[2025] UKPC 48
Privy Council Appeal No 0091 of 2023

JUDGMENT

Maso Capital Investments Ltd and another (Respondents) *v* Trina Solar Ltd (Appellant) (Cayman Islands)

From the Court of Appeal of the Cayman Islands

before

Lord Lloyd-Jones
Lord Hamblen
Lord Leggatt
Lord Burrows
Sir Andrew Popplewell

JUDGMENT GIVEN ON
30 September 2025

Heard on 8 July 2025

Appellant
Graham Chapman KC
Nick Hoffman
Luke Fraser
(Instructed by Harney Westwood & Riegels (Cayman) LLP and Seddons GSC LLP)

Respondent
Mark Howard KC
Jonathan Scott
Rupert Bell
(Instructed by Edwin Coe LLP)

SIR ANDREW POPPLEWELL:

Introduction

1. The appellant is a Cayman Islands exempted limited company ("the Company"). There are two parts to its business. The major part (by revenue) involves the manufacture and sale of solar panels and associated equipment for residential and commercial use. This was referred to as its upstream business. In the other part, referred to as its downstream business, the Company develops, designs, manages, and sells or operates solar power projects.

2. The business was founded by Mr Jifan Gao ("Mr Gao") in 1997 and carried on by his Chinese company, Changzhou Trina Solar Energy Co Ltd ("Trina China"), until 14 March 2006 when the Company was incorporated as a listing vehicle to take Trina China public. Trina China became the wholly owned subsidiary of the Company. Mr Gao has at all material times been the Chairman of Trina China and the Chairman and Chief Executive Officer of the Company. From 2006 the Company's shares were listed on the New York Stock Exchange as American Depositary Shares ("ADSs"). In 2015 Mr Gao reached an agreement to take the Company private by way of merger with a group of equity investors ("the Buyer Group"), which would acquire the shares in the Company for US$11.60 per ADS ("the Merger Price"). At that time Mr Gao, together with his wife and his holding company, owned some 5.6% of the Company's shares. The merger was approved by the board of the Company on 1 August 2016. At an extraordinary general meeting of the shareholders held on 16 December 2016 ("the EGM") the Company approved the merger between the Company and Fortune Solar Limited, a company indirectly owned by the Buyer Group, at the Merger Price. At the EGM, approximately 97.8% of the shares were voted in favour of the merger, of which about 59.4% of the shares were expressly voted, and the remainder were deemed to be voted in accordance with the Company's recommendation under the proxy arrangements. The respondents were two dissenting shareholders whose combined shareholding amounted to some 1.75% ("the Dissenters"). The merger was completed on 13 March 2017.

3. Under section 238 of the Companies Act (2016 revision) of the Cayman Islands ("the Companies Act"), where there has been a merger or consolidation involving at least one Cayman Islands company pursuant to Part XVI of the Companies Act, a dissenting shareholder is entitled to payment of the "fair value" of their shares. If the dissenter and the company cannot agree on fair value, the company shall, or the dissenter may, present a petition to the Grand Court for determination of the fair value of the dissenter's shares.

4. In accordance with the procedure required under sections 238 and 239 of the Companies Law, the Company presented such a petition to the Grand Court. It was heard by Segal J ("the Judge") in May and June 2019. Three different valuation measures were

relied on for determining the fair value of the shares. One was the Merger Price. Another was a market value of the shares by reference to their trading price at the valuation date, which was agreed to be the date of the EGM. This was not a matter of simply taking the listed trading price at that time because, as was again common ground, it had to be adjusted to determine what the market price would have been in the absence of the market's knowledge of the recommended merger at the Merger Price. The Judge and parties referred to this as the Market Price. The third valuation was a discounted cash flow analysis, which is a familiar methodology used in company share valuations. It involves estimating the company's net cash revenues over a future period of time (in this case seven years) and then discounting them to give the present day capital value of such future income stream. This was referred to by the Judge and the parties as the DCF Value. In each case the value reached by the three measures fell to be adjusted for a minority discount, in accordance with the decision in *Shanda Games Ltd v Maso Capital Investments Ltd* [2020] UKPC 2. The Judge determined the values per ADS reached by applying the three valuation measures, after a minority discount, to be Merger Price US$11.37; Market Price US$7.26; and DCF Value US$17.81. The Judge then applied a weighting of 45% to the Merger Price, 30% to the Market Price and 25% to the DCF Value in reaching his decision that a fair value was US$11.75 per ADS.

5. The Dissenters appealed to the Court of Appeal (Sir Richard Field, Sir Michael Birt, Sir Jack Beatson JJA) on a number of grounds. So far as relevant to the current appeal, the Court of Appeal reached the following conclusions.

(i) The Judge was plainly wrong to attribute any weight to the Merger Price, which was not a conclusion reasonably open to him on the findings he made.

(ii) No adjustment should be made to the Market Price, although the Court concluded that the Judge had not been entitled to accept the relevance of certain analysts' reports as a guide to the reliability of the Market Price.

(iii) The 45% weighting allocated to the Merger Price should all be transferred to the DCF Value so that the fair value was to be determined by giving a 70% weighting to the DCF Value and a 30% weighting to the Market Price.

(iv) Two adjustments were required to the DCF Value found by the Judge:

(a) The Judge had used the figures contained in the projections prepared by the Company's management for average future selling prices of modules in the upstream business. The Court of Appeal determined that he should have used figures identified by the Company's expert, Ms Glass, but with an adjustment (i) to remove reliance on figures derived from one data source; and (ii) to adjust a linear rate of decline to a reducing rate of decline.

The Court of Appeal was unable to determine the appropriate figure necessary to reflect these adjustments and remitted it to be determined by the Grand Court in the absence of agreement between the parties (which was not reached).

(b) The Judge had also used the figures in the management projections for determining the capacity factor in relation to downstream business, which was a flat rate of 13.7%. The Court of Appeal determined that he should have increased these to 14.3% for 2016 and thereafter increasing by 0.05% every year from 2017 to 2023.

6. The Company advances five grounds of appeal. Ground 1 is that the Court of Appeal was wrong to interfere with the Judge's assessment that 45% weighting should be attributed to the Merger Price. Ground 2, which arises if ground 1 fails, is that the Court of Appeal was wrong, having found that the Merger Price should carry no weight, to increase the weight to be placed on the DCF Value from 25% to 70% whilst leaving the Market Price weighting at 30%. Ground 3 is that the Court of Appeal was wrong to conclude that the Judge was not entitled to rely on the analysts' reports in respect of the Market Price. Ground 4 is that the Court of Appeal was wrong to interfere with the Judge's decision on the module selling prices. Ground 5 is that the Court of Appeal was wrong to interfere with the Judge's decision on the capacity factor and/or to substitute its own figures.

"Fair value" and Delaware jurisprudence

7. There was no real dispute between the parties as to the meaning of "fair value" in section 238 of the Companies Act. It is the valuation of the dissenter's share in the value of the company as a going concern, discounted for their minority interest. It is not necessarily the same as the market price at which shares are trading because, for example, the value may be affected by information which is not publicly available to those conducting the trading, what was referred to as 'Material Non Public Information' or 'MNPI'; or, as in this case, by knowledge of the merger proposal. Nor is the merger price necessarily representative of market price or fair value. For example, it too may be influenced by MNPI; and the merger process may have been conducted in a way which prevented or discouraged a higher offer from a rival bidder emerging. A DCF valuation is also subject to potential weaknesses and uncertainties as a reliable guide to the company's value. It is subject to multiple assumptions as to the future, by reference both to the commercial and financial conditions in which the company will be trading, and its own performance in those conditions. As is well known, a small variation in only one input is often capable of producing a large change in the output valuation.

8. The Cayman Islands courts have followed the practice and jurisprudence in Delaware in applying both market based and DCF valuation methodologies when assessing fair value. Market valuations have included using the merger price, the trading price of the company's stock, and market prices of comparable companies. In both jurisdictions that has sometimes resulted in one measure being used to the exclusion of the others; and sometimes in the court adopting a "blended" approach of assigning weightings to two or more valuation measures, or using one as a cross-check against another.

