Neutral Citation Number: [2025] EWHC 1877 (Ch)

Case No: HC-2015-001324

IN THE HIGH COURT OF JUSTICE
BUSINESS AND PROPERTY COURTS OF ENGLAND AND WALES
BUSINESS LIST (ChD)

7 Rolls Building
Fetter Lane
London, EC4A 1NL

Date: 22 July 2025

Before:

THE HONOURABLE MR JUSTICE HILDYARD

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Between:

(1) ACL NETHERLANDS B.V. (AS SUCCESSOR TO AUTONOMY CORPORATION LIMITED) — **Claimants**

(2) HEWLETT-PACKARD THE HAGUE BV (AS SUCCESSOR TO HEWLETT-PACKARD VISION BV)

(3) AUTONOMY SYSTEMS LIMITED

(4) HEWLETT-PACKARD ENTERPRISE NEW JERSEY, INC

- and -

(1) JEREMY VAUGHAN SANDELSON AS ADMINISTRATOR OF THE ESTATE OF DR MICHAEL RICHARD LYNCH DECEASED — **Defendants**

(2) SUSHOVAN TAREQUE HUSSAIN

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- -

Conall Patton KC, Max Schaefer (instructed by **Travers Smith LLP**) for the **Claimants**

Richard Hill KC, Sharif A. Shivji KC, Tom Gentleman, Zara McGlone, Karl Anderson, with **Lord (David) Wolfson KC and Nehali Shah** (all instructed by **Clifford Chance LLP**) for the **1st Defendant**

Paul Casey (instructed by **Simmons & Simmons LLP**) for the **2nd Defendant**

Hearing dates: 12–16, 22, 26-28 February 2024
Further written submissions 4-5 March 2024

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Approved Judgment

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MR JUSTICE HILDYARD

I direct that no official shorthand note shall be taken of this Judgment and that copies of this version as handed down may be treated as authentic.

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Hon. Mr Justice Hildyard

Scope of this Judgment

1. This judgment follows on from my judgment on liability dated 17 May 2022 (my "Main Judgment") for which the short reference to the record is [2022] EWHC 1178 (Ch). Unless otherwise expressly stated, I adopt the same definitions and short forms of reference in this judgment as in my Main Judgment.

2. In my Main Judgment, I set out the reasons for my conclusion that HP had substantially succeeded on issues of liability, that Autonomy's true financial position and performance had not been properly and accurately disclosed, and that had it been so, HP would not have proceeded with its acquisition of Autonomy at the bid price. In view of the length of the Main Judgment, I delivered a summary of my conclusions, to be read subject to the Main Judgment and in particular paragraphs [4153] to [4155], which can be found annexed to the Main Judgment as Appendix 6.

3. I expressed the provisional view, however, that (a) even if Autonomy's true financial performance and position had been properly and accurately disclosed, HP/Bidco would nevertheless have wished to proceed to a bid and to conclude the Acquisition, but at a significantly reduced price, and (b) it is more likely than not that, in a counterfactual world in which full proper and accurate information about Autonomy ("Autonomy's True Position") had always been provided to the market (defined as the "FSMA Counterfactual"), Autonomy's Directors would have recommended, and shareholders would have accepted, a reduced offer: and see paragraphs [4056] to [4060] and [4076] of my Main Judgment.

4. I acknowledged that the assessment of what bid price would have been negotiated, agreed and recommended to Autonomy's shareholders in the FSMA Counterfactual is a difficult one, inevitably involving subjective judgment (see paragraphs [4061] to [4062] of my Main Judgment). As there stated, I did not feel able to determine, before recalibration of the Deal Model and other cross-checks in the light of my findings on liability and further assistance on a number of issues, what, in Autonomy's True Position, Autonomy's share price would have been, and what premium HP would reasonably have been required (and would have agreed) to pay to achieve its objective of an agreed bid: ibid.

5. Thus, notwithstanding that there was no order for a split trial, and the evidence at the main trial (the "Main Trial") covered issues of quantum as well as liability, I determined that I needed further assistance from the experts (Mr Bezant for HP/Bidco and Mr Giles for the Defendants[1]) and from Counsel at a further hearing.

[1] Technically, Mr Giles was instructed only by Dr Lynch. However, since Mr Hussain adopted Dr Lynch's position and the expert evidence submitted on his behalf, and for simplicity, I refer to Mr Giles's reports as the expert evidence of 'the Defendants'. More generally, references to "the Defendants'" case, position, submissions, or other cognate expressions, should be interpreted in the same way even if technically only put forward by or on behalf of Dr Lynch.

Issues on which I invited further guidance

6. Amongst the issues I identified as ones on which I was likely to need further guidance were:

   (1) How the experts' approach and valuations would differ, taking into account that although the Claimants succeeded in most, they did not succeed in all, of their claims.

   (2) Any points of disagreement with my preliminary view that, in the context of the FSMA Claim at least, a recommended and acceptable bid price would have been achieved and that in that context, this is, accordingly, a "Transaction case".

   (3) Further consideration of the possibility that, conversely, in the context of the deceit/Misrepresentation Claims against each of the Defendants personally to recover loss relating to the acquisition of the shares and share options held by them respectively, it is to be assumed that the fraud would have been revealed and corrected; and, if so, whether HP/Bidco would have proceeded in the teeth of such a revelation, or whether in that different context, this must be treated as a "No-Transaction case"; and in which case, with what effect: and see paragraphs [4066] to [4076] of my Main Judgment.

   (4) Further analysis and assessment of Mr Giles's central theme that the Discounted Cash Flow ("DCF") valuation on which the Deal Model was based would "*not be materially affected by the Allegations*" because "*Overall the Accounting Adjustments [would] very likely have no impact or very little impact on cash*": see paragraph [4063] of my Main Judgment.

   (5) How, in the context of a 'Transaction case' (a) the share price in the Counterfactual and (b) any premium are to be determined, assuming (contrary to Mr Giles's evidence) that the DCF valuation and the Deal Model would have been materially affected, and the market and shareholders may have had different expectations.

   (6) What, in the context of a 'No-Transaction case', would be the value of the shares acquired, having regard especially to whether HP/Bidco should be required to give value or credit for any part of the synergy value expected to be realised by HP in respect of the Acquisition.

   (7) What is the correct quantum of loss for which the Claimants seek recovery against each Defendant in their direct claims for breaches of fiduciary duty.

7. I considered that a further exchange of expert evidence and (in all probability) a further hearing would be required to assist me on these issues. Accordingly, in the exercise of my discretion (and see *Southern Counties Fresh Foods Ltd* [2009] EWHC 1362 (Ch) per Warren J), I directed that there be a further hearing to determine these and any other issues relating to quantum, and that additional expert evidence be provided to assist me on the questions I had raised, and in particular on the effect of the fact that the Claimants had not succeeded in all their claims.

Dispute as to admissibility of additional material and arguments

8. Perhaps unsurprisingly, the parties formed different views of the scope of further evidence that I had invited. Initially, I sought to address these differences in directions given in October 2022, which provided for the sequential exchange of expert evidence. However, the disagreement between the parties sharpened after that exchange. In particular, the Claimants objected that two reports filed by Mr Giles (his third and fourth reports) went considerably and impermissibly beyond the proper scope of the further evidence, given that factual issues on quantum had all been directed to be addressed at the Main Trial. They depicted his further evidence as "*naked attempts to reopen the trial wholesale…*".

9. To address these differences and give more specific directions, a further hearing was arranged for and took place on 26 June 2023 ("the Quantum Directions Hearing"). My approach and more detailed conclusions on the directions sought and those given at the Quantum Directions Hearing are set out in a judgment dated 19 July 2023 ("my Quantum Directions Judgment"), for which the short reference is [2023] EWHC 1847 (Ch): and see especially paragraphs [31] to [41].

10. It is unnecessary for me to repeat the detail of my reasons, which I have set out in my Quantum Directions Judgment; but my overall conclusion, albeit subject to certain specific reservations, was that on the whole, the disputed evidence (which had already been exchanged) was likely to be of assistance to me in understanding both the effects of stripping out from the calculation of loss the impugned transactions which I did not consider to have been demonstrated to be improper. More generally, in this unusually complex case, I needed further explanation of the differences which had led to such an enormous remaining gulf between the experts of over US$3 billion in their respective DCF standalone valuations of Autonomy at the time of the Acquisition,[2] of over US$2 billion in their valuations of the value of synergies[3] and of some US$4 billion in their assessment of the "Revised Price".[4]

[2] In his seventh report, prepared after the Main Trial and submitted for the Quantum Hearing, Mr Bezant stated his standalone value of Autonomy in the RTP on the RCC basis (excluding net cash of US$705 million) as being US$5,834 million (down from US$9,502 million (excluding net cash) in the Represented Position). In his third report, prepared for the Quantum Hearing, Mr Giles states his standalone valuation for Autonomy on the RCC basis to be US$10,146 million. (As to the 'RCC' basis, see paragraph [53] below.)

[3] In his sixth report, based as was then his preference, on the RUS, Mr Bezant reduced to US$5,042 million the value of synergies in the RTP (down from HP's estimate of US$7,735 million in the Represented Position) whereas Mr Giles, based on what he perceives to be substantially the same basis as HP adopted, values synergies in the RTP as US$7,692 million.

[4] The actual Acquisition price paid by HP was US$11,126 million. Again using his then preferred RUS basis, Mr Bezant assessed the Revised Price on the 'Transaction basis' (see paragraphs [85] *et seq* below) as approx. US$7,100 million, the overall loss (including loss referable to the acquisition of the Defendants' shares) as $4,026 million and the FSMA loss (restricted to the FSMA claim and thus excluding loss in respect of the acquisition of the Defendants' shares) as $3,728 million. Mr Giles did not consider there to be any difference in terms of quantum between the 'Transaction basis' and the 'No-Transaction basis' (see paragraphs [93] and [94] below), and he concludes that there would have been no material change in Autonomy's stand-alone value in the RTP compared to the Represented Position, and that the agreed bid price in the RTP would not have materially differed from the Acquisition Price ($11.1 billion, which was about $5 billion above Autonomy's market capitalisation at the time).

11. However, I reserved to the substantive Quantum Hearing the decision whether to exclude certain parts of the evidence and/or decline to permit certain lines of argument. I return to this later in the context in which the specific objections arose.

Structure of this Judgment

12. I address the FSMA Claim (in Part A), the Deceit/Misrepresentation Claims (in Part B), the Claims for Direct Losses (in Part C), and finally, the Currency of Loss (in Part D).

PART A: FSMA CLAIM

13. In Part A of this Judgment I consider:

    (1) the parameters relevant to assessing quantum in the context of a successful FSMA claim;

    (2) the differences between the two experts in terms of their basic approach;

    (3) the important areas of common ground between the parties and their respective experts, at least in the context of the FSMA claim;

    (4) the key differences between the experts which account for the gap between them of over US$3 billion in their respective views of what would have been the Deal Model in Autonomy's True Position;

    (5) the appropriate counterfactual exercise in the context of the FSMA Claims and the principal outstanding differences between the experts in the construction of the FSMA Counterfactual;

    (6) what should be taken to be Autonomy's 'Restated' or 'True Position' after correction of the false accounting;

    (7) my view as to the proper approach in constructing and the adjustments to be made to the actual Deal Model in constructing a revised DCF valuation and Deal Model in the FSMA Counterfactual;

    (8) what, in light of (6) above and the differences in the performance and prospects of Autonomy, Autonomy's share price would have been immediately before and at the time of the Acquisition in the FSMA Counterfactual; and

    (9) assuming a 'Transaction case', what premium over the share price HP would have agreed to pay, and what would accordingly have been the negotiated, agreed and recommended bid price.

(1) Parameters relevant to assessing quantum in a FSMA claim

14. It may be helpful first to rehearse the parameters relevant to assessing quantum in the context of a successful FSMA claim (which I take from my Main Judgment) and to explain some of the terminology adopted by the parties in that context.

15. In such a claim, if and to the extent that it is established, the wrong for which the claimant is getting compensation or reparation is the inclusion of false or misleading statements in, or the omission of required information from, published information: see paragraph [527] of my Main Judgment.

