my opinion, the Tribunal could legitimately conclude that the proposed conditions did not address all the SLC to which the merger could reasonably possibly give rise. There is also a reasonable possibility that the public interest would be substantially prejudiced in the period following the lapsing of the proposed supply agreements.

[133] In my opinion, therefore, the appeal should be dismissed.

[134] One concluding observation: The issues regarding demand growth and the parties' sustainable production capacities were not matters concerning which either of the economists had expertise yet both were questioned extensively thereon. They were asked to express views about the import and weight of evidence given by others on these issues. Much of this evidence was unhelpful. Care should be taken to confine expert testimony to the scope of the witness' expertise.

[135] The following order is made: The appeal is dismissed with costs including those attendant on the employment of two counsel.

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ROGERS JA

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