9. The approach of the Delaware Courts can be of assistance and value in this area because the Companies Act was based partly on legislation in Delaware (which has similarities as well as differences), amongst other jurisdictions; and Delaware has a longer history of applying its law and therefore a more developed jurisprudence: see *Shanda*, at para 49, and the judgment of Martin JA in the Court of Appeal in that case at para 46 cited at para 21.

10. It is necessary to refer to three Delaware decisions amongst those relied on by the parties or the courts below, all decided in 2017 or 2018. In *DFC Global Corporation v Muirfield Value Partners* L.P. 172 A. 3d 346 (Del 2017) the Delaware Supreme Court sat *en banc* on an appeal from the Court of Chancery, which had decided that fair value was to be determined in that case by attributing one third weighting to each of the transaction price, a DCF valuation and a valuation based on comparable companies. DFC Global was a publicly listed payday lending firm purchased in an arm's length transaction by a private equity firm. The Supreme Court rejected an argument that there was a presumption in favour of the transaction price being the best estimate of fair value in arm's length transactions. Nevertheless it held that the Court of Chancery had failed to give adequate weight to the transaction price and had given inadequate reasons for its failure to do so, remitting the matter to the lower court. The Supreme Court's reasons included the fact that the transaction resulted from a robust market search which had lasted approximately two years, in which financial and strategic buyers had an open opportunity to buy, without inhibition of deal protections, and to receive non-public information about it; that there was no hint of self-interest which compromised the market check; that the stock was actively traded; that the firm was actively examined by debt markets which rated and analysed its creditworthiness; and that the Court of Chancery had not given any reasons for the weighting it had given to the different valuation measures. The Supreme Court's conclusion was that on remission the lower court "may" conclude that the deal price was the most reliable indication of fair value.

11. A few months later, in *Dell Inc v Magnetar Global Event Driven Master Fund Ltd* 177 A. 3d 1 (Del 2017), the Delaware Supreme Court (in an almost identical constitution to that in *DFC*) was concerned with a management led buyout of the well-known computer company Dell, which was actively traded on the NASDAQ exchange. The lower court had declined to attribute any weight to the deal price or to the stock trading price, and had determined fair value solely on the basis of a DCF valuation. The Supreme

Court allowed the appeal and remitted the case for reassessment. So far as the stock price was concerned it observed that the market for Dell's shares was efficient and therefore "likely a possible proxy for fair value". So far as the deal price was concerned it said this:

> "There is no requirement that a company prove that the sale process is the *most reliable* evidence of its going concern value in order for the resulting deal price to be granted any weight…. In so holding, we are not saying that the market is always the best indicator of value, or that it should always be granted some weight. We only note that, when the evidence of market efficiency, fair play, low barriers to entry, outreach to all logical buyers, and the chance for any topping bidder to have the support of Mr Dell's own votes is so compelling, then failure to give the resulting price heavy weight because the trial judge believes there was mispricing missed by all the Dell stockholders, analysts, and potential buyers abuses even the wide discretion afforded the Court of Chancery in these difficult cases. And, of course, to give no weight to the prices resulting from the actions of Dell's stockholders and potential buyers presupposes that there is a more plausible basis for determining Dell's value in the form of expert testimony, such as from the petitioners' expert, who argued that his DCF analysis showed the fair value of Dell's stock is $28.61 per share - almost three times higher than the unaffected stock price of $9.97 per share and more than two times higher than the deal price of $13.75 per share." (emphasis in original)

12. The Supreme Court also referred to the inherent hazards in using a DCF methodology:

> "Although widely considered the best tool for valuing companies when there is no credible market information and no market check, DCF valuations involve many inputs—all subject to disagreement by well-compensated and highly credentialed experts—and even slight differences in these inputs can produce large valuation gaps. Here, management's projections alone involved more than 1,100 inputs, and the experts' fair value determinations (which also included several novel tax issues discussed below) landed on different planets ..."

13. In *Re Solera Holdings Inc* [2018] WL 3625644 Bouchard C gave the deal price sole and dispositive weight in determining the fair value of the petitioners' shares. He

observed that Solera was sold in an open process which, although not perfect, was characterized by many objective indicia of reliability. In particular, the merger was the product of a two-month outreach to large private equity firms followed by a six-week auction conducted by an independent and fully authorized special committee of the board, which contacted eleven financial and seven strategic firms; public disclosures made clear to the market that the company was for sale; the special committee had competent legal and financial advisors and the power to say no to an underpriced bid, which it did twice, without the safety net of another bid; the merger price proved to be a market-clearing price through a 28-day go-shop which the special committee secured as a condition of the deal with the buyer, one which afforded favourable terms to allow a key strategic competitor of Solera to continue to bid for the company; the record further suggested that the sales process was conducted against the backdrop of an efficient and well-functioning market for Solera's stock: before the merger, for example, Solera had a deep base of public stockholders, its shares were actively traded on the New York Stock Exchange and were covered by numerous analysts, and its debt was closely monitored by ratings agencies.

14. At para 17 Bouchard C said:

> "I now turn to my own independent determination of the fair value of Solera's shares with the guidance from *DFC* and *Dell* in mind. Those decisions teach that deal price is 'the best evidence of fair value' when there was an 'open process,' meaning that the process is characterized by 'objective indicia of reliability.' Such 'indicia' include but, consistent with the mandate of the appraisal statute to consider 'all relevant factors,' are not limited to:
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> • '[R]obust public information,' comprised of the stock price of a company with 'a deep base of public shareholders, and highly active trading,' and the views of 'equity analysts, equity buyers, debt analysts, debt providers and others.'
>
> • '[E]asy access to deeper, non-public information,' where there is no discrimination between potential buyers and cooperation from management helps address any information asymmetries between potential buyers.
>
> • '[M]any parties with an incentive to make a profit had a chance to bid,' meaning that there was a 'robust market check' with 'outreach to all logical buyers' and a go-shop characterized by 'low barriers to entry' such that there is a realistic possibility of a topping bid.

• A special committee, 'composed of independent, experienced directors and armed with that power to say 'no,'' which is advised by competent legal and financial advisors.

• '[N]o conflicts related to the transaction,' with the company purchased by a third party in an arm's length sale and '"no hint of self-interest.'"

15. A number of observations may be made about these authorities and the applicable principles. Transaction price, market price, comparable company valuation and DCF valuation are all valuation measures which may properly be drawn on in seeking to assess fair value. This is not intended to be an exhaustive list. There is no hierarchy between them. There is no presumption, for example, in favour of the transaction price or a market price. All merger transactions are factually unique and the relevant circumstances will often differ very substantially from case to case. In considering each measure, the court will usually be required to take account of extensive factual and expert evidence and consider many variables. Each methodology must be assessed individually to identify strengths and weaknesses which may affect its reliability as a guide to fair value. Reliability is not in this context a binary concept in which the court must conclude that the measure in question is or is not reliable; rather it is a qualitative concept in which the court may conclude that it is more or less reliable on a sliding scale. Often there will be uncertainties inherent in the methodology itself. For example, when considering the transaction price, the court will be concerned with the hypothetical possibility of rival bids; and in a DCF valuation, with future projections and the discount rate. Sometimes uncertainties will arise from paucity in the evidence before the court. Save where it is proper to draw adverse inferences or to treat a party as having failed to discharge an evidential burden which it bears, the Court has to form a view of the effect of these uncertainties.