16. In assessing the losses flowing from that wrong, it is necessary to ask what would have happened had the false statements or omissions not been made, and if instead the published information had contained true statements in respect of all matters required to be included in respect of all Autonomy's transactions: see paragraph [528] of my Main Judgment. That is the relevant Counterfactual to be constructed for the purpose of my determination of quantum in the FSMA Claims ("the FSMA Counterfactual").

17. As noted in paragraphs [528], [529] and [4059] of my Main Judgment, and as is also common ground, the premise of the FSMA Counterfactual is that accurate information would have been published historically, and would have informed the market, Autonomy's share price and its shareholders' expectations. Likewise, in the context of a takeover bid, it is to be assumed that any deal model prepared by a bidder to estimate the standalone value of the target, and the bidder's own perception of the value of the company and the price it would be prepared to pay, would have been informed by correct accounting in respect of all the target's transactions.

18. The difference between the bid price which the Claimants agreed on the basis that Autonomy's financial position had been correctly accounted for (*"the Represented Position"*), and the bid price the Claimants would have been prepared to agree had Autonomy's true financial position been correctly presented is the measure of their loss.

19. In my Main Judgment, I have found that the foundation of HP's assessment and ultimate decision was the description of Autonomy's historical revenue performance, organic software revenue growth and the description of its business and five revenue streams put forward in Autonomy's published information or "Reports". That was the bedrock of the DCF valuation constructed by HP in the Represented Position, which was referred to by all parties and their experts as "HP's Deal Model": see, in particular, paragraph [4047] of my Main Judgment.

20. As a step in the quantification of their FSMA Claims loss, Mr Bezant and the Claimants provided for the Main Trial a revised version of HP's Deal Model which they modelled on what they contended was the *'True Position'* in the FSMA Counterfactual: see para. [4001] of my Main Judgment. They referred to their model, which they put forward as reflecting the *'True Position'* as defined in my Main Judgment[5], as their '*Adjusted Deal Model'*.

21. However, in the event and for the reasons stated in my Main Judgment, the Claimants succeeded on most of their FSMA Claims, but not all of them. In particular, they did not persuade me in respect of what were referred to as *"the Excluded Transactions"*. That required factual adjustments to the FSMA Counterfactual and recalibration of their Adjusted Deal Model to reflect what at the Quantum Hearing was referred to by the Claimants and Mr Bezant as the *'Revised True Position'* or *'RTP'* and by the Defendants

[5] See, for example, the definition provided in paragraph [4001] and footnote 540 of my Main Judgment.

and Mr Giles (usually) as the *'Restated Position'*. Mr Bezant and the Claimants referred to their recalibrated Adjusted Deal Model as their *'Updated Adjusted Deal Model.'*

(2) The techniques and process of valuation

22. Although all concerned acknowledged it was only a first step and itself also based on a variety of highly subjective inputs and assessments, it was common ground that a DCF valuation is the most used and respected valuation technique for assessing the stand-alone value of a commercial entity.

23. As is apparent from its name, the theory of a DCF valuation (as comprised in HP's Deal Model and in the Adjusted Deal Model) is that a company's value to a purchaser is ultimately the amount of cash it can be expected to generate for shareholders over the course of its lifetime, adjusted for the time value of money by applying a discount rate to establish present day values. Put another way, the stand-alone value of a company is taken to be the sum of all future cashflows discounted to the present day.

24. As foreshadowed in paragraph [23] above, whilst a DCF valuation provides a picture of the intrinsic economic value of an entity in terms of its future cash flows, it can be no more accurate than the many assumptions which are required to be made in its development. The seemingly very precise figures characterising a DCF valuation give the appearance of exact and objective assessment which is not the reality. For example, the figure taken for terminal value, which is the capitalised value of all cash flows occurring after the end of the forecast period, typically represents about 70% of the total value. Any small changes in the predicted growth rate, the selection of the date for commencement of any 'plateau period', and the terminal growth rate selected will produce relatively large changes in the terminal value. Predictions as to the future are apt to be subjective: a DCF valuation is a helpful process, but it is ultimately based on subjective assessments and choices, and will usually be one of a variety of valuation approaches (such as a 'multiples' analysis).

25. Further, the assessment of stand-alone value does not provide an answer to how the benefit of a share of its ownership (through its shares), nor of the market value of a smaller holding of shares, will be valued (a) in the market and (b) by a particular purchaser. These both require highly subjective assessments in a hypothetical (counterfactual) world.

26. As to (a), not only is a listed company's share price often volatile (to a greater or lesser extent, according to the nature of its enterprise and market reputation, as well as other more general market sentiment and extraneous matters affecting the stock market more generally), but also any bid price offered in the context of a proposed takeover is likely to have to exceed the mid-market share price. That is principally because what shareholders are prepared to accept will reflect not only that mid-market price but (where applicable) their knowledge of higher prices for their stock in the past, which will fuel their perception of their holdings' worth and also the basic expectation of a takeover premium. That expectation is based not only on 'market' factors (such as past premiums paid for companies in the same line of business or generally), but also on the almost invariable perception that a bidder has spotted value it can realise, if the acquisition proceeds and it acquires complete control, for which it should be prepared to pay.

27. As to (b), and in those circumstances, almost all bidders will be (or will be perceived to be) 'special purchasers' in the sense that they will have identified some material benefit to flow from its acquisition over and above its share price. That is usually referred to as 'synergy value', which in this case HP's Deal Model also sought to assess. The aggregate of 'synergy value' and stand-alone value establishes a top limit of what a bidder can responsibly agree to pay, because a bidder is not likely to pay more than it can reasonably hope, over time, to obtain. Further, a bidder will naturally aim to retain as much as possible of the synergy value it has detected. Negotiations will in reality centre on the division of the synergy value between the bidder and the target's shareholders.

28. Thus, the eventual price will be the product of negotiation: and that, and its conclusion, will reflect the parties' perception of their respective strengths and weaknesses (and probably which of them considers that it has more to lose). There can be no exactness in determining what would be the result of a hypothetical negotiation. Although the Deal Model and its assessment of standalone value is likely to provide the 'floor', and the aggregate of stand-alone and synergy values provide the 'ceiling', the process and result will then ultimately depend on (a) the estimated share price of the target and the expectations of shareholders (especially in terms of the premium to be expected in any takeover), (b) the anticipated overall value of the target to the bidder (including not only its standalone but also its synergy value), (c) the appetite of the bidder to achieve an agreed bid (including any pressure of time or concerns about rival bidders), (d) the negotiating strengths and skills of the seller (or more accurately, its director(s) who are, once their company is "in play", in effect charged to agree and recommend a bid price to their shareholders), and (e) any "hold out" position which the bidder needs to win over: examples might include the need to secure the agreement of reluctant directors; and/or the support of a significant shareholder; and/or the services and continuing support of key executives whose services are perceived by the bidder to be required to achieve the integration of the target company and the success of the business post-acquisition.

29. In short, a DCF valuation, though almost invariably undertaken by a bidder and likely to be formative in its view of value, is more of a range-finder to set the rational parameters in value terms of a prospective bid and what range of prices would be rational to pay, and not the answer to that issue: standalone valuation on a DCF basis informs the bidder's approach and may have affected the pre-bid share price but it will not determine the eventual bid price. Value and price are not synonymous. The determination of the Revised Price is a multifactorial process, the ultimate factual assessment required being what, having regard to standalone value, the pre-bid share price and the other parameters referred to above, would have been the dynamics and result of the price negotiations; and though Mr Bezant provided his conclusion in this regard, the assessment is not a matter of expertise, but one of fact to be made by the Court.

30. In making such an assessment, there is inevitably a temptation, not least because the required exercise of recalibration may tend to encourage it, to make comparisons between the position as Represented and the hypothetical position in the FSMA Counterfactual world. Such comparisons are inevitable but dangerous. They tend to encourage a discount on value by reference to perceived diminution (whether in size, business 'mix' or quality of earnings) in the counterfactual and/or or the disappointment

of adverse comparison, which is not appropriate. At least in the context of the FSMA Claim, it does not yield an appropriate measure of loss. I consider that a sometimes silent invitation or inherent tendency to make a comparison, and the presentation of figures to give it credence, introduced a discounting factor which did infect the Claimants' approach.

31. The exercise that is required (in the FSMA claim and in a 'transaction case', at least) does not involve a comparison other than, when the time comes, to compare the Revised Price with the Actual Price to establish the Loss. HP should not be supposed to have been led to expect more: the Revised Price is the price they would have agreed to pay for the entire issued share capital with Autonomy's position and propensities as they must be taken to be in the RTP, without any unfavourable comparison to the Represented Position, nor any 'disappointment factor'. Thus, to take an example, it would be legitimate to take into account, for the purposes of assessing the likely result of a negotiating process, that in presenting Autonomy's activities and prospects, Dr Lynch would not have been able to point to any substantial OEM business such as HP might have expected or at least considered desirable and profitable; but it would not be legitimate, in my view, to introduce a discount on the basis that in the actual world, HP had been led to expect a much more successful OEM business and so would have been disappointed by the very small OEM business which would be shown in the RTP.

(3) The expert evidence: overview

32. The experts' valuation reports in this case have run to well over one thousand pages. Mr Bezant has provided me with seven reports, Mr Giles with four (two of such reports in each case having been provided after my Main Judgment and for the Quantum Hearing). That does not include copious schedules, appendices and exhibits (filling 8 lever arch files in the case of Mr Bezant's first report alone), nor two long Joint Statements (the utility of which was diminished by the tendency to excessive argumentation rather than summary, as the parties had to acknowledge).

33. Mr Bezant's approach and conclusions were summarised in the Claimants' written opening submissions for the Quantum Hearing as follows:

> *"Mr Bezant's evidence at trial set out a systematic and comprehensive assessment of the loss based on what the Claimants called the "True Position", which corrected Autonomy's published financial information for the effect of the totality of the alleged fraud. From that starting point, Mr Bezant valued Autonomy using both DCF and multiples analyses; estimated its counterfactual share price; and assessed Revised Price by reference to a variety of metrics, including a range of premia over that estimated share price. His overall conclusion was that HP's loss was in the order of $5bn.*
>
> *…. Mr Bezant has now amended the various... schedules, to reverse the adjustments the Claimants had made in respect of the Excluded Transactions, and thereby establish the RTP (i.e. the Revised True Position). He has then re-performed the same valuation methodology he used at trial and concluded that his valuation of Autonomy is about $1bn higher – and, as a result, his assessment of the loss about $1bn. lower (i.e., c.$4bn)."*

34. Mr Bezant considered it to be within his professional expertise to go beyond recalibration of the Deal Model and an assessment of trading and transaction multiples analyses (which I explain later). He provided in addition an assessment of the price (the *'Revised Price'*) that HP would have paid for Autonomy, had it known the RTP. However, he acknowledged both the *"inherent subjectivity"* of any valuation exercise, and also (to quote from his first report) that the *"assessment of counterfactual price is subjective insofar as it concerns a hypothetical negotiation between specific parties"*.

35. Mr Giles felt, as it were, spared an assessment of the Revised Price because he considers that the value of Autonomy in the RTP was no lower, and probably higher, than in the Represented Position. In his view, any change in the synergy value to HP would have been minimal. He considers there to be no reason, in those circumstances, to believe that the pre-Acquisition share price would have been different. Logically, therefore, it is his opinion that the price that HP would have been prepared to pay would have been the same or higher than the actual bid price. Put shortly, he considers that:

> *"…Mr Bezant's DCF valuation did not fully capture Autonomy's underlying economic activity, resulting in a significant understatement of Autonomy's cash flow generation, which is the focus of a discounted cash flow valuation model. The accounting adjustments, whilst reducing Autonomy's revenues and profits, had no effect on cash meaning that, in the Restated Position, Autonomy's cash conversion was significantly higher, as demonstrated by the free cash flow("FCF") margin analysis presented in my* [second] *report… In effect, Mr Bezant incorporated the negative revenue impacts of the accounting adjustments but ignored the offsetting positive cashflow effects - these are reflected in the working capital, specifically, deferred revenue, movements which have the effect of shifting revenue into the future whilst maintaining existing cash flows."*

36. These differences of basic approach, and the disparity in the experts' respective views as to whether, and to what degree, the Revised Price in the RTP would have differed from the actual bid price, illustrate again the truth that, especially in the context of a takeover, a company has no certain and intrinsic value other than what a particular bidder is prepared to pay for its shares. Any appearance of the "appliance of science" is to that extent misleading. The re-creation of a counterfactual deal model to establish standalone value and provide the "lower bound" and a "ceiling" for price (since the seller will not be likely to accept less but the bidder's directors are unlikely to support a bid which exceeds standalone value by what they regard as too extravagant a margin), and the assessment of the value of synergies, are necessary steps; but they inherently involve subjective assessments, and they can only provide guidance towards what is ultimately an informed guesstimate of what would have been the share price. Likewise, they are ultimately insufficient to establish what should be taken to be the revised price that would have been agreed in the counterfactual world.