16. Moreover, the exercise is not one simply of assessing the reliability of each methodology individually, but one of assessing comparative reliability between all of them. The courts in the Cayman Islands and Delaware have sometimes used one methodology as a cross-check against another; sometimes they have adopted a percentage weighting of a kind the Judge adopted in this case. Where the values reached by the different valuation measures are relatively close, the concept of a cross-check between them has some coherence. Where, however, the values are widely divergent, it makes little sense to talk of using one as a cross-check against another. In this case, for example, the DCF Value reached by the Judge was some 2 ½ times larger than the Market Price (and indeed on the Dissenters' expert evidence would have been potentially 10 times greater or more). Neither could realistically be said to support the other. Nevertheless in such circumstances the court may properly ascribe some weight to each by a relative weighting. The court may be faced with two valuation measures, neither of which it would consider to be more reliable than not as a guide to fair value if taken individually. Nevertheless it is entitled to ascribe more than a 50% weighting to one if it considers it

less unreliable than the other. Assessing reliability is not only a qualitative exercise in relation to each methodology individually, but the court is concerned with a qualitative assessment of the reliability of the methodologies relative to each other.

17. It follows that the task for the trial judge is one which is highly case specific and highly fact dependent. It not only involves findings of primary fact but is peculiarly dependent on nuanced evaluative assessments. In considering the hypothetical questions which often arise, the court is dealing in risks and uncertainties which are not readily quantifiable. The same is true in relation to the conclusory evaluation of the extent to which a methodology provides a reliable guide to fair value, both individually and relative to another methodology.

18. In this context, the lists of factors set out in cases such as *Dell*, *DFC Global* and *Solera* can be a useful guide to considerations which in any individual case may point to a greater or lesser degree of reliability in using the transaction price. They are not, however, to be treated as checklists, all or most of which must be met before any reliance may be placed on a transaction price. There may, for example, have been substantial failings in relation to any market check process which is designed to flush out rival bidders at a higher price than the proposed transaction price; but the court may in a particular case be satisfied that there were no realistic rival bidders; or that none would have come forward even with the most exemplary market check process. It would be perfectly proper for the court to attach weight to a transaction price in those circumstances, although the fact that the court has been deprived of evidence of the point being tested may increase the level of uncertainty and consequently reduce the weighting to be attributed to such price. All will depend on the facts of the individual case, including the relative reliability of other methodologies contended for.

Principles applied by appellate courts to findings of fact and evaluative assessments

19. The parties were largely agreed as to the principles to be applied by an appellate court to findings of fact or evaluative assessments of a lower court, which are well established. In the absence of some identifiable error such as a material error of law, an appellate court will not interfere with such findings unless the judge's decision is plainly wrong, in the sense that it was one which no reasonable judge could have reached, or (which is the same) lies outside the bounds within which reasonable disagreement is possible; if the decision does not come within that category it is irrelevant that the appellate court would have reached a different decision. See *Assicurazioni Generali SpA v Arab Insurance Group (Practice Note)* [2002] EWCA Civ 1642; [2003] 1 WLR 577, at para 16; *FAGE UK Ltd v Chobani UK Ltd* [2014] EWCA Civ 5; [2014] FSR 29, at para 114; *Henderson v Foxworth Investments Ltd* [2014] UKSC 41; [2014] 1 WLR 2600, at paras 58-68; *Volcafe Ltd v Cia Sud Americana de Vapores SA* [2018] UKSC 61; [2019] AC 358, at para 41; *JSC BTA Bank v Ablyazov* [2018] EWCA Civ 1176; [2019] BCC 96,

at paras 40-41; *Perry v Raleys Solicitors* [2019] UKSC 5; [2020] AC 352, at paras 49-52; *Volpi v Volpi* [2022] EWCA Civ 464; [2022] 4 WLR 48, at paras 2-4.

20. Four of the reasons for that restrictive approach are of relevance to the current appeal. First, where the trial court has heard evidence given orally by witnesses, tested by cross examination, it is in a much better position to evaluate that evidence than an appeal court which does not have that advantage; a transcript of the evidence does not capture the atmosphere of the courtroom or the subtleties of the way the evidence was given. That applies as much to expert witnesses as it does to witnesses of fact (save sometimes in the special case of experts on foreign law). Secondly, as Lord Hoffmann said in *Piglowska v Piglowski* [1999] UKHL 27; [1999] 1 WLR 1360, 1372: "[The judge's] expressed findings are always surrounded by a penumbra of imprecision as to emphasis, relative weight, minor qualification and nuance … of which time and language do not permit exact expression, but which may play an important part in the judge's overall evaluation." Thirdly, the trial judge has sat through the entire case and their ultimate judgment reflects this total familiarity with the evidence. The insight gained by the trial judge who has lived with the case for days or weeks will be far deeper than that of the appellate court whose view of the case is much more limited: *McGraddie v McGraddie* [2013] UKSC 58; [2013] 1 WLR 2477, at para 4. In the memorable and oft quoted metaphor ascribed to this consideration by Lewison LJ in *FAGE v Chobani*, "[i]n making his decisions the trial judge will have regard to the whole of the sea of evidence presented to him, whereas an appellate court will only be island hopping." Fourthly, especially in long and complicated cases, duplication of the trial judge's role on appeal is a disproportionate use of the limited resources of an appellate court, and will seldom lead to a different outcome in an individual case. Again to quote the memorable language of Lewison LJ in *FAGE v Chobani*: "[t]he trial is not a dress rehearsal. It is the first and last night of the show."

21. These reasons apply with particular force to the trial and appeal in this case. The trial took sixteen days. The Judge heard oral evidence from two witnesses of fact; and from four expert witnesses. The Company called Dr Goffri as its industry expert and the Dissenters called Mr Russo as theirs. Each had produced two lengthy reports and gave oral evidence which was tested by cross-examination. The Judge found that both were extremely knowledgeable with extensive expertise in the solar energy field. The Company called Ms Glass as its valuation expert; the Dissenters called Mr Edwards as theirs. The Judge found that both demonstrated that they had substantial expertise and experience in valuation matters and a good knowledge of the solar industry and energy sector. They had each produced lengthy reports which the Judge described as excellent – clear. Cogent. detailed and thorough. Each was cross-examined. The Judge said at para 13 that he had "generally found Ms Glass' evidence to be more balanced, realistic and reliable". The reports of these four experts and their joint memoranda ran to over 1,000 pages. The Judge also had to consider a large body of documentary evidence and a myriad of issues relevant to valuation, including detailed consideration of the management projections. He had over 500 pages of closing submissions. All this meant that he was deeply immersed in the world of this Company's business activity; the commercial industry and financial climate in which it was operating; and the events surrounding the

merger. He had to make numerous findings and evaluative assessments which he couched in careful and nuanced language, but whose exact import will have formed a penumbra beyond the terms of his exact expression.

The Grand Court decision

22. The Judge's carefully and thoroughly reasoned judgment comprised 353 paragraphs over 249 pages. His essential findings about the merger process were as follows.

23. On 12 December 2015 Mr Gao and the Buyer Group submitted the merger proposal to the Company at the Merger Price. The following day the Company's board appointed two directors, Mr Zhao and Mr Shao, to form a special committee of the board ("the Special Committee") whose function was to evaluate the merger proposal. Mr Zhao gave evidence and was cross-examined. Mr Shao was not called to give evidence. The Special Committee appointed Kirkland & Ellis LLP as its US legal advisers and Citigroup Global Markets Inc ("Citi") as its financial adviser. One of Citi's tasks was to produce a fairness opinion on the proposed merger transaction with the Buyer Group. The Special Committee also asked Citi to perform a market check to explore potential alternative transactions. For this purpose, the Special Committee drafted a list of 22 potential buyers for Citi to approach. Of those, 12 responded, 9 provided no response, and Citi was unable to contact one. In parallel with its market check, Citi continued to negotiate with the Buyer Group in order to seek to persuade it to improve the Merger Price. It was unsuccessful in those endeavours.

24. On 1 August 2016 Citi presented its conclusions to the Special Committee with a slide pack comprising a summary of its valuation analyses ("the Citi Fairness Analysis"). These involved a comparable companies analysis, a DCF valuation and a sum of the parts analysis, each of which produced a range of values for the Company's shares. The comparable companies valuations had upper end values varying between US$7.87 and US$10.78 per ADS. The DCF valuation resulted in a range of US$8.59 to US$14.14. The upper value of the sum of the parts valuations was US$11.88. Citi noted that the 52 week trading price range was US$6.96 to US$11.24. Citi also provided to the meeting a formal Opinion, subsequently exhibited to the Company's filing with the US Securities and Exchange Commission ("the SEC"), which gave the opinion that the Merger Price was fair to the holders of the ADSs from a financial point of view ("the Citi Fairness Opinion"). The Citi Fairness Opinion made clear that it was based on seven year management projections prepared by the Company in January, February and July 2016 ("the Management Projections").

25. At the EGM held on 16 December 2016, the shareholders had the benefit of reports from three proxy adviser firms advising shareholders on how to vote. Two recommended

that the shareholders vote in favour. The third recommended them to vote against, not on the basis that the Merger Price was not a fair market price but largely on the basis that the price should be increased from a market rate to reflect a premium for control. The voting was overwhelmingly in favour in the percentages identified above.

26. The Judge considered the applicable principles, including Delaware authorities. It was not suggested by the Court of Appeal, or before the Board, that he made any error of law in identifying them.

27. At paras 157, 158 and 176 the Judge identified a number of factors which he regarded as supporting reliance on the Merger Price. They were that:

(i) The Buyer Group held only 5.6% of the shares and was therefore not in a position to force through the merger.

(ii) The merger was approved by over 97% of the shareholders, who were mostly independent of the Buyer Group and included a large number of institutional and sophisticated shareholders (which Ms Glass had identified as including large asset managers as well as banks such as Goldman Sachs & Co, Morgan Stanley, Deutsche Bank AG, and Bank of America Corp). They would not have blindly and unthinkingly followed the directors' recommendation or the Citi Fairness Opinion, but would have considered for themselves the reasonableness of the Merger Price, so that they must have considered that the Merger Price was within the range of reasonable prices.

(iii) The market in the Company's shares was liquid, moved with announcements and was followed by analysts; and the merger proposal was not timed at a particularly bad time for the Company so as to take advantage of a particularly low share price or some large investment which had not yet showed fruit.

(iv) The Company had been on the market for a year during which time the merger proposal had been well publicised allowing bidders an opportunity to come forward.

(v) The proxy firms had conducted their own analyses on value and commented on the Citi Fairness Opinion, and were all in favour of the merger at the Merger Price save that one thought it should be improved by a premium for buyer control.

28. The Judge also addressed a challenge by the Dissenters to the reliability of the Citi Fairness Opinion based on its Fairness Analysis. One element of the attack was that the Fairness Analysis had used a cost of debt in its DCF valuation of 13%; whereas the Management Projections had used a figure of 5.5% and 6.2%, and Ms Glass had used a figure of 5.5% in hers. When it came to making his findings in relation to the rival DCF valuations, the Judge accepted that the cost of debt figure to be used for the DCF Value should be 5.5%. However the Judge found at para 170 that he would accept Ms Glass' evidence that this did not undermine the reliability of the Fairness Opinion for the reasons she gave. He said:

> "(b) Ms Glass considered that Citi's approach was a matter of judgment and that even if Citi's assumed cost of debt was high, which she accepted it was, it could not be said to represent an error which undermined the reliability of the Fairness Opinion. It was possible that 13% was justifiable and that there was a good reason for Citi's use of that figure. She assumed that it flowed from Citi's assumption of a very high capital structure (70% perpetual debt), which suggested an assumed LBO (leverage buyout) structure, and might have reflected the need for (and implicit cost of) restricted cash. Since it might be justified and the overall result of Citi's DCF valuation appeared to her to be reasonable, she was not prepared to say that Citi had made an error, let alone a serious one. And neither she nor Mr Edwards were in a position properly to understand and therefore criticise Citi's approach without having discussions with them.
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> (c) [I]n my view, the figure used by Citi is hard to justify. As I note below, Ms Glass' view for the purpose of her DCF valuation is that 5.5% (4.6% after tax) is the appropriate figure. In view of the figures used by Mr Edwards and Ms Glass, 13% seems very high. But I accept Ms Glass' view that it is not possible, and only speculation, to form a view as to whether a review of Citi's model would show that the high cost of debt figure was based on justifiable assumptions and did not, when the model is viewed in the round, result in a material undervaluation."

29. As to the manner in which the Special Committee acted, and the market check which was conducted by Citi, the Judge held that the Dissenters' criticisms of the performance of the Special Committee were largely unjustified but that "some of their criticisms were justified and establish grounds for concern". The justified criticisms which gave rise to this concern were identified as the following.

(i) Mr Zhao was an unsatisfactory witness who had failed to assess the treatment of strategic buyers or test the adequacy of steps taken by Citi; and was content to leave all important matters to Mr Shao. The fact that there had been no evidence from Mr Shao as to why the Special Committee acted as it did was unhelpful and made it more difficult for the Company to rebut the criticisms made by the Dissenters and to show that the work of the Special Committee was adequate.

(ii) The Company did produce copies of board minutes establishing the Special Committee and its powers and terms of reference, together with the minutes of the meetings of the Special Committee, copies of the presentations made to the Special Committee by Citi and Kirkland & Ellis, and email correspondence between the Special Committee and Citi. The first meeting of the Special Committee was on 11 January 2016 and the last meeting was on 1 August 2016. The documents were helpful in giving an account of the Special Committee's decision-making but there were some significant gaps, in particular in relation to the Special Committee's thinking with respect to the selection of the parties to approach, the assessment of the progress and outcome of the Citi market check process and the adequacy of the Merger Price. In the early stages, the Special Committee met once a week but there was a considerable gap between the meeting on 8 April and the next meeting on 27 May 2016 (the meeting on 21 April 2016 was cancelled because of "limited updates") and the subsequent meeting on 24 June 2016. While it appeared that by 8 April 2016 activity in the Citi market check process was slowing down, important discussions were continuing with the Buyer Group over price, and the length of time between meetings had not been fully explained.

(iii) The reasons and justifications for Citi's decision and the Special Committee's approach to which strategic buyers should be contacted remained unclear. Five international and seven domestic strategic buyers were identified and approached but these included only one of the Company's five major competitors. That was not explained in any documents from the market check period or by Mr Zhao in evidence. The explanation which was given in a document filed with the SEC in November 2016 ("the Proxy Statement") was that it would cause disruption to the Company and potential risk of competitive harm. Whilst the fact that only one of the major competitors had been approached would have been apparent from the Proxy Statement to the shareholders and proxy firms at the EGM vote, and this explanation was a rational basis for carefully managing approaches to competitors, it may have been ex post facto rationalisation and was in any event not a reason for excluding them altogether. The evidence strongly suggested that the Special Committee failed to treat major competitors with the requisite care.

(iv) The evidence as to the impact of exclusion of the major competitors was sketchy, speculative and in conflict. It had not been shown that such competitors had been prevented from coming forward to express their interest had they desired to do so. It was likely that had they had a real interest in making a bid they would have had sufficient information about the fact that the Company was on the market to contact Citi and express their interest. The process did not have the clear effect of shutting out major competitors or preventing a significant section of potential bidders from expressing their interest. Whilst some doubts remain as to whether major competitors would have come forward, had they been included in the list of buyers and approached, they were not so great as to undermine substantially the effect of the process overall.

(v) The Special Committee had failed to put one potential bidder which had expressed an interest in being part of a consortium (IFC) in contact with other bidders who had expressed an interest (Hanwha and Motech); and too readily acceded to requests from interested parties in being put in touch with the Buyer Group. That raised an issue as to whether more could have been done with the interest which had been expressed in order to generate a consortium which might make a competing bid. However there was insufficient evidence that Hanwha or Motech needed finance or were sufficiently interested or otherwise prepared to work with IFC or that any such steps would have resulted in a bid or even a realistic chance of a competing bid.