37. That said, HP's loss is, for the purpose of its FSMA claims, the difference between what it was persuaded to pay in fact, and what it would have been persuaded to pay in the FSMA Counterfactual world and the RTP. For the purpose of establishing that difference and thus HP's loss, it is necessary as part of the inquiry to retrace the steps actually adopted by HP, and the assessments of value HP made, as best these can be identified, and to replicate these steps, but in the (hypothetical) context of and by reference to the published information as modified for the purposes of the FSMA Counterfactual to conform with the RTP.

38. I turn to that exercise, not only to assess the experts' different approaches but also because it is important to follow and understand HP's own approach; but with the caveat which is already evident but always requires recall: that the process in truth culminates in an exercise (a hypothetical negotiation) which necessarily involves a question of impression and the application of a broad brush (or axe).[6]

(4) Common ground in the context of the FSMA Claims

39. In constructing the FSMA Counterfactual, there was more common ground between the parties and their respective experts than the huge disparity between their views on the appropriate quantum of damages might suggest.

40. Although the Claimants contended that its lower sales of software (once hardware sales are disclosed and stripped out as such), its slower growth, and its less attractive "mix" of sales, implied that its technology had proved less attractive than as represented, I did not understand the excellence and uniqueness of IDOL technology to be disputed. I also took it to be common ground that in the FSMA Counterfactual, as in fact, HP was intent on buying Autonomy for the opportunities which Autonomy's range of software offered HP to achieve the "transformational change" that Mr Apotheker (for one) was convinced was necessary to rescue it from the doldrums and establish it as a premium player in "the software space" .

41. The parties and their experts were agreed that, in those circumstances, at least in the context of the FSMA Claims, this is to be treated as a 'Transaction case'. Ultimately, none of the parties sought to argue against my provisional conclusion (see paragraphs [4056] to [4060] of my Main Judgment) that HP needed the transformational change that it would have continued to perceive Autonomy's products and market position would enable, and would have wished to proceed with the Acquisition and make a bid which would have been sufficient to result in its conclusion, though the Claimants contended that this would be at a drastically reduced price.

42. Both experts adopted a DCF approach as their principal valuation method; and they agreed that the principal purpose of their expert evidence is to opine as to the valuation that HP would have ascribed to (a) Autonomy's standalone value and (b) the synergies to be obtained by HP in the counterfactual world. Both also agreed that this primarily involves making adjustments to HP's Deal Model, which was a DCF model and HP's primary valuation tool, so as to construct an appropriate Counterfactual Deal Model in light of the conclusions in my Main Judgment.

43. Despite the enormous difference in their respective DCF/Deal Model valuations for the purposes of the FSMA Counterfactual, the experts were in agreement as to Autonomy's actual historical software sales (as distinct from the accounting recognition and treatment of revenues derived from them) and past revenue growth, except as regards Mr Giles's addition of a further $9.9 million of IDOL Product revenues in Q1 2011 in respect of the BoA transaction (with an impact of some $1 billion on Mr Giles's

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6 See my comments at [1199] in *CF Partners (UK) LLP v Barclays Bank plc* [2014] EWHC 3049 (Ch), a case concerning the slightly different context of assessing what would have been the result of a hypothetical negotiation for the purposes of establishing the quantum of damages in a *Wrotham Park* case. Those comments were approved by the Supreme Court at [75] in *Morris-Garner and another v One Step (Support) Ltd* [2018] UKSC 20.

valuation, which the Claimants disputed and maintained was impermissible and flawed).

44. Thus, it is common ground between the experts that, in what, to accord with my Main Judgment, is to be taken to be its 'True Position' or "RTP", Autonomy's software business was, in accounting terms, smaller. Indeed, it was not disputed that in the RTP its reported (earned) revenue and accounting profits would be (overall) around 23% lower than in the Reported Position.[7] (There was, however, as will be elaborated, a fundamental dispute as to the relevance of this, given that it was not in dispute that Autonomy's actual cash receipts did not change, and revenue which cannot be recognised as earned for accounting purposes until a subsequent date is nonetheless revenue in a commercial sense.)

45. The Claimants' reliance on the reduced software revenues in the RTP introduced a source of confusion in this context. They appeared, especially from Mr Bezant's sixth report and the Claimants' opening submissions for the Quantum Hearing, to be advancing a contention that the lower software revenues which could immediately be recognised as earned in its accounts in the RTP, and the fact that Autonomy was, at least in terms of its accounting revenues and profit levels in its software business, a considerably smaller company,[8] leads to the conclusion that what they called *"a lower bound to the Loss assessment"* is $3 billion. They presented this as their assessment of their minimum loss simply on the basis of Autonomy's historical software business being smaller in the RTP than in the Represented Position, before taking into account what Mr Bezant describes as the *"judgemental aspects"* of his assessment, relating to reduced future growth prospects and less attractive 'mix' and enhanced risks of the business, to which he ascribes a further loss of $1 billion.[9] The confusion was deepened by the reference in bar charts provided by the Claimants which appeared (in the manner in which they were presented) to confirm acceptance on the part of Mr Giles of loss relating to the smaller size of Autonomy's core software business in the region of $3 billion.

46. This arrestingly simplistic contention was, however, clarified (a little reluctantly) by Mr Bezant on the first day of his cross-examination at the Quantum Hearing (and also in his responses to my own questions in the course of it, which reveal my surprise). The upshot is that although Mr Giles and the Defendants accept that Autonomy's software business was, in terms of the size of its earned software revenues and profits, a smaller business than was represented, Mr Bezant does not mean to suggest that it follows that

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7 Leaving aside deferred revenues, Reported revenues were $740m in 2009, $870m in 2010 and $476m in H1 2011. The restated reported revenues (based on the RCC) were $646.8m (12.6% less) in 2009, $745.8m (14.3% less) in 2010 and $408.3m (14.2% less) in H1 2011 (not including $9.9m which Mr Giles contends should be added in respect of the BoA transaction referred to in paragraph [43] and discussed at length later). Restated software revenues (based on the RCC) were $586.9m (20.7% less) in 2009, $645.9m (25.8% less) in 2010 and $367.3m in H1 2011 (22.9% less). (Note, however, that the restated figures are calculated after stripping out receipts now to be classified as deferred revenues, which do not qualify as revenue until earned.)

8 Mr Bezant's premise being (as summarised in his sixth report) that *"Autonomy was not a pure software business but one that made significant sales of third-party hardware…*[and its] *actual software business was (at both the revenue and profit levels) about one-quarter smaller, and growing less strongly, than represented…with* [a]*…Revised True historical revenue mix of the business…both smaller and less attractive than represented."*

9 For example (and somewhat arrestingly), on HP's analysis, the IDOL Cloud business would grow 4.7 times in the period from 2011 to 2021. In contrast, on Mr Bezant's analysis, that line of business would grow only 2.7 times based on the RUS or 2.5 times based on the RCC.

a loss of at least $3 billion is demonstrated. He accepts that it is not simply the size of Autonomy's reported revenue that matters. What matters is the import, effect and significance of that figure being lower than represented having regard to (a) Autonomy's historical cashflows (which, it was also common ground, remained the same in aggregate), and (b) Autonomy's gross margins, cash flow and levels of cash conversion in the FSMA Counterfactual. Mr Giles's position is that it is those factors, and overall cash flow capacity which is the right measure of economic strength and what investors (like HP) value.

47. There was also some confusion, but nevertheless eventually some measure of agreement, between the experts as to how hardware revenues (which had not been differentiated from software revenues in the Represented Position) should be treated and disclosed in the FSMA Counterfactual. In my Main Judgment, I concluded that the hardware revenues and associated costs (which had been disguised) should have been disclosed.

48. Some aspects of Mr Giles's reports, and also of Mr Hill's submissions in opening, seemed to give the impression that hardware revenues and the associated hardware costs should be excluded altogether in constructing the FSMA Counterfactual, since otherwise Autonomy was not the pure software company it was represented to be. However, and as was also accepted by Mr Giles when I questioned him about this, the experts were in fact in agreement that the past hardware sales and related costs were to be included in the historic accounts as re-presented in the FSMA Counterfactual, but that any hardware re-selling would immediately have been discontinued, and thus should be stripped out entirely for the purpose of any revenue forecasts.

49. Thus, in their Second Joint Statement, Mr Bezant and Mr Giles expressly agreed that *"for the purpose of projecting Autonomy's future performance, the hardware transactions should be excluded…"* (They remained disagreed, however, as to the implications in value terms of the disclosure of past hardware sales and their costs.)

50. The two valuation experts also substantially agree that it is not the size of a company's revenue and profit levels, but its capacity to generate future cash flows and their net present value, which is the determinant of DCF value. That must be contrasted, therefore, with their fundamental disagreement as to the relative importance of factors informing such a valuation and to be used as the basis for forecasting. The disagreement is as to how the capacity to generate future cash flows is to be ascertained: I elaborate upon that later.

51. Another key ingredient of a DCF valuation which is not substantially in dispute is the appropriate discount rate to be adopted in determining the present value of Autonomy's future cash flows. Both experts adopted the concept of weighted average cost of capital ("WACC") as the best and most generally adopted determinant of the appropriate discount rate percentage. It was common ground also that HP envisaged that, after the Acquisition, Autonomy would be run autonomously; and Autonomy's own WACC was agreed to be the best guide. Mr Bezant calculated this to be around 7.5% as at the Valuation Date. However, having regard to a slowing macroeconomic outlook of several major economies and an increase in the implied market risk premium, he preferred to adopt 10%. This was also the rate used by HP in constructing its Deal Model and it fell within the range which both HP's and Autonomy's financial advisers, as well

as investment analysts, were using at the time of between 8.5% to 11.5%. Mr Giles accepted 10% as a fair rate to apply.

52. Both experts, in their DCF valuations, forecast growth separately for the five main categories of software revenue that is to say, IDOL Product, IDOL Cloud, IDOL OEM (those three sources together comprising 'Core IDOL'), maintenance and services. That was also how HP constructed its Deal Model.

53. Further, both experts acknowledged, as I explained in my Main Judgment, that the allocation between categories was imperfect: and that there was no perfect way of establishing the reported revenues by category because there was no complete audit trail to enable that. Two approaches were agreed to be available: (a) categorisation in accordance with the Restated Revenue Schedule ("RUS") which was built up from Autonomy's General Ledger (and which the Claimants originally preferred) and (b) categorisation in accordance with spreadsheets prepared by Mr Hussain at the time (which the Claimants originally only adopted as a cross-check on the RUS and referred to as the "Revised Cross-Check" or "RCC" and the Defendants preferred and called "the Revenue Spreadsheets").

54. There was initially a dispute as to which of these was to be preferred, with the Claimants initially strongly critical of the RCC, even floating in opening the assertion (which does not appear to have been pleaded with any particularity, if at all) that the RCC *"were a vehicle used to implement the fraud."*[10] By the end of the Quantum Hearing, however, it had become common ground that the RCC should be adopted for the purpose of establishing the 'True Position', except that (as noted above) the experts agreed that (contrary to their classification in the Revenue Spreadsheets) revenue from hosting should be categorised as IDOL Cloud and not IDOL Product.