(vi) Mr Gao's stated position was that he would not support any bid other than that by the Buyer Group. The Judge accepted that this *might* (his emphasis) have had a chilling effect and have made it more difficult for bidders to succeed in competition with the Buyer Group. But Ms Glass considered that interested parties would not have been prevented from bidding at all, and the adverse impact of the loss of Mr Gao for those who bid with the prospect of losing him as CEO would be modest and manageable. The Judge accepted her approach as reasonable. His conclusion was that there was a material risk, that is one which could not be ignored as too remote, that the merger process would fail to produce an independent competing bid because other bidders would have found it difficult to compete with the Buyer Group or would have needed to discount their bid because of the impact of losing Mr Gao, but that the evidence did not support a conclusion that that was the reason for the absence of a competing bid, or that the risk was such as to preclude reliance on the Merger Price.

(vii) The connections between Mr Gao and the members of the Special Committee gave rise to concerns as to their independence and willingness to act adversely to Mr Gao; and aggressively and proactively to seek out competitive bidders.

(viii) Overall, there was a market check process which, while deficient, was sufficient to demonstrate an adequate level of marketing the Company to show that it was likely that all interested parties including strategic purchasers could have pursued their interest if they wished to do so. There was in this case no MNPI so that the market had sufficient information from which to form a reliable view of the value of the Company and its shares.

(ix) The written and oral evidence left the Judge with serious concerns whether the Special Committee took sufficient steps to ensure that the discussions between the Buyer Group and management were properly restricted and supervised to ensure that management were not being improperly influenced by Mr Gao, that information flows were appropriate and monitored, and that the Buyer Group was being treated at all times in a manner appropriate to a competitive bidder.

30. The Judge expressed his conclusions in evaluating these strengths and weaknesses of the Merger Price as a guide to fair value at para 181:

> "For the reasons I have given, I consider that the performance of the Special Committee was deficient in a number of material respects. These deficiencies affected the governance and effectiveness of the merger process and weaken the Company's argument that the process ensured that all interested parties were given a full and fair opportunity to come forward and that full value offers from competing bidders could have been made in fair competition with the Buyer Group. There were weaknesses in the Citi Market Check process with respect to the involvement of the Company's main competitors; the Special Committee could and should have done more to ensure the independence and separation of the team preparing the Management Projections from Mr Gao's influence and Mr Gao's position may have had chilled the interest of some potential bidders and reduced the chance of bidders being prepared to make full value bids (without a Mr Gao discount) in competition with the Buyer Group. But, as I have said, there are a number of significant factors that support reliance on the Merger Price. The problems with the merger process which I have found to exist need to be taken into account when deciding what weight to give the Merger Price in the Court's fair value determination. They are not sufficient to, and do not, preclude any reliance on the Merger Price."

31. The Judge then addressed in detail the evidence relating to Market Price and DCF Value, and his conclusions on those measures. The only aspect of those parts of his judgment with which this appeal is concerned are his treatment of upstream module sales prices, and downstream capacity projections, for the purpose of reaching the DCF Value, which are the subject matter of grounds 4 and 5. The Board returns to these below.

32. The Judge explained his reasons for the weightings he applied to the three valuation measures in considerable detail at paras 330 to 340. He recorded that Ms Glass had given detailed reasons for her suggested weightings, which were to attribute 80% to market valuations and 20% to a DCF valuation; and to split the market valuation weightings equally between the Merger Price and the Market Price, so as to attribute a weighting of 40% to each of them. He accepted that Ms Glass' approach was generally reasonable but considered that to a small extent it underrated the risks involved in reliance on the Merger Price which required "a small additional discount"; and to a greater extent underrated the risks in the reliability of the Market Price. Overall this meant that the combined weighting of the market factors should be reduced to 75% and that of the DCF Value increased to 25%. This was notwithstanding that he generally accepted Ms Glass' reasons for applying a significant discount to the weighting of the DCF Value, but that was required by having to give it a relative weighting by reference to reduction in the weighting of the two market valuation measures (at para 340(h)). The 75% market weighting would be distributed as to 45% to the Merger Price and 30% to the Market Price.

The Court of Appeal Judgment

33. In the Court of Appeal Birt JA, with whom the other Justices of Appeal agreed, also gave a thorough and carefully reasoned judgment. He correctly identified the legal principles applicable to an appellate court interfering with findings of fact or evaluative assessments; and recognised that the court could only allow the appeal if satisfied that the Judge's conclusions were plainly wrong in the sense identified.

34. He rejected the Dissenters' challenge to the weighting attributed to the Market Price. In doing so he was critical of the disclosure and evidential failings of which he held the Company guilty; these included the fact that the evidence of Mr Chan, the Company's Vice President of Legal Affairs, was that no requests had been addressed to Citi or Kirkland & Ellis for relevant documents they might hold. He concluded that nevertheless the Judge's decision on Market Price was not one which was plainly wrong.

35. The court reached the opposite conclusion in relation to the Merger Price. As to the law, Birt JA adopted the relevant part of the Judge's summary of the principles identified in *Dell*. He also treated the list of factors which Bouchard C had identified in *Re Solera*, set out above, as a helpful summary of the features to be looked at when considering whether weight should be placed on a merger price. He rejected the submission made on behalf of the Dissenters that if any of the *Dell* features were absent then no weight, or only minimal weight, could be given to a merger price. He concluded, however, at para 142 that "if the breaches are substantial, this is likely to mean that the merger price is not reliable as an indicator of fair value and that accordingly little or no weight should be given to the merger price".

36. In relation to the Citi Fairness Opinion at paras 123 to 130 he considered and accepted the Dissenters' submission that the Judge had been plainly wrong to treat the 13% cost of debt figure used by Citi as insufficient to undermine the reliability of the Opinion. He quoted the Judge's conclusion at para 170(c) and said that the Judge had effectively found that 13% was too high. Having done so, mere speculation that there might have been some reason for Citi to have taken a figure of 13% was not evidence that it was justifiable. It was for the Company, which was seeking to rely on the Merger Price, to provide evidence in support of the reliability of the Citi Fairness Opinion. At para 130 he concluded: "The consequence of the judge's decision is that, in the absence of any evidence to support the figure, he has in effect found that the figure was justified."

37. At para 146 he summarised the reasons for concluding that the Judge's decision that the Merger Price be given a 45% weighting, which he observed was nearly half, was not reasonably open to the Judge. With one additional element they were those which he summarised at para 148 as justifying his own view that no reliance could safely be placed on the Merger Price in the following terms:

> "On the facts of this case, given (i) the significant deficiencies in the market check process, (ii) that this was a management buyout with all the potential difficulties and conflicts of interest which this brings, (iii) the material risk that Mr Gao's position had a chilling effect on prospective bidders, (iv) the deficiencies in the Fairness Opinion, [(v)] the concerns about the independence of the members of the Special Committee and whether they were willing to act adversely to Mr Gao's interests, and [(vi)] the complete failure of the Company to produce relevant evidence, I do not see that any reliance can safely be placed on the Merger Price. The whole point of the protections and processes which have been developed in the Delaware jurisprudence and adopted in this jurisdiction is to give the court comfort that the merger price can be probative of fair value. …"

38. The additional element, identified at para 146(i), was that having decided that Ms Glass' weighting of 40% needed to be reduced by an additional amount, the Judge had in fact increased it to 45%, a conclusion which was wholly inconsistent with what he had said about the need for an additional discount; and that this was an inconsistency which the Judge did not explain.

Ground 1

39. The Board considers that the Court of Appeal was not entitled to interfere with the Judge's assessment that a weighting of 45% should be accorded to the Merger Price. Its reasoning in concluding that such an assessment was outside the range reasonably open to the Judge is flawed in the following respects.