55. It was also common ground that the revenue mix within Core IDOL was materially different from that represented; and that in particular, (a) in (for example) H1 (and Q2) 2011, in which IDOL Cloud and IDOL OEM were represented as accounting for 62% of Core IDOL revenues, in reality those revenue streams accounted for some 38% of that total, (b) revenue properly categorised as IDOL OEM, a revenue source which had been reported to be growing rapidly, was declining to the point of insignificance, and (c) the predominant revenue source was IDOL Product (representing some 62% of the total in that period).

56. Both experts cross-checked their Counterfactual Deal Models/DCF valuations against multiples-based valuations, using both trading multiples (based on the share prices of companies identified as being sufficiently comparable to Autonomy) and transaction multiples (similar, but identifying the prices at which controlling interests in sufficiently comparable companies change hand). However, as explained later, their approaches and especially their respective selections of comparator companies, were very different: Mr Giles considered Mr Bezant's approach to be flawed, primarily because (as Mr Giles put it in his third report) *"he subjectively adopts ranges for the EV/EBITDA and P/E multiples that are not at all representative of the comparator companies that he himself*

[10] The Claimants did, however, plead that *"Mr Hussain prepared (or oversaw the preparation of) the revenue spreadsheets in which particular transactions were misallocated to and therefore misclassified as IDOL OEM Revenue."* The Claimants did not abandon this. The agreed choice of RCC was to assist comparison of the experts' reports.

identifies…As the ranges of his multiples are too low, Mr Bezant arrives at implausibly low valuations."

57. It was not in dispute that prior to the bid, Autonomy's shares had historically traded at a substantial discount, both to its ostensible standalone value[11] and (in common with many technology companies) compared to its US-listed peers. Also common ground was that in the context of a takeover bid, sellers will not accept a price lower than their perception of the standalone value of the business, nor, in such a context, one which does not offer a substantial premium over the share price to reflect (i) a bidder's need to achieve an agreed and (in this case) recommended bid for all the share capital; (ii) the value of control, (iii) some share of the synergy value which the bidder perceives will enure to it pursuant to the acquisition, and (iv) any special considerations, such as pressure on the buyer to pitch at a price that forecloses actual or potential rival bidders.

(5) Autonomy's 'True Position': constructing the RTP Deal Model

The 'building blocks' of the Revised True Position or 'RTP'

58. Turning back to the way in which the parties have approached the task of constructing the RTP Deal Model in the FSMA Counterfactual to reflect my conclusions in my Main Judgment, the building blocks are what the Claimants and their expert (Mr Bezant) produced and called "Revised True Position" or "RTP" Schedules ("the RTP Schedules").

59. These RTP Schedules were based on schedules that the Claimants had produced for the Main Trial (which they called "Former True Position" or "FTP" schedules). In the RTP Schedules, Mr Bezant adjusted the FTP schedules to reverse in full corrections originally made for the Excluded Transactions (which I did not consider to have been validly impugned).

60. The RTP Schedules, which in effect comprise a set of financial results of Autonomy for the ten quarters, Q1 2009 to Q2 2011, as adjusted to reflect the findings in my Main Judgment, provide the building blocks of the Claimants' recalibrated DCF valuation model: or, in other words, for what they contend would have been the Deal Model if in its published information Autonomy had correctly reported all its transactions.

61. The RTP Schedules as provided by Mr Bezant comprise more specifically:

(1) The Restated Revenue Schedule in two versions: the RUS version and the RCC version (see paragraphs [53] and [54] above).

(2) Revised Restated Balance Sheets showing the effect on the balance sheet, at the end of each relevant quarter, of adjustments to reflect the True Position (as set out in Voluntary Particulars provided by the Claimants and reviewed and approved by their accountancy expert, Mr Holgate).

(3) Revised Profit Schedules, made up of:

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[11] According to Mr Bezant's seventh report, HP's assessment of the standalone value of Autonomy was higher than the enterprise value implied by Autonomy's share price by around 48% in August 2011.

(a) a Revised Restated Profit Schedule, including revised profit calculations with and without the hardware transactions;

(b) a Revised Reciprocal MAF Analysis, including revised profit calculations with and without the hardware transactions and other uneconomic Reciprocal and VAR/MAF transactions.

(4) A Restated Organic Growth Schedule.

Agreed and disputed revisions to the RCC version

62. Mr Giles reviewed and proposed five revisions to the RCC version of the Restated Revenue Schedule and rejected the RUS version (which he did not further address).

63. One revision Mr Giles proposed was of Mr Bezant's way of reversing two of the Excluded Transactions (Prisa in Q4 2010 (OT2) and Amgen in Q4 2010 (OT 3)). Mr Bezant accepted this revision and included it in a Revised Restated Revenue Schedule in its RCC version. Mr Bezant did not accept Mr Giles's other proposed revisions: but of these, only one, relating to what was referred to as "the BoA transaction", would make a substantial difference. As previously mentioned, the proper accounting for the BoA transaction remained in dispute and I discuss it further below.

64. Subject to that dispute relating to the "BoA transaction" (see section (9) below), there was no material difference between the experts in relation to the RCC version of the Restated Revenue Schedule.

(6) Summary of key areas of disagreement resulting in the gap of more than $3 billion between the experts

65. Despite that common ground, there were obviously major differences of approach between the parties and their respective experts, as to (a) the relative importance of accounting metrics and cash flow metrics; (b) the reconstruction of the DCF valuation and the Deal Model in the FSMA Counterfactual to reflect the RTP, and (c) as to the process, relevance and effect of that reconstruction in the determination of what would, in the RTP, have been the agreed bid price.

66. In summary, the experts eventually appeared to accept that the key remaining differences between them in respect of their DCF-based valuations relate principally to the inputs and assumptions to be made with regard to:

(1) the adjustments to be made (having regard to my findings in my Main Judgment) to Autonomy's historical published information and the "True Position Schedules" relied on by the Claimants at the Main Trial to show Autonomy's 'Restated Position' (referred to by the Claimants and Mr Bezant as 'the True Position'), being a fundamental building block in the construction of a Counterfactual Deal Model/DCF valuation;

(2) the historical "baseline" revenues for IDOL Product, including (a) the treatment of revenues relating to the impugned hosting transaction with the BoA (see paragraph [43] above and paragraphs [108] to [157] below), and (b) the forecast IDOL Product revenue growth rate to be applied to those baseline revenues;

(3) IDOL Cloud growth, and specifically, forecast IDOL Cloud revenue growth rates, and certain counterfactual accounting presentations posited by Mr Giles but rejected by Mr Bezant;

(4) forecast movements in working capital (and, in particular, Mr Giles's forecast growth in deferred revenue liabilities linked to his counterfactual contentions and assumptions relating to IDOL Cloud);

(5) the assumption to be made as to the pattern of IDOL Cloud growth between 2013 and 2021 (that is to say, the interpolation method and appropriate interpolation factor);

(6) the terminal growth rate to be applied to the terminal value calculation; and

(7) the synergy value of Autonomy (and in particular, IDOL software) to HP.

67. In numerical terms, these differences were illustrated in the Table below, which I have reproduced from the written opening submissions on behalf of Dr Lynch, and which, although subsequently adjusted, still provides a useful broad guide:

(1) The accounting adjustments (largely the Bank of America issue) and other DCF assumptions	+US$423m
(2) IDOL Product Growth	+US$1,543m
(3) IDOL Cloud growth rates	+US$475m
(4) IDOL Cloud interpolation rate	+US$942m
(5) deferred revenue growth	+US$405m
(6) HP terminal growth rate	+US$525m

68. I turn first to explain and provide an assessment of what seem to me to be the overarching differences of approach between the experts (see paragraph [65] above) before then addressing the more specific differences described in paragraph [66] and tabulated in paragraph [67] above.

(7) Overarching difference of approach as to the relative importance of accounting and cash flow metrics

69. An overarching difference between the experts is as to the relationship between historic accounting records and the ascertainment of the future value of a company's free cash flows (discounted to the present day) which is (they agree) the purpose of a DCF valuation. It is not an unusual disagreement: it is a frequent source of debate.

70. Put shortly, Mr Bezant and the Claimants insist that the key factors are historical revenue, historical (organic) revenue growth and historical profit margins as stated in the company's accounts. In contrast, the Defendants focus on historical cash flows (which they presented as the main drivers of long-term value). The Defendants emphasised especially the central importance of the basic point that, notwithstanding the matters of which the Claimants complain, Autonomy's cash receipts were unaltered, and that none of the accounting adjustments required to be made in the RTP in

consequence of my conclusions in my Main Judgment result in a cash outflow: none has any cash flow impact at all. The crux of the Defendants' case is that the accounting adjustments affect revenue and profits but, crucially, are cash neutral. In this regard, Mr Giles highlighted, as offering further support to this central point, Mr Bezant's own evidence that:

> *"The value of any asset depends on three factors: (1) the amount of cash it currently generates; (2) the potential future growth (or decline) in these cash flows; and (3) the risks attaching to future cash flows."*

71. Translating and elaborating this difference of approach into its effect on the RTP Deal Model, the essential conceptual difference of approach between the two valuation experts is that:

    (1) Mr Bezant considers that the adjustments required on the basis of my Main Judgment, which plainly affect the amount of earned revenue and accounting profit, result of themselves in a reduction of $3 billion in Autonomy's underlying DCF value. He initially suggested that this reduction *"flows directly from Autonomy being a much smaller business (at both the revenues and profits levels) than Represented"* and *"can be viewed as a lower bound to the Loss assessment",* even before allowing for a further loss of $1 billion arising from what he called *"the judgemental aspects of my valuation"* relating to his *"revised assessment of Autonomy's growth prospects and risk…"* His basic thesis is that (to quote from his seventh report, which he prepared for the Quantum Hearing) *"accruals-based accounting measures capture the same economic activities as cash-based measures - but provide <u>more</u> information about a company's economic activities than cash flows alone."* (Emphasis original) In support of his basic proposition that Autonomy was, in terms of its revenues and profit levels as stated in its accruals-based accounts, and excluding deferred revenues, so much smaller and less valuable, Mr Bezant continued to present as

    > *"the key determinants of forecast cash flows and hence value…baseline revenues, revenue growth, and profit margins, which are primarily informed by historical revenues, historical (organic) revenue growth, and historical profit margins."*

    (2) Contrastingly, Mr Giles (though he accepted that Autonomy's software business, shorn of hardware revenues and other contrivances, was smaller in terms of its revenue and profit levels) rejects this equation of accounting revenues with size and potential. Indeed, Mr Giles contends that the reduction in accounting revenues is *"the wrong measure of size"* and certainly *"not the relevant measure for valuation purposes"* since it ignores *"other relevant metrics that give a better indication of total economic activity".* He criticises Mr Bezant for giving excessive prominence to accounting measures, such as profits, whilst downplaying and undervaluing Autonomy's cash generating capacity. He considers that the accounting measures (revenue and profits) give only part of the picture of the business, and do not properly reflect the true cash-generating strength and momentum of the business, which is really what is to be reflected in a DCF valuation. Mr Giles's basic approach, which supported the Defendants' case that such a valuation would *"not be materially affected by the Allegations"*

(see paragraph [4063] of my Main Judgment), is that *"Cash flow capacity, not accounting profit, is the right measure of economic strength and size"*. His thesis is that *"ultimately it is the receipt and payment of cash that drives valuation and economic activity"* rather than accounting measures and that is the reason why it is often said that *"cash is king"*.

(3) Thus, to quote his first, third and fourth reports:

"It makes no logical sense to say that… profits are more important than cash flows. To the contrary, the specific purpose of the calculations is to unwind the accounting treatments (resulting from accounting conventions), in order to arrive at the underlying economic activity represented by the cash flows", given that the *"DCF method inherently relies on historical cashflows to project such future cash flows"*.

Mr Giles insists that:

"The principal reasons why there is no material change in the DCF valuation are that cash flow and growth are the critical drivers of value. In that regard:

a. The underlying economic activity of Autonomy (i.e., its cash generating capacity) was not altered by the accounting adjustments and was actually enhanced from the perspective of a buyer considering the future prospects of Autonomy in 2011 (i.e., on a continuing operations basis)[12].

b. Autonomy's organic growth rate was higher in the Restated Position than it was in the Reported Position and that growth was increasing in H1 2011."