(i) The Citi Fairness Opinion

40. The 13% cost of debt figure used by Citi was not sufficient to justify the Court of Appeal's criticisms of the Judge's reliance on the Citi Fairness Opinion. The Judge was entitled to take as his starting point that Citi was a reputable institution with the relevant expertise and one whose valuation could command weight unless demonstrated to be undermined. Ms Glass' evidence on the point was not confined to saying that it was a matter of speculation as to why Citi had taken a figure of 13% as the cost of debt. She had addressed the point in her second report, where she had observed that cost of debt was one of a number of inputs which contributed towards a weighted average cost of capital ("WACC"), which was the relevant input to the DCF valuation; and that the WACC used by the Citi Fairness Analysis, and therefore the Citi Fairness Opinion, was 11.6% which was only slightly higher than the figure for WACC of 10.8% which she herself had used; the difference was one which she described as a difference in judgement, not an error on the part of either evaluator. Moreover she had satisfied herself that although she did not have access to the Citi model, she could have confidence in Citi's analysis for the following reason expressed at para 175 of her first report, to which the Judge referred at para 174:

> "I agree that, without access to Citi's underlying model, certain adjustments made by Citi appear unusual. However, that does not imply Citi's analysis was in error. Since Citi's financial model is not available, nothing can be gained by trying to determine what Citi may or may not have done based solely on a hard-copy printout of the analysis. Instead, I re-ran Citi's analysis using my own model. That is, I performed a DCF analysis based on Trina's projections, along with a discount rate of 11.6%, a terminal growth rate of 3%, and a valuation date of 30 September 2016 – all of which are Citi's assumptions. My analysis resulted in a fair value of $10.98 per ADS, which approximates the $11.00 per ADS fair value determined by Citi. As a result, I have no concerns about any alleged errors in Citi's DCF analysis and I believe Mr Edwards' claims are unwarranted."

41. She was cross examined on the 13% cost of debt point, and disagreed that one could just change that one component of the WACC analysis in testing the overall reliability of the Citi Fairness Opinion. As she had put it in her second report, rather than cherry-picking by removing the low and not the high or vice-versa, she had considered Citi's overall WACC. The Judge saw and heard her evidence and "generally found [her] evidence to be more balanced, realistic and reliable". He was entitled to accept her evidence that using 13% for cost of debt did not undermine the reliability of the Citi Fairness Opinion, given the use by Citi of a WACC of 11.6%. That was what he said as part of the last sentence of para 170(c): "But I accept Ms Glass' view that… Citi's model … did not, when the model is viewed in the round, result in a material undervaluation"; and at para 175: "In my view Ms Glass' analysis and evidence shows that it is not possible to conclude that the Fairness Opinion was subject to errors, of a methodological or arithmetical kind, that made it unreliable and unreasonable." This latter conclusion came immediately after para 174 in which he had summarised Ms Glass' evidence about having rerun her model using Citi's inputs including Citi's WACC of 11.6%. That was a conclusion open to the Judge on the evidence and was not logically undermined, as the Court of Appeal thought, by Citi having used a cost of debt figure of 13%. The Judge was looking at the position holistically and in the round, whereas the Court of Appeal was focussing on only one component element of the analysis.

(ii) The market process and absence of rival bidders

42. When addressing the jurisprudence on the need for a robust market check, at para 142 Birt JA said that "if the breaches are substantial, this is likely to mean that the merger price is not reliable as an indicator of fair value and accordingly little or no weight should be given to the merger price …". This is too rigid an approach and unduly elevates the importance of a market check to something approaching a threshold. In a case such as the present the existence of any deficiencies in the market check process (which is a more appropriate term than "breaches") needs to be evaluated alongside a consideration of the impact of such deficiencies; and alongside consideration of other factors which militate in favour of the reliability of the merger price. *Dell*, *DFC Global* and *Solera* were cases in which there were no departures, or almost no departures, from an ideally robust market check process, and what was said about the content of such an ideal process in those cases was addressed to circumstances in which it was present not absent.

43. In this case the Judge's criticisms of the market check process did not point to the Merger Price being too low as such. They simply meant that the Judge was deprived of the opportunity of being able to conclude with full confidence that there were no other bidders because of "concerns" whether the market had been conclusively tested in that respect.

44. Moreover the Court of Appeal failed to give effect to the Judge's findings, particularly at paras 163(g) and 340(c), that, despite the deficiencies he identified in the

market check process and the material risk that Mr Gao's position would have a chilling effect, it was "likely" that they did not result in any bidder who would otherwise have come forward failing to do so. Those are findings of fact as to the probabilities, albeit the Judge recognised and took account of the uncertainties involved. They were findings which the Judge treated as diminishing the importance of deficiencies in the market check process, and Mr Gao's position, in undermining the reliability of the Merger Price, as he was entitled to do. Mr Howard KC submitted that there was no evidence to support such findings, but this formed no part of the reasoning of the Court of Appeal and the criticism is unjustified. The Judge had extensive and detailed evidence from the experts about this industry and market, the participants in it, and who the potential alternative bidders were. Moreover he had Ms Glass' evidence, which he was entitled to accept, that Mr Gao's position would not have made a significant difference to bidders coming forward. At para 163(g) the Judge described the evidence as "sketchy and speculative and in conflict". It was necessarily speculative because it was hypothetical, but the fact that it was sketchy and in conflict did not preclude the Judge from forming a view about it and making findings in the way he did. The Judge was not left without any evidence on which to form a view and he made findings based on the evidence.

45. Birt JA dealt at para 146(v) with what the Judge had held at para 163(g) about the effect of the market check failures. He characterised the Judge's finding as being that "the failures in the market check [process] were not significant because it had not been shown that competitors were shut out as, if they had a real interest in making a bid, they would have known that the Company was on the market and could therefore have contacted the Company or Citi." This was not a wholly accurate characterisation of the Judge's findings: the Judge had not treated the failures in the market check process as insignificant; on the contrary they resulted in his assigning less than 50% weighting to the Merger Price.

46. Birt JA said that this involved an error on the part of the Judge for two reasons. First it was inconsistent with the Delaware jurisprudence which emphasised the need for a robust market check and "outreach to all logical buyers"; it would usually be the case that it would be public knowledge, of which potential bidders were aware, that the Company was in play; and if that fact alone were sufficient, there would be no need for a market check. He said: "I would therefore disagree that the suggestion that potential buyers could have come forward even though they were not on the list to be approached by Citi was a reason to ignore the deficiencies in the market check procedure." This again mischaracterises what the Judge had done as being to "ignore" the deficiencies in the market check procedure, when in fact he had accorded significance to them in evaluating the weighting to attach to the Merger Price. Moreover it appears to treat the requirement of outreach to all logical buyers as if it is a threshold requirement which must substantially be met before *any* reliance can be placed on a merger price. That is contrary to the multifactorial and fact specific evaluation which must be undertaken in each case, and which the Judge took conspicuous care to undertake in this case.

47. The second reason identified by the Court of Appeal for dismissing the Judge's reasoning as to the impact of market check deficiencies was that the Judge had effectively put the burden on the Dissenters to show that competitors were prevented from coming forward, which they would virtually never be in a position to do; and that this reversed the evidential burden of proof which was on the Company as the party putting forward the Merger Price as a reliable guide to fair value. The Board does not regard this as a fair criticism; the Judge had evidence and made findings based on it, not on the basis that the Dissenters had failed to discharge some evidential burden which lay on them. In any event it is not self-evident that it would have been any easier for the Company to call evidence from potential rival bidders, especially if they remained strategic competitors, than it would for the Dissenters to do so.

(iii) The factors in favour of giving weight to the Merger Price

48. The Court of Appeal was not justified in giving no effect at all to the factors which the Judge identified as lending support to the reliability of the Merger Price. At para 148 it simply recited the weaknesses and deficiencies there identified and proceeded directly to the conclusion that no reliance could safely be placed on the Merger Price. At paras 146(vii) and (viii) it had referred to the factors which the Judge had identified at para 157 as lending weight to the Merger Price. Birt JA there said that, although the majority vote may not always be so large, these were features which were likely to be present in many if not most cases; that they do not diminish the need for a robust market check; and that he did not see "that the existence of the factors listed by the judge can possibly balance or outweigh the deficiencies in the market check process and the concerns about the impact of Mr Gao's position."