He summarised his position as follows:

"Assuming an appropriate set of Accounting Adjustments, the first impact of the adjustments to the historical data is to reduce revenue. However, the Allegations all involve either cash neutral or loss-making transactions and therefore the counterfactual free cash flows for the Relevant Period should either be neutral or improved. This neutral or improved cash position should be reflected through restated costs, capital expenditure, accounts receivables, accounts payable and deferred revenue adjustments that offset, or more than offset, the reductions in revenue."

72. The Claimants (also praying in aid paragraphs [4033] to [4036] of my Main Judgment[13]) urged me to focus on historic accounting revenues and growth rates, and summarised their position as being that <u>historical</u> cash flows are not predictive of <u>future</u> cash flows, and though in the short term cash flows may differ substantially from profits properly

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12 As to that *"continuing operations basis"* see footnote 55 under paragraph [177] below.

13 And, in particular, my finding at 4047 that *"the foundation of HP's assessment and ultimate decision was the description of historical revenue performance, organic software revenue growth, gross margins and the description of its business and five revenue streams put forward in Autonomy's published information and providing the bedrock for the Deal Model."*

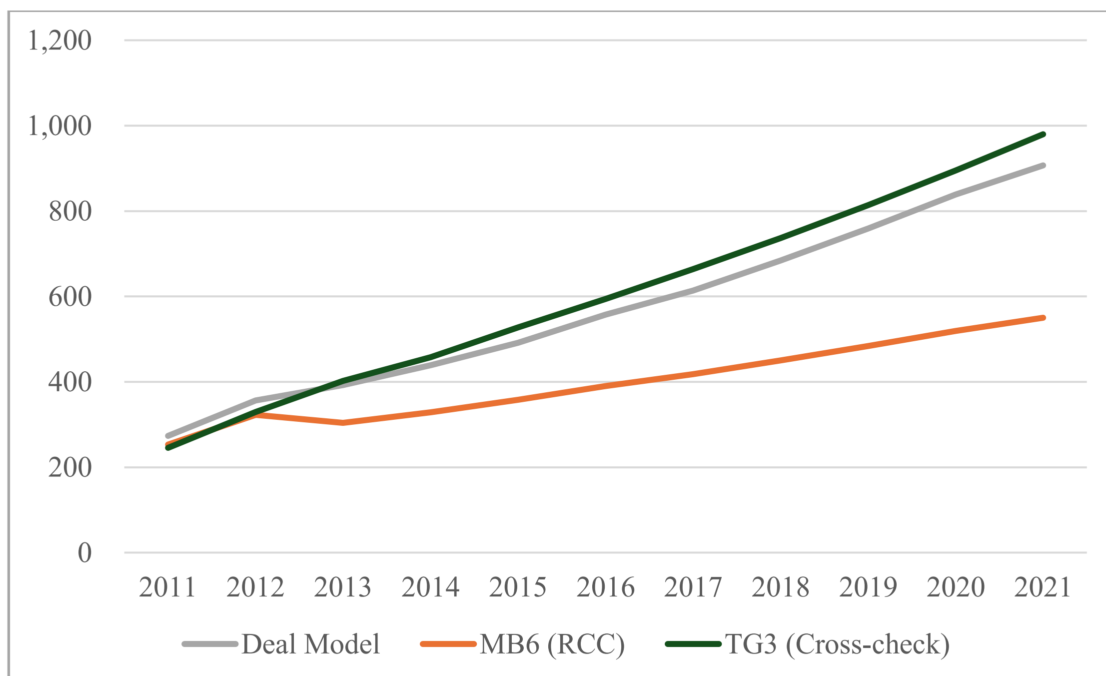
assessed on the accruals basis, over the long term, a company cannot produce more cash than its profits.

73. The Defendants urged me to focus on cash flow capacity as the key driver of value (rather than accounting profit), pointing out that in a DCF model, it is the free cashflows which are discounted to calculate value.

74. In summary, the crux of the issue between the experts in this regard is their differences as to the true drivers in the assessment of future growth and value, and in particular the importance of the singular feature of the case that Autonomy's cash flows were not reduced, so that although its revenues were smaller in accounting terms, its cash generating/cash conversion capacity would have appeared improved in the RTP.

75. The differences between them in their forecasts of free cashflows were illustrated in the graph below, for which the source is Appendix B.2 to Mr Giles's third report.

Forecast free cash flows, per Deal Model, MB6 (RCC) and TG3 (Cross-check) ($ millions)



My assessment of the relative importance of accounting and cash flow metrics

76. I shall have to return to specific aspects of this overarching difference in approach later in the course of addressing specific revenue streams. However, the issue as to whether (putting it shortly) cash flow or accrued revenue is the principal determinant of a DCF valuation is of general relevance and permeates the two experts' respective reports. In that regard, it has seemed to me that, in their insistence on (in the case of Mr Bezant) the reduction in reported revenue and profit and (in the case of Mr Giles) the consistency of cash and "billings" as the primary basis for assessing loss, both experts have tended to adopt over-extreme positions in support of their respective clients' position. Regrettably, there seems to me to be more than a tinge of advocacy in both approaches, with each expert presenting an unhelpful pastiche of the other's approach for forensic effect.

77. Neither extreme position survived scrutiny. When cross-examined, Mr Bezant was constrained to accept that to understand the momentum and prospects of a business, investors are interested in and attach value to "billings" (that is, the cash amounts invoiced and collected from customers in each year) and deferred revenues as well as earned revenues. Mr Bezant could not dispute Mr Giles's point that deferring revenue, though it lowers earned revenue/profits in the year of deferral, shifts recognition of the profits deferred to later years and does not reduce profitability overall. Mr Bezant also eventually had to acknowledge that (a) smaller size in terms of revenue and profits as stated in the accounts may affect forecasting of future cash flows but is not a measurement of loss, and thus (notwithstanding what he had written in his reports) he is not now saying the $3 billion figure is a *"minimum number"* or *"lower bound"* for the calculation of the FSMA loss; and that (b) the real issue is as to the assessment of growth rates in the RTP and Mr Giles's proposition that once loss-making hardware transactions are stripped out (as they should be going forward), cash conversion and gross margins are higher and capex is lower, contributing to Autonomy being (on a 'continuing operations' basis)[14] *"a leaner, more efficient, higher cash generative business".*

78. Mr Giles, for his part, softened his initially somewhat uncompromising insistence on cash flow to the exclusion of accounting revenues in measuring present performance and thereby future prospects.[15] In his third report (prepared for the Quantum Hearing), the position he now puts forward seems to me to have been reformulated and re-presented with a more realistic tacit acknowledgement of the relevance of historical revenue, revenue growth and profit margins as stated in accounts prepared on an accrual basis accounting.

79. That is realistic because although the fact that DCF valuation is based on cash generation rather than forecast profit seems to indicate the superiority of cash flow in analysing and predicting performance, and the mantra that *"cash is king"* (see, for example, Mr Giles's third report) is oft-repeated, that mantra invites obvious questions; in particular, as to (a) why, then, accounts (the purpose of which is to provide an accurate basis for assessing the performance and prospects of an entity) are drawn up on an accruals basis,

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[14] See footnote 55 below.

[15] This had I suspect, been exacerbated by the focus of the Defendants at the Main Trial as regards the valuation evidence, which was their attempt to undermine the Claimants' case on causation. In that context, Mr Giles stated in his first report (for the Main Trial) that since *"the claim does not suggest that there was any loss of cash, i.e., there is no allegation that the cash earned by Autonomy was in any way fabricated or misstated….therefore the Claimants have not established a link between the Allegations and the Claimed Loss."* Building on this, Dr Lynch submitted at the Main Trial that: *"The company's historic cash-flows and cash reserves are not in dispute. This is relevant because, first, HP challenges Autonomy's recognition of revenues as an accounting matter but not the receipt of cash that Autonomy reported. Secondly, (HP and the market generally) valued Autonomy based on its cash-flows, rather than its revenues, software revenues, software revenue growth or organic software revenue growth (as HP now claims)."* I did not accept this argument on causation in my Main Judgment: I concluded that, though (of course) there were other factors which HP took into account (including the view of analysts), and its appetite to pursue a bid and willingness to pay a substantial premium was fuelled by its perception of the qualities of Autonomy's technology, the bedrock of the Deal Model and its financial assessment of Autonomy's standalone value was the description of historical performance, organic software revenue growth, gross margins and the description of its business and five revenue streams put forward in Autonomy's published information: see especially, paragraphs [4044] to [4048], and, as to the expected synergies and the premium it was prepared to pay, see also paragraphs [4037] to [4043].

and (b) whether the implicit suggestion that accounting fraud will never result in loss unless the effect is to reduce cash receipts can really be right.

80. The answer is that past cash receipts are not an adequate basis, without also considering accounting parameters prepared on an accrual basis, for forecasting the potential of the business to generate future free cash flows, which is what a DCF valuation is really intended to assess. First, the accruals accounting method for determining profit – in other words, the recognition of revenue when earned and expenses when incurred - is a necessary tool whereby to measure true performance.[16] One cannot tell, from examining the levels of or trends in those cash flows directly, whether they reflect the underlying economic fundamentals of the business, or simply timing differences in the receipt and payment of cash; and historical revenues, revenue growth and profit margins, which are assessed on an accruals basis, match revenue and costs in the period to which the substance of the economic activity relates and better reflect the underlying economic activity of the business than historical cash conversion. Only by means of accrual accounting are revenues and expenses recognised in the appropriate period and matched together (in other words, recording revenue and costs in the period to which the substance of the economic activity relates).

81. Mr Shivji provided a helpful explanation of the relationship between accounting profit and cash and "billings", and their relative importance in a DCF valuation, in his oral opening at the Quantum Hearing. Building on a gloss on Mr Giles's central thesis that what really matters is what is happening to a business in cash terms, Mr Shivji explained the relationship between accounting and cash flow analysis as follows:

> *"…discounted cash flow is ultimately about cash, because cash flows drive value, and it is the free cash flows*[17] *that you are trying to calculate with the DCF which you then discount to the present value to get total value of the business.*
>
> *Our position is that the starting point is that cash is the best touchstone for the actual economic activity of the business. Cash is king. Cash reflects the actual sales made by the business and paid for by customers, so it is an important check of the health and success of the business.*
>
> *Now we don't say that cash is the only metric that your Lordship needs to look at, or that simply because the cash is unchanged here* [that] *is the end of the story. But we say that looking through the accounting measures to the real business activity will give your Lordship some indication of what is going on with this business, and*

[16] This can be illustrated by the example of cash received on sale of a licence in the course of hybrid hosting business (which is addressed at length later). The entire payment in cash may be received at the inception of the hybrid hosting arrangement; but it is intended to cover the period over which the agreed service is to be provided. Showing that cash receipt as referable only to one period is misleading: it represents, in effect, an advance payment in place of future earnings for the provision of a service over the life of the hosting arrangement, and unless spread over that time period gives an entirely false picture of the true momentum and performance of the business. Nor will it cover costs. Cash in and cash out does not provide a fair and full picture of the true underlying activity of the business, which, in a given time period, may differ significantly from its cash flows.

[17] "Free cash flow" is the cash that remains after a company has paid what is required to support its operations and to fund capital expenditure. It is calculated by subtracting capital expenditure (or "capex") from "net cash from operating activities".

that feeds into the valuation exercise in two ways. One is more technical and one is a bigger picture point.

On the more technical side of things, there is obviously a relationship between the accounting measures and the cash that you get at the end of your DCF model, the free cash flows. The top line is the accounting measures but the bottom line, and what you care about, is the cash flow, and the connection, the mechanical connection between them is, effectively, your cash conversion. We know that the working capital judgments are a bit more complex than that, but they are effectively the…relationship between the company's accounting measures and actually the cash it generates.

So that's the technical point. But on top of that, there is a broader point of principle, which is that when you are looking at the historical experience of a business to ascertain the real economic activity and momentum, you need to look at the cash activity, because that tells you what is going on under the hood, and that will help you ascertain the momentum of the business, which will help you ascertain what is going on with growth.

…

And it is important that the tail doesn't wag the dog in this relationship between accounting measures and cash. It is the business activity in the historical period which comes first and that is ultimately what drives the valuation. The accounting is a convention that tries to capture that business activity and, like all conventions, there are principles and rules applied, including concepts like prudence and conservatism.

In your DCF model, your top line is that accounting measure but your bottom line, and what you care about, is the cash, and what you are trying to do is unwind the accounting measures to arrive at the real economic activity of the business, so it is not that the accounting drives the cash, it is that you need to convert the accounting to cash to understand the activity."

82. Mr Shivji's explanation seems to me to provide a correct and welcome clarification and acknowledgement that (to use shorthand) both the accruals-based accounting figures (suggesting diminution in value) and the history and pattern of billings (and any growth in working capital or deferred revenues) must be considered in assessing and forecasting the cash-flow generating capacity of the entity, which is the ultimate object of a DCF valuation.

(8) ***Differences in approach in developing a counterfactual DCF valuation and as to the relationship between standalone value and (i) share price and (ii) the final bid price***

83. The experts also adopted different approaches to (a) the exercise required as regards the development of a suitable DCF valuation in the RTP and (b) what assistance such a DCF standalone valuation provides in the assessment of what (i) Autonomy's share price and market capitalisation and (ii) the final agreed bid price would have been in the RTP.

84. As to (a) in paragraph [83] above, the first point to clarify is why, in his various expert reports, Mr Bezant put forward two DCF standalone valuations, together in each case with sensitivity analyses and two multiples analyses by way of cross-checks, and what were the substantive differences between them.

85. The answer lies in Mr Bezant's distinction between *"Actual Value"* (for which Autonomy would have to give credit in assessing damages in a *"No-Transaction scenario"*) and *"Revised Price"* (being the revised bid price which HP would have agreed to pay for Autonomy in the RTP). Mr Bezant described one valuation as an *"objective"* DCF standalone valuation comprising (with its cross-checks and sensitivity analyses) his opinion *"as an objective valuer"* of the *"Actual Value"* of Autonomy in the RTP. He described the other as his *"subjective"* DCF standalone valuation *"for Revised Price"*.

86. The latter makes adjustments to the *"Actual Value"* version of the DCF valuation intended to reflect *"HP's subjective perspective"* and *"the forecasts that HP would have made* [to its Deal Model] *in the RTP…"* in estimating *"HP's internal assessment of Autonomy's standalone value…"* (The italicised words being quotations from the Claimants' written opening submissions for the Quantum Hearing.)

87. However, the differences between Mr Bezant's two DCF valuations are relatively minor. Mr Bezant's *"subjective"* adjustments relate to tax: as Mr Bezant explained in his sixth report, his "subjective" DCF valuation tracks how (in his view) HP would have valued Autonomy in the RTP, and adopts, instead of an "objective" view of likely tax rates, the corporation tax assumptions actually made by HP (and in particular, a constant rate of 28% which was a rate in excess of what had been announced at the time). Mr Bezant considers (with justification) that there is *"no reason to believe that [HP] would have used a different assumption had it known the RTP"*. The tax adjustment results in slightly lower profits and thus a lower "subjective" DCF valuation than his objective *"Actual Value"* assessment. (Mr Giles sought to depict this adjustment as another method of reducing Autonomy's value: but I do not accept that.)

88. Mr Bezant provided and uses his *"objective"* DCF valuation for a number of purposes:

    (1) First, and most obviously, he uses it for his calculation of loss on a "No-Transaction" basis, which he considers is applicable in the context of the Misrepresentation Claims (which I discuss later), the measure of loss in that context being the difference between the price paid by HP and the value of Autonomy for which it must give credit.

    (2) Secondly, he uses it as one of the ingredients of his assessment of Autonomy's market capitalisation in the RTP. His approach in that context is to assess what would have been *"Autonomy's Revised True share price"* by estimating the discount at which in the RTP Autonomy would have traded to its *"intrinsic value"* calculated on a DCF basis.

    (3) Thirdly, he then uses his assessment of *"Autonomy's Revised True share price"* in order to *"replicate the bid premium analysis the parties and their respective advisors performed"*; it being one of the basic parameters for his assessment of *"Revised Price"* that it should not represent a greater premium over

"Autonomy's Revised True share price" than the premium HP actually paid in the Represented Position.

(4) Fourthly, he uses his assessment of Actual Value to determine what proportion of the total price paid related to HP's perception of the synergy value it could expect to realise. He moves from that to calculate both what HP would have perceived to be Autonomy's synergy value in the RTP and what amount HP would have paid for synergies in the RTP on the basis that (quoting his sixth report) it is *"reasonable to assume that HP would not have paid more than the same percentage of assessed synergies (11.9%, or up to US$599 million) that it paid in fact"*. Mr Bezant also noted that taking the Revised Price to be the aggregate of *"Autonomy's Revised True share price"* (as so assessed) and a synergy share of $599 million, and thus in total some $7,500 million, equated to a premium of 61% (compared to the actual bid premium of 65%), which he felt confirmed his approach (Autonomy being, in his assessment, substantially less attractive than as Represented).

89. Mr Bezant's approach, as above summarised (and which I return to discuss more fully later) is essentially mechanistic. That is not to disparage it; it is to make the point that although mechanical it is not scientific: it is Mr Bezant's substitute for the otherwise necessarily subjective assessment of the key ingredients in determining the Revised Price, that is (i) what would have been Autonomy's share price and (ii) what would have been the pattern and result of the negotiations for a premium over it in the RTP. Despite assertions of their appreciation of the difference between value and price and of the latter being an expression of what a given purchaser is ultimately prepared to pay,[18] Mr Bezant felt unable as an expert, and the Claimants did not feel it necessary, to offer any other assessment of either the likely market response to Autonomy in the RTP, or of the likely dynamics of the negotiating process on price in the FSMA Counterfactual. Nor (more especially) did he feel able or did the Claimants attempt any subjective assessment to take into account the pressure on HP in the then perception of its board, to achieve the acquisition and the transformational change it was intended to bring and, to that end and if necessary, to share more of the value to HP of the very substantial anticipated synergies.[19]

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[18] Thus, for example, the Claimants acknowledged in their closing submissions for the Main Trial (paragraph [5997(5)]) that *"While value quantifies the expected future economic benefits of owning an asset, price is the amount paid for it"* and that *"When a buyer and seller agree on a transaction price, it should fall within a range bounded at the lower end by the market value (or the value to the seller, if higher), and at the upper end by the value to the buyer, including the value of potential synergies to that buyer. Where it falls will depend, among other things, on the parties' bargaining positions and negotiating skills…"*.

[19] In that connection, in their written opening submissions for the Quantum Hearing, the Claimants stated that my Main Judgment *"finds as a matter of fact that….price negotiations were driven primarily by (1) standalone value and (2) the premium over the prevailing share price that Autonomy's shareholders would accept"*. That is not an entirely accurate gloss. What I stated (at paragraph [4037]) was that "[a] *bid price within the range then had to be fixed by reference (principally) to (a) the standalone value (b) Autonomy's then current share price and (c) what premium HP was persuaded would be necessary (and thus what proportion of the synergy value which HP hoped would result would have to be surrendered to Autonomy's shareholders) to achieve the objective of an agreed price."* The price that Autonomy's shareholders would probably accept (which Dr Lynch had in his mind as being a premium over share price of 60%) was not Dr Lynch's ceiling in seeking to obtain as much value as possible for his shareholders (see paragraph [4015] of my Main Judgment) and it was materially less than he in fact achieved (64% premium over the share price as at 18 August 2011): and see my Main Judgment at paragraphs [279] and [301] as to the range of implicit premium over the course of negotiations, rising at one point to 74.5% .

90. Thus, what I have described as a "mechanistic approach", and which, taken together with Mr Bezant's multiples analyses, the Claimants (in their closing submissions) commended as providing a *"systematic framework for assessing both Actual Value and Revised Price"*, was in effect what Mr Bezant and the Claimants offered as a proxy for both such exercises in light of Mr Bezant's acknowledgement that *"given the number of different factors that affect the price agreed between two parties in a transaction, it is not possible to determine precisely what the Revised Price would have been"*. The adoption of a proxy was presented as a rational gauge of *"the approximate overall Revised Price which I consider that HP and Autonomy would have agreed."* It also, of course, enabled Mr Bezant to extend the scope of his evidence to the assessment of what bid price would have been agreed, which is ultimately a question of fact not, or not otherwise, within the scope of expert evidence.

91. The Claimants noted (and disparaged) Mr Giles's approach, suggesting that he *"does not generally distinguish between Actual Value and Revised Price or between objectivity and subjectivity of approach"*. They also noted that he does not set out *"an analysis of how Revised Price may be estimated by reference to counterfactual share price and the premium over that share price that Autonomy's shareholders would have accepted"* beyond asserting that in the RTP, neither Autonomy's DCF valuation nor its share price would have been lower than its historical valuation and share price. They submitted that in consequence, if the Court disagreed with that position, *"there is nothing in Mr Giles's report to assist on the specific issue of Revised Price"*.

92. The fact is that Mr Giles's approach, and his perception of his role and its limits, was very different. He did not consider it necessary to provide a further valuation in the context of the Misrepresentation Claim. He considered his single task in assessing the value of Autonomy on a DCF basis in the RTP was to make such adjustments to the Deal Model as constructed by HP in the Represented Position as HP would have made in the RTP. As he explained in cross-examination, he did not think it his role to *"make so many changes that it becomes a completely new thing"*. He accordingly produced only one DCF valuation, being his assessment of how HP's Deal Model would have been recalibrated by HP in the RTP.

93. That also reflected the Defendants' submission that (a) the "No Transaction" basis of quantification should not arise, but even if it did (whether for the FSMA Claim and/or the Misrepresentation Claim), then (b) this would not materially impact the quantum assessment, because (quoting the Defendants' written Opening Submissions) *"the actual value of Autonomy to HP was not different to the price paid."*

94. Further, and as already noted briefly, Mr Giles's position was that there is no mathematical or mechanistic correlation between intrinsic value as assessed according to DCF modelling and market price, and that estimating the share price in the RTP is *"not an assessment that can be made by updating clear inputs due to accounting changes, as we can do with the DCF model"*.

95. Like Mr Bezant, he considers that *"there is no way to precisely know or measure how the "market" would have priced Autonomy in the counterfactual scenario"*; but the solution he offers is different. Mr Giles considers that the best that can be done is to assess *"what information was important to the market and what information would have been important to the market in the Restated Position"* and in that regard *"the*

abundance of information in the form of equity analyst commentary that can tell us what issues were important to people that followed Autonomy."

96. As to the assessment of what would have been the agreed premium over the share price and thus the bid price in the RTP, Mr Giles frankly acknowledged that it was not within his expertise to give an opinion on what price the sellers would have accepted, though he stated that the evidence he had seen (including analyses conducted) *"would not justify a seller accepting a lower price"* than HP actually paid.

97. Beyond that, he put forward:

(1) an elaboration to *"help explain"* why HP was prepared to pay a substantial premium in the Represented Position and would have been willing to do so in the RTP (which he summarised as being *"the transformational opportunity and the perceived interloper risk while knowing that Dr Lynch would not accept a lower price even when the implied premium had increased"*);

(2) an analysis and chart to illustrate the range of premiums implied by agreed acquisition price by reference to fluctuations in Autonomy's share price in the offer period (which at some points rose to approximately 75%), illustrating a point made by Mr Giles that the premium contemplated by HP fluctuated in terms of its percentage and *"therefore cannot serve as a guide to the "price" that HP and Autonomy would have agreed in the Restated Position"*;

(3) his objection to the proxy on the basis that no mechanistic approach by reference to value can be more than a proxy for the assessment of price; that (as in fairness I should record the Claimants accepted) *"While value quantifies the expected future benefits of owning an asset, price is the amount paid for it"*[20] and that accordingly, no formulation of a proxy, even one presented as a *"systematic framework"*, should obscure the reality that, ultimately, the bid price will reflect the overall attraction of the underlying business to the particular purchaser and the balance of negotiating power between the parties in negotiating the price (and especially any imperative for sale or purchase) and their respective negotiating skills;

(4) a reminder that HP paid higher premiums in acquiring ArcSight Inc and 3PAR Inc (67% and 235.7% respectively);

(5) his general, but nonetheless potentially important, position that despite its smaller size and different mix of business lines, Autonomy's quality of earnings was enhanced in the RTP, and that Mr Bezant and the Claimants had accentuated and placed undue reliance on negative features of Autonomy in the RTP, but overlooked positive characteristics of a leaner and more cost-effective enterprise; and

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[20] The Claimants also accepted that *"When a buyer and seller agree on a transaction price, it should fall within a range bounded at the lower end by the market value (or the value to the seller, if higher), and at the upper end by the value to the buyer, including the value of potential synergies to that buyer. Where it falls will depend, among other things, on the parties' bargaining positions and negotiating skills…".*

(6) his related point that the mechanistic approach taken by Mr Bezant and the Claimants took no sufficient account of factors in the RTP which remained just as strong as in the Represented Position, including that (a) HP was buying Autonomy for its unique and world-beating technology and, contrary to the Claimants' central thesis, its IDOL technology would have been no less attractive, and no less successful and valuable, in the counterfactual world; (b) HP's assessment of its value in enabling HP to achieve transformational change, and release the synergies value to it of the Acquisition, would not have been materially lower; (c) Mr Bezant had failed to take proper account of the fact that it is cashflows which are the key drivers of long term value, and Autonomy's actual cashflows were not reduced as a result of the accounting improprieties that I have concluded (in my Main Judgment) took place.