49. This suggests a number of errors of approach. It does not in fact identify all the factors properly relied upon by the Judge, which included the Citi Fairness Opinion and the views of the proxy firms who the Judge found would have made their own analyses. It also unduly elevates the importance of a robust market check to something approaching a threshold requirement, in the absence of which no reliance can be placed on a transaction price. Above all it involves the court impermissibly substituting its own evaluative assessment for that of the Judge. The Board considers that the Court of Appeal lost sight of the advantages enjoyed by the Judge who was immersed in the sea of evidence; and of the breadth of the range of legitimate evaluative assessments beyond which the trial judge must have strayed before an appellate court can interfere. In a case of this nature there is a high threshold to be met before an appellate court will be able to say that the judge was plainly wrong. The Judge expressed his findings about the deficiencies in the market check process in a nuanced way as giving rise to "concern". He was in the best position properly to assess the degree of that concern and the significance of the deficiencies in the light of countervailing factors. His finding that they did not undermine the Merger Price as one to which some resort could be had was an evaluative assessment which he was very much better placed to make than an appellate court. Although the Court of Appeal had correctly identified the limits on its entitlement to interfere with the Judge's

findings, it seems to the Board that it impermissibly strayed into the realm of substituting its own evaluation for that of the Judge.

(iv) Approach to "reliability" of valuation measure

50. Further, in saying that factors lending support to the reliability of the Merger Price could not balance or outweigh the deficiencies in the market check process or the concerns about the impact of Mr Gao's position, the Court of Appeal seems to have been treating reliability as a concept in which the supporting factors and undermining factors fall to be balanced so as to produce an all or nothing result, such that if the weaknesses are more potent than the strengths, no weight can be attached. That erroneously treats reliability as a binary concept and ignores the fact that weight may be attached to a particular valuation measure even where the court concludes that the uncertainties or weaknesses make it less rather than more reliable.

51. This is one of a number of indications that the court also failed to treat reliability as a comparative concept as between different valuation measures, in which they are to be assessed by reference to how reliable one is relative to the reliability of another. This error in approach seems to the Board to explain the court's false point at para 146(i) that having decided that Ms Glass' weighting of 40% needed to be reduced by an additional amount, the Judge had in fact increased it to 45%, a conclusion said to be wholly inconsistent with what he had said about the need for an additional discount; and an inconsistency which the Judge did not explain. This is a false point because the Judge did in fact reduce the weighting of the Merger Price relative to the DCF Value. In Ms Glass' view it was to be 40% to 20%; he adjusted it to be 45% to 25%. That decreases the weighting of the Merger Price relative to the DCF Value from double to less than double.

52. This error in approach is perhaps most obvious in what the Court of Appeal did by way of redistribution of the 45% Merger Price weighting. Having decided that it would not disturb the weighting of 30% applied to the Market Price on the basis that the Judge could not be shown to have erred in giving it that weighting, and discarded the Merger Price, it added the 45% to the DCF Value so as to fill the gap without any analysis or reasoning. The court simply failed to undertake the required comparative reliability exercise which was necessary if the Merger Price was to be accorded no weight. The surprising result was that despite Ms Glass' evidence, with detailed reasons, that a market based approach was much more reliable than a DCF Value, and despite the Judge finding that her evidence generally was reliable and was in this specific respect to be taken as his starting point for relative weighting, the ultimate weighting would be 70% in favour of the DCF Value, almost three times that attributed by the Judge and far more than the market based weighting.

Grounds 2 and 3

53. These grounds do not arise as a result of the Board's view on Ground 1.

Ground 4

54. The Judge concluded at para 8(f)(iii) that the forecasts for module selling prices in the Management Projections had not been shown to be in error and should therefore be accepted. His detailed reasoning is at paras 207 to 217. The Judge explained at para 209:

> "The Company's projections were based on a judgmental assessment. From 2017 to 2021, the Company projected that prices would decline by US$0.045, US$0.040, US$0.035, US$0.030 and US$0.025 per watt, respectively, each year. Thus the price decline was reduced by US$0.005 each year. In percentage terms, this approach resulted in a price decline that slowed over time. In 2021, the Company moved to a fixed percentage decline, such that prices in 2022 and 2023 were assumed to decline by 7% each year, which approximated the percentage decline expected at the time (ie, 6.9% in 2021). As a result of moving to a fixed percentage decline, the price decline in dollars per watt slowed over time (from US$0.025/w to US$0.023/w to US$0.022/w)."

55. Different figures had been contended for by Dr Goffri and Mr Russo, whose sources and methodologies had been the subject of criticism by Ms Glass. The Judge accepted the criticisms of some of their sources and methodologies, such that the only ones he treated as relevant were three used by Dr Goffri and one used by Mr Russo. To these four, Ms Glass added a fifth source, SunShot, which she said was a respectable source being part of the US Department of Energy's Solar Energy Technologies Office which drew on a wide range of other sources. She also sought to deal with the problem that of these five sources only one, namely IRENA, gave any projections for the last three years, 2021-2023, which she considered unreliable. Her solution was to assume a constant decline for those years at the rate which was the average for all the sources for 2020, namely 6.8%. At para 217(e) the Judge accepted that Ms Glass' evaluation and analysis of the evidence of Dr Goffri and Mr Russo was reasonable "with one possible exception". He said:

> "I was concerned …….at her use of and reliance on [the SunShot] data source that had not been used or commented on by either of the industry experts….. But on balance I am satisfied that Ms Glass' analysis and support for the

> reasonableness of the forecasts in the Management Projections remains good……Excluding the SunShot data does … suggest that the forecast in the Management Projections might have been too low for 2020-2023 but in my view the various alternative methodologies establish a range of potentially reasonable approaches and forecasts but do not demonstrate that the Management Projections were clearly or likely to have been in error."

56. The Court of Appeal at para 171 treated this as a finding which was not reasonably open to the Judge for the following reasons. The Judge was entitled to accept Ms Glass' evidence in respect of the different sources used by Mr Russo and Dr Goffri. Her analysis, including the SunShot figures, came up with figures which were materially lower than those in the Management Projections and so could not be said to have provided support for the Management Projections. A fair reading of para 217(e) was that the Judge considered that the SunShot figures should be excluded. However it was not reasonably open to the Judge to accept that the Glass projections without the SunShot figures supported the reasonableness of the Management Projections on the "swings and roundabouts" or "rough and ready" basis that such adjusted Glass projections were a little lower in the earlier years, similar in the middle and higher in the later years, because this was to ignore the extra effect on a DCF valuation of later year figures. This was particularly so in circumstances where there was nothing to explain or justify the figures in the Management Projections. The only reasonable conclusion for the Judge to have reached was that the selling prices should be calculated in accordance with the evidence of Ms Glass but adjusted to exclude the SunShot figures. That was subject to a further point, namely that Ms Glass assumed a linear rate of decline in the prices from 2021 to 2023, as did the Management Projections. However the Judge appeared to have accepted at para 217(b) as common ground between the industry experts that the rate of decline would have slowed over the later years. Ms Glass' projections therefore fell to be adjusted not only to remove the SunShot figures but also to reflect this slowing rate of decline in the later years, rather than the linear rate of decline she had adopted.