98. In summary, therefore, the parties and their experts were far apart as to:

(1) Whether, or the extent to which, a comparison between Autonomy's DCF standalone value (whether "objective" or "subjective") and its share price in the Represented Position provides a basis for the fair assessment of what would have been *"Autonomy's Revised True share price"* and market capitalisation in the RTP;

(2) whether any such mechanistic link or approach can further be used as the basis for a fair assessment of (a) the likely synergy value of Autonomy to HP in the RTP; (b) the likely premium over the share price that Autonomy's shareholders might have been expected and/or prepared to accept at the time of the bid; (c) the likely bid price which would have been agreed between Dr Lynch and HP in the RTP.

99. I explore these material differences, and also important other differences in the experts' respective approaches to multiples as a cross-check, at greater length later.

My assessment of the strengths and weaknesses of these different approaches

100. In the meantime, I should also note some contrasting strengths and weaknesses in the parties' respective approaches.

101. I found it helpful that Mr Bezant in his first report (at paragraph [9.4]) had explained in considerable detail how in the actual world HP came to define what price they would be prepared to pay (commencing with an initial maximum of $11.7 billion (about £27.5 per share), then a range of between £24.94 and £26.94 per share, before fixing, at the end of the negotiating process on between £25 and £25.50). The Defendants, by contrast, were much less forthcoming as to what Dr Lynch's internal assessment was in the Represented Position of what his shareholders would have accepted, and how that would have changed in the FSMA Counterfactual.

102. To my mind, neither expert nor the parties offered any analysis (other than that implicit in their respective DCF valuations) of any longer term effect in the market of the stratagems which I have found were adopted to maintain the 'beat and raise' perception of Autonomy in the market; or, put another way, as to the extent to which, over a longer period, Autonomy's share price was influenced by whether or not it met its quarterly projections.

103. The Defendants submitted that the accounting levers which I have held were deployed to sustain the 'beat and raise' perception of Autonomy were not the drivers of Autonomy's value to a long-term strategic shareholder. More particularly, they submitted that, even if HP's Deal Model had (in the RTP) yielded a lower standalone value, Dr Lynch would have held out for, and (especially since HP regarded his support as crucial), HP would ultimately have been prepared to pay, the same price, and that:

> *"The misconduct in which the Court has found Dr Lynch and Mr Hussain engaged was one essentially directed to quarterly revenue targets. Such matters were inevitably short term in focus and anchored to short term fluctuations in the share price. There is no reason to think that they would have had any bearing on the long-term prospects or HP's assessment of such matters. Autonomy remained on a standalone basis a very valuable asset with a promising future."*

104. The Claimants dismissed all this, and queried what on earth can have been the point of the fraudulent overstatement of revenues and profits I have held to have been proven if none of it had any material effect in terms of the value and/or price the perpetrators could realise on sale of the company. They (and their expert, Mr Bezant) rested their assessment on their basic proposition that the effect was that Autonomy was a far less attractive company in the FSMA Counterfactual than it was Represented to be, and that the measurement of the differences would translate mechanistically into both the market share price and the ultimate bid price.

105. Despite the enormous length of the evidence, none of the parties or their experts offered what is usually referred to as an *"Event Study"*. An *"Event Study"* (in this context) measures the impact of a company-specific event on a company's share price, using historic market data. It is a technique used in the United States, especially in the context of class actions and by reference to the theory of causation and loss known as the *"fraud on the market"*. As explained in the US Supreme Court decision in *Halliburton Co. v Erica P. John Fund, Inc.* 573 U.S. 258 (2014), citing *Amgen Inc v Connecticut Retirement Plans and Trust Funds,* 568 U.S. 455 (2013) (also in the US Supreme Court), the theory is that *"the market price of shares traded on well-developed markets reflects all publicly available information, and hence, any public material misrepresentations"*. This, in the US, gives rise to a rebuttable presumption of causation and reliance, which is often relied on by plaintiffs in class actions relating to securities claims.

106. Although the theory has not been adopted (and may well not be a sufficient test of reliance and causation) in this jurisdiction for the purposes of FSMA, it might provide a means of assessing whether a given event has substantial long-term effect on market capitalisation. This might have been useful; but I accept that the variety and nature of the "events" in this case would add to the complexity; and in any event, no such study was performed, nor (as far as I am aware) has the technique been tested before the English court.

107. Lastly in this section, I should re-emphasise that these differences as to how to determine the Revised Price, and thereby the FSMA Loss, in no way undermines the experts' agreement as to the centrality of HP's Deal Model in providing a measure of Actual Value in the sense of Autonomy's intrinsic capacity to generate business and profit. Taken together with cross-checks such as multiples valuation and sensitivity analyses, and the assessment of synergy values which the Deal Model also included, it enabled HP to assess the effect of different permutations, and to form a view of rational

parameters for the price. The real conundrum is how to calculate market capitalisation and share price. Although that was also taken by Mr Bezant, on instructions, to be another measure of Actual Value, the reality is that it is a very different concept; and the issue is whether and to what extent the one can be taken to inform the other in determining what price HP would have needed to pay to achieve an agreed and recommended bid in the RTP (the Revised Price).

(9) Dispute as to how the BoA transaction should be accounted for in the RTP

108. I turn to the convoluted dispute relating to the BoA transaction before addressing, after that, another disagreement between the parties and their experts relating to the revised DCF valuation/Deal Model, which is whether the costs of the VAR transactions which the Claimants successfully impugned should be included in the Counterfactual DCF valuation.

(a) Basis and valuation importance of the dispute

109. The BoA transaction was a hybrid hosting deal which was concluded in Q1 2011. It effectively replaced four inter-related VAR transactions which had taken place in Q3 and Q4 2010. The four precursor VAR transactions, VT16[21] and VT 21, VT 23 and VT24, were addressed in the VAR Schedule to my Main Judgment at paragraphs [949] to [1094].

110. Autonomy recognised $19.5 million of revenue in relation to the precursor VAR transactions ($9 million on VT16, $7 million on VT24 and $3.5 million on VT23); but (as was obviously necessary to avoid double-counting) it recognised no additional revenue when the 'direct' hybrid hosting deal between Autonomy and BoA (also nominally for $19.5 million), for which I have found the VAR transactions were 'placeholders' and which in effect replaced them, was concluded.

111. In my Main Judgment, I held that the precursor VAR transactions were improper: and the parties are agreed that, in constructing the FSMA Counterfactual showing Autonomy's 'True Position', no revenue should be booked in respect of them. That puts the focus on how the BoA transaction itself, which had been 'warehoused' in the meantime but which in truth was the only 'real' transaction, is correctly to be accounted for in the FSMA Counterfactual; and how, in particular, Autonomy would have recorded the *"actual value"* for the *"licence fee for the Digital Safe and related software"*.

112. As I shall later explain more fully, this dispute drives a material difference between the two experts. The Claimants' approach leads to just $0.7m of revenue being recognised for this deal across Q1 and Q2 2011[22] despite the receipt by Autonomy of cash of $19m. Although the gap narrowed at the Quantum Hearing to US$381 million, Mr Giles initially increased his DCF valuation of Autonomy by some US$1 billion by reference to it. His reasoning can be summarised as follows (the impacts on the DCF valuation are taken from Mr Bezant's evidence):

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[21] Though VT16 was originally a separate transaction and was subsequently 'repurposed': see VAR Schedule at footnote 80.

[22] $122,973 (cell CQ70) + $134,137 (CQ71) + $219,423 (CW70) + $239,342 (CW71) (per Hosting VPs, tab 'Hosting – Sch 6 Detail').

(1) $9.9 million should be added to the 'baseline' IDOL Product revenues to which Mr Giles's growth forecasts then were to be applied: this alone adds $146 million to his growth estimate;

(2) that would also increase historical year-on-year IDOL Product growth (based on the RCC) in H1 2011 from 41.2% to 50.8%: and because his growth forecasts focus on and are directly driven by H1 2011 growth, this increases his valuation by a further $539 million;

(3) then, Mr Giles attributed only $0.5 million of related costs to the $9.9 million of revenue for H1 2011, with the effect of increasing Autonomy's historical profit margins and, in turn, his forecast profit margins: thereby also increasing his average forecast EBITDA[23] margins from around 47.1% to 48.5%, and his DCF valuation by a further $318 million; and

(4) finally, Mr Giles made an adjustment affecting his projections of movements and growth in deferred revenue: and that reduced his valuation slightly, by $57 million.

113. It was principally in relation to this dispute that at the Quantum Directions Hearing, the Claimants sought an order that the scope of the evidence for the substantive hearing and of the Quantum Hearing itself should not extend to *"evidence that reopens issues of accounting expertise, including as to the correct accounting in respect of the Q1 2011 Bank of America hosting transaction."*

114. The Claimants submitted, on the basis of that characterisation of the dispute, that (a) it was too late to raise the issue now since, if to be raised at all, it should have been so at the Main Trial, and (b) it was not a matter within the proper remit of Mr Giles, who has no accountancy expertise.

115. As to the substance of the point, if permitted to be pursued, the Claimants accepted that the headline or nominal transaction fee was stated to be $19.5 million, and that BoA had actually paid a total of US$19 million (representing payment in full less an early payment discount of US$0.5 million). However, they submitted (to put their detailed arguments shortly) that, by its terms, the contract provided for credits and payments to be available to BoA to the value of $9.4 million and an early payment discount of $0.5 million such that, on any rational and realistic view, $9.9 million had to be offset against the headline or nominal amount, leaving the *"actual value"* of the BoA transaction to be stated in its accounts as being in net aggregate US$9.6 million. This amount was to be recognised as a fee for hosting services rateably over the term. As revenue from hosting services, they submitted further, the revenue should be categorised as IDOL Cloud revenue.

116. Dr Lynch, supported by Mr Hussain, objected both to the Claimants' characterisation of the dispute and to the conclusions built on it; and further submitted that it was an unfair and inappropriate point for the Claimants to take in circumstances where, at the Main Trial, the Claimants had advanced their case by reference to a factual witness who,

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[23] "Earnings Before Interest, Tax, Depreciation and Amortisation": a commonly-used measure of a company's profitability and overall financial performance.

in the event, had refused to testify and was withdrawn and where the Claimants themselves did not call any accounting expert evidence on the point.

117. In any event, it was submitted for Dr Lynch that the issue could and should be resolved now by detailed analysis and proper application of the contract which sets out the terms of the BoA transaction ("the BoA contract") without any further accountancy evidence (the only accountancy issue being whether the licence fee element of the BoA transaction should be spread over the life of the arrangement which had already been sufficiently addressed at the Main Trial, and indeed in my Main Judgment, and which the Defendants were now content to accept).