57. The Board considers that on these points too, the Court of Appeal was not justified in treating the Judge's conclusions as plainly wrong. When considering the reliability of the Management Projections generally, the Judge noted at para 189(b) that the Company had explained how they were compiled and that those involved in their preparation had an in-depth knowledge of the Company's business. Projections produced by a company form a starting point in a DCF valuation because a company is taken to know its own business; and insider knowledge which informs such management projections may justify according them greater weight than industry evidence based on third party source material. Ms Glass was not giving primary evidence of solar industry experience, but rather assisting in the evaluation of the evidence of Dr Goffri and Mr Russo from a valuation point of view. The Judge was not bound to accept the evidence of any of the three as to the exact figures which should be taken, or those in the Management Projections, but rather had to evaluate for himself the worth and the effect of each. It is

important to keep in mind the nature of the exercise here being conducted. It involved making a prediction at the valuation date of what would have happened over the subsequent seven years; it was a prediction as to an average selling price; and was in respect of the Company's own particular products; it used a single figure for each calendar year; and there was limited relevant market data to draw on. It was not an exercise in calculation which was capable of producing a single figure which could be objectively justified as the only correct figure as an empirical fact; rather it was an exercise in estimation involving considerable uncertainties in which there would inevitably be an element of approximation resulting in a range of figures which could be justified as a reasonable estimation. It was for the Judge to consider whether the effect of Ms Glass' evidence without the SunShot data properly supported the reasonableness of the Management Projections. If the result of removing the SunShot data from her calculations was, as the Court of Appeal said, that the results were a little lower in the earlier years, similar in the middle and higher in the later years, by comparison with the Management Projections, that did not invalidate the Judge's assessment that they supported the reasonableness of the Management Projections even if that ignored the extra effect on a DCF valuation of the later year figures. The Court of Appeal's approach was to treat it as a calculation exercise, rather than, as the Judge correctly treated it, an exercise in estimation which could produce a range of reasonable results. Moreover, the fact that the Court of Appeal felt itself unable to perform the recalculation, and so could not know what its effect would be, reinforces the conclusion that it was not in a position to conclude that the Judge was in error on this point, let alone plainly so.

58. The same is true for the point about a linear rate of reduction in the later years. What the Judge had said about the industry experts at para 217(b) was that Dr Goffri had accepted that "over time 'module prices … would decrease but at a slower rate'" and that "[t]his does suggest that adopting a linear rate of decline fails fully to accommodate this aspect of the data." It does not appear from the material put before the court that this was any more than a generalised prediction. As can be seen from para 209 of the Grand Court Judgment quoted above, the Management Projections (unlike Ms Glass' projections), did adopt a decreasing rate of reduction in prices for five of the seven years, to 2021, by using fixed price reductions, and only adopted a linear percentage rate of decline for the final two years, 2022 and 2023. It is far from apparent that overall the treatment in the Management Projections was inconsistent with what Dr Goffri is recorded as saying, or that the result was outside the range of reasonable estimations. That was a matter for the Judge's assessment, which he was far better placed to undertake than the Court of Appeal.

Ground 5

59. The Judge explained the relevance of the capacity factor in downstream sales at para 240:

> "As I have explained, an important concept used in the assessment and forecasting of sales is the capacity factor. This is the amount of energy generated in a year divided by the total generation that could be provided assuming continuous operation over a full year (8,760 hours). A high capacity factor indicates high utilisation levels of installed generating capability whilst a low capacity factor indicates that a plant is running below its capability for a large part of the time. Higher capacity factors are more desirable, particularly for renewable generators like solar facilities that have no incremental costs associated with energy production, because they indicate increased production of sellable electricity for the same level of capital investment."

60. The Management Projections assumed an average electricity generation of 1,200 hours per year which equated to a capacity factor of 13.7%. This was an estimate across all of the mix of its power projects. Mr Russo's view was that this was too low. Dr Goffri's view in his reports was that without details of all the built and planned systems and site specific information, the Company's estimates on a portfolio basis were appropriate. He modified this in cross-examination to accept that the use of tracking technology in China, which would make solar panels more efficient by allowing them to move to track the sun's movements, was expected to grow; that the use of trackers would increase the capacity factor; and that a reasonable forecaster would have anticipated that the capacity factor would increase over the following years, although he could not say by how much and disagreed that it would be as much as Mr Russo's figures suggested.

61. Ms Glass' reports concluded that the assumption of 1200 hours (ie a capacity factor of 13.7%) was reasonable in the light of nine sources which included some of those used by Mr Russo and Dr Goffri but some from her own research, although it was potentially towards the lower end of a reasonable range. Her view was also modified in cross-examination in the light of Dr Goffri's change of position. When it was put to her that both the industry experts now agreed that the effect of tracker technology would be to increase the capacity factor, she accepted that the 13.7% figure would be too low but she could not state by how much.

62. The Judge's conclusions at [249] were expressed as follows:

> "I find this to be a difficult issue. The competing analyses are detailed, based in part on empirical data collected in third party studies whose assumptions were unclear and contested, there is an admitted lack of historical patterns, there is an absence of important data (for example, the location of all the Company's built and proposed solar PV systems and site specific

information, the orientation of its portfolio of solar PV systems and regional sales and investment strategies) and explanations from the Company together with speculation about how anticipated market trends (for example relating to the increased use of trackers) would impact the Company. While it appears that the capacity factor estimate in the Management Projections (13.7%) was probably below a reasonable forecast, (as Ms Glass accepted during her cross examination), it is unclear what, and in my view the evidence does not establish what, a reliable and reasonable higher estimate should be (and therefore what alternative estimate the Court can properly use). While I consider the information gaps to be regrettable, the Court can only reach a decision based on the evidence adduced (I do not consider that I can or should draw adverse inferences on this issue from the Company's failure to produce further information in response to Mr Russo's requests). In my view, on balance, I find Dr Goffri's evidence as supported by Ms Glass' reasonableness tests, to be preferable to Mr Russo's analysis and Ms Glass' analysis and explanations be convincing. I therefore conclude that the forecast in the Management Projections should be accepted."

63. The Court of Appeal noted at paras 181 to 185 how the evidence of Dr Goffri and Ms Glass on this question had been modified in cross-examination. At para 188 it concluded that the Judge was plainly wrong on the issue because he had found at para 249 that the figure of 13.7% was probably too low, which was a finding that it was too low, and was an inevitable finding in light of the evidence. It was not therefore open to him to adopt that figure or to treat the evidence of Dr Goffri or Ms Glass as supporting the reasonableness of the Management Projections in this respect. The court accepted that the Judge was in a difficult position because he had found that Mr Russo's figures were too high and he had no other figures than Mr Russo's because Dr Goffri and Ms Glass had felt unable to put forward any figures save to say that Mr Russo's figures were too high and the Management Projections were too low. In those circumstances the Judge simply had to do his best to choose a figure somewhere between Mr Russo's and that in the Management Projections. It was not open to him to say that because no other figures were available he would accept the Management Projection figure despite his finding that it was too low.

64. The court went on to say that it would not be proportionate to remit this issue to the lower court and that it should reach its own decision. It did so by taking the figure for 2016 as that in fact achieved in 2015, namely 14.3% and increasing it by 0.05% each year from 2017 so as to become 14.35% in 2017 rising to 14.65% for 2023. It did not identify the basis for taking these increments of 0.05%.

65. Mr Chapman KC submitted that the Judge had not made a finding that the figure of 13.7% was probably too low but merely that it "appeared" to be too low. The Board does not consider that to be a realistic submission. It agrees with the Court of Appeal that the Judge's finding was that 13.7% was too low and that such a finding was inevitable in the light of it being the view of each of Mr Russo, Dr Goffri and of Ms Glass.

66. However, the Court of Appeal gave no reason for choosing the 0.05% increase figure which it applied, which appears to have been plucked out of the air. The Board observes that it involves a tiny yearly increase, both in absolute terms, and by comparison with Mr Russo's suggested increase of 3% over 7 years, which is suggestive of tinkering with what is only one of the many figures from the Management Projections which are inputs into the DCF valuation exercise. Of greater effect is the Court of Appeal's adjustment of the starting point for the increases by substituting a figure of 14.3% for 13.7% in 2016, without identifying any reason why that figure, which was the actual capacity for 2015, should be preferred to the 13.7% figure used in the Management Projections, which was the projected figure for 2016. Moreover, as Mr Chapman argued, the adjustment failed to take account of the cost of the trackers, both the initial acquisition and installation cost and subsequent operating and maintenance cost which would be increasingly used over the projection period to increase capacity. In those circumstances the Board does not consider that the figures chosen by the Court of Appeal have any greater claim to validity than the Management Projection figures used by the Judge, and there was no justification for the court to interfere with his assessment by making the adjustments it made.

Conclusion

67. Accordingly the Board will humbly advise His Majesty to allow the appeal on Grounds 1, 4 and 5, the effect of which is to restore the assessment of fair value to that determined by the Judge.