118. The Defendants further submitted that, if there was any need for further evidence, the burden had been on the Claimants to establish that the "actual value" of the BoA transaction was other than its stated headline consideration of US$19.5 million and they had not discharged it. They added that in any event, the Claimants' case *"has an air of unreality about it as it fails to reflect the cash in fact received by Autonomy from Bank of America."*

119. The dispute thus raises issues as to (a) whether the Defendants' attempt to revisit the accounting treatment of the BoA transaction should be permitted at all; and if so, (b) the timing of revenue recognition (c) the categorisation of the revenue received and (d) the overall "true value" of the revenue received.

(b) The position of the Claimants in relation to the BoA transaction

120. The parties indulged in a careful and considerable exegesis of the history of how the matter developed at and after the Main Trial.

121. The Claimants' pleaded case challenged four aspects of how Autonomy accounted for revenue from the BoA licence sale. The first two concerned the <u>timing</u> of revenue recognition, the third concerned how it was <u>categorised</u>, and the fourth concerned the <u>quantum recognised</u>.

122. The Claimants pleaded that:

(1) Autonomy recognised revenue from the Q3 and Q4 2010 VAR transactions that it should instead have recognised only in relation to the eventual BoA transaction (in Q1 2011).

(2) Autonomy recognised revenue in respect of the licence up front, and (the BoA transaction being an impugned hosting deal) should instead have recognised revenue rateably over the licence term.[24]

(3) Autonomy also wrongly reported much of the revenue recognised as IDOL OEM.[25]

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[24] The BoA transaction was a pleaded Schedule 6 transaction.
[25] OEM36 and OEM45.

(4) Only $9.6m of the nominal $19.5m licence price should have been recognised at all, because the remaining US $9.9 million was expected to be offset by the same amount in credits and payments.

123. The Claimants' case on the last point was further pleaded in PoC Schedule 6, note 10, which explains that the adjustments in that Schedule:

> *"reflect the recognition of $9.6 million of revenue (being the licence fee of $19.5 million less certain credits and payments available to Bank of America of $9.4 million and an early payment discount of $0.5 million) over that term as hosting revenue (together with equal and opposite reductions in deferred revenue to offset that deferred in Schedule 4 in respect of the three VAR transactions (Schedule 3, Transactions 16, 23 and 24))."*

124. PoC Schedule 3 also stated, in the context of each of the three precursor VAR transactions, that due to the various credits and payments, the actual value of the licence fee under the eventual direct deal with BoA was only $9.6 million.[26] Further, the Claimants' pleaded case was reflected in the detailed accounting adjustments set out in the Voluntary Particulars ("VPs"). The VP for each precursor VAR transaction deferred the revenue recognised by Autonomy in respect of it ($19.5m across the three),[27] and the VP for the Schedule 6 hosting transactions recognised the $9.6m value of the BoA "licence" sale rateably over its term.[28]

125. As proof, the Claimants relied on the verification and approval of their pleadings by their accounting expert, Mr Holgate, and the relevant accounting principles which (as confirmed in terms during Mr Holgate's cross-examination at the Main Trial), were common ground between the experts. These principles included, in particular, that for revenue to be recognised for either the sale of goods or the rendering of services:

(1) it must be possible to measure both the amount of revenue and the amount of costs reliably, because revenue and expenses that relate to the same transaction (or stage of completion of the rendering of services) are recognised simultaneously;[29]

(2) measurement of revenue must be at *"the fair value of the consideration received or receivable taking into account the amount of any trade discount and volume rebates allowed by the entity"*;[30] and

(3) it must be "*probable*" – meaning more likely than not – that the economic benefits in issue will flow to the entity.[31]

126. As to the individual transactions, Mr Holgate explained in his first report that he was "*instructed to review 53 sets of Voluntary Particulars*"; he had "*carefully reviewed*" them; and he "*agree[d] with the adjustments*".

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26 PoC Schedule 3 under VT16; VT23; VT24.
27 VP for VT16, VT23 and VT24.
28 Specific Note 15 to the VP for the Schedule 6 hosting transactions.
29 IAS §§18.14(c) and (e) §18.20(a), (c) and (d); and §18.19.
30 IAS §18.10.
31 IAS 18.14(d) and 18.20(b).

127. The Claimants submitted in the round that, in these circumstances, they had discharged their burden of proof and that the *"actual value"* of the BoA transaction to be stated in its accounts was in aggregate US$9.6 million after deduction of the various credits and discounts provided for in the BoA contract, and that this amount was to be recognised as a fee for hosting services rateably over the term. As revenue from hosting services, they submitted further, the revenue should be categorised as IDOL Cloud revenue.

128. The Claimants submitted that the Defendants had not put forward at the Main Trial any contrary case, save their general denial, and that it was too late to do so now. They submitted that the Defendants were blatantly seeking to advance a new case, unsupported by any accounting expert evidence of their own, and which they could and should have put to Mr Holgate, as the Claimants' accounting expert, at the Main Trial; and that it would be unfair, and contrary to the interests of finality in litigation, for them to be permitted to do so, especially in the absence of any explanation as to why the point was not raised at the Main Trial.

(c) The position of the Defendants in relation to the BoA transaction at the Main Trial

129. At the Main Trial, Dr Lynch denied the Claimants' case on the accounting for the hybrid hosting transactions, and made a blanket denial of the adjustments in Schedule 6, to which he did not otherwise plead back.[32] Neither Dr Lynch nor Mr Hussain advanced any positive case on the credits and payments, though the latter (expressly) required the Claimants to prove that the credits and payments had the pleaded effect on the actual value of the deal.[33]

130. Mr Holgate was not cross-examined about this apparent approval of the Claimants' pleaded approach. Dr Lynch neither served, nor sought any permission to serve, any further evidence from Mr MacGregor on this subject. Dr Lynch's first witness statement commented on the BoA transaction,[34] but did not discuss the credits and payments.

131. However, Mr Giles was cross-examined on the issue at some length at the Main Trial. It was fairly put to him, and he accepted, that *"offering those credits and discounts while keeping the licence fee at $19.5 million gave Autonomy revenue matching the amount it had already recognised on the VAR deals…"*. It was also put to him that one of the ways Autonomy had accelerated revenue on the transactions was *"by recognising revenue that substantially exceeded the actual value of the contract, given the $9.4 million of credits and discounts that it provided for over and above the early payments, yes?"* At the time, Mr Giles answered that he was not sure that it was something he had looked at; and although he gathered himself latterly to suggest that, because Autonomy Inc had received in cash the full headline figure (less only the early payment discount) the credits and debits would not affect cash flows for valuation purposes, he appeared to

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[32] Most materially, D1 Def §158 pleaded in response to PoC §114 that there is "*no basis for the adjustments contended for in Schedule … 6*".

[33] D2 Def §232 required the Claimants to prove the contents of Schedule 6 and Mr Hussain's involvement. D2 Def also stated in respect of each of the references to the credits and payments in PoC Schedule 3 (see fn 26) that "*HP is required to prove that the credits and discounts granted by Autonomy to Bank of America resulted in the actual value of the part of the deal described in this section amounting to USD 9 million only*": response to Schedule 3 at §168A, §237(b1) and §248(b1). In each case the $9m figure cited is presumably a typographical error for the $9.6m figure given in the paragraph responded to.

[34] Lynch 1 §§322–329 and §§483–484.

accept that it might affect revenue recognition. Thus, in Dr Lynch's closing submissions the issue was dismissed (in a footnote) as

> *"…(at most) an accounting question of whether these revenues could yet be recognised. As a matter of valuation, it is indicative of the health of the business…even if there were credits or rebates associated with the deal, that would not impact on its significance for valuation purposes."*

132. On what they presented as the separate question of revenue recognition, the Defendants advanced no positive case until Dr Lynch's solicitors advanced the contention that the entire $19 million *"should be recognised as revenue"* in a letter dated 26 August 2022 (and thus after the Main Trial). They then contended at this Quantum Hearing that the amount of revenue to be recognised had to be determined by the *"actual value"* of the BoA transaction, and that the Claimants had failed to provide any factual or expert evidence to prove their case that the *"actual value"* of the BoA transaction was other than its nominal value; and that in any event, the issue could and should be resolved in their favour by an analysis of the BoA contract.

(d) My approach to the further evidence and submissions

133. Notwithstanding that the evidence at the Main Trial was to cover both liability and quantum, I consider that it is fair to reassess the proper treatment of the BoA transaction in light of my finding that its precursor VAR transactions were improper, and that therefore it is the recognition and categorisation of the revenue from the BoA transaction, rather than the precursor transactions, which must be determined and presented.

134. The reassessment necessarily requires a detailed examination of the BoA contract and its legal effect in the context of my findings. However, that reassessment must be by reference to the evidential record at the Main Trial (including the expert accountancy evidence then adduced), and must not extend to disputed matters of fact that could and should have been put to witnesses.

135. Accordingly, although I consider his evidence as to the valuation effects to be admissible and helpful, where Mr Giles's evidence digresses into matters of accountancy or factual matters said to be relevant to the issue I consider I should take no account of it.

136. The net result, as it seems to me, is that the fundamental issue is as to the meaning and effect of the BoA contract. If the contract does not provide a sufficient answer to the question as to revenue recognition without recourse to further accountancy evidence or evidence of fact, I would agree with the Claimants that it is simply too late now to pursue the point, which (subject to admissible valuation evidence now before me) must be determined according to the state of the evidence at the time of the Main Trial.

(e) The BoA Contract: Claimants' analysis and interpretation

137. The relevant contract (stated to be effective on 8 February 2011) for the additional software is comprised in a Fourth Amendment to an Application Service Provider Agreement ("ASPA") dated 31 March 2009. The ASPA was in a sense the umbrella agreement for the licensing to BoA of IDOL software/technology. The specific terms

and conditions of the BoA transaction in issue are set out in Appendix 1 to that Fourth Amendment. The Autonomy group entity concerned was Autonomy Inc. (defined as *"Supplier"*).

138. The BoA contract covered two areas (*'Products'* and *'Services'*) which appeared under separate hearings and were priced separately:

(1) Under *'Products'*, Autonomy Inc agreed to license to BoA the software listed at A, B and C of the agreement.[35] The software licence fee was $19.5m, to be invoiced immediately but payable within 60 days. BoA was entitled to an early payment discount if the software licence fee was paid within 15 business days. There was a further annual maintenance and support fee of $975,000. BoA had the right to terminate the agreement, but it was expressly provided that the software licence fee of ($19.5m) was non-refundable.[36]

(2) Under 'Services':

(a) BoA agreed to pay a hosting fee by reference to the size of all data stored per MB fee.[37] This would govern data already stored as well as additional data which BoA had agreed to provide to Autonomy Inc (see *'Legacy Data'* below). As to the data already under storage, under the Third Amendment agreement, BoA had been entitled to store unlimited amounts of S6 data with pricing based on the number of 'seats' up to a maximum charge of $80,000 per month.[38] Autonomy Inc agreed to waive that monthly charge.

(b) The BoA contract expressly mandated BoA[39] to deliver to Autonomy Inc what was called *"Legacy Data"* which was currently being stored internally at BoA in four repositories (called the *"Internal Repositories"*).[40] This was a significant body of data which was estimated to amount to some 830 TB of data, with target milestones for delivery of the data in stages.[41] Under the revised data storage fee, the total storage fees on that amount of Legacy Data on an annual basis amounted to c. $3m per annum. In addition to the obligation imposed, BoA was also required (under the heading *"Schedule for delivery of Media and Ingestion of Data")* to *"use reasonable commercial efforts"* to deliver the Media *"as soon as practicable"*.

(c) For data hosted in a single Internal Repository and scheduled to be delivered in full to Autonomy Inc by 1 July 2011, Autonomy agreed to

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[35] Bank of America List of Software, Bank of America Fourth Amendment.

[36] Termination clause.

[37] See clause entitled Waiver of Hosting Fees.

[38] BOA Third Amendment: "*A monthly recurring charge for hosting shall apply as follows: (i) for 1-20,000 seats rolled out in production - $20,000.00; (ii) for 21,000-40,000 seats rolled out in production - and (sic) additional $20,000.00; (iii) for 41,000-60,000 seats rolled out in production - an additional $20,000.00; and (iv) for 61,000 to 80,000 seats rolled out in production - an additional $20,000.00*".

[39] The BoA contract set out a series of *"obligations relating to delivery of legacy data…"* commencing "*BoA shall transfer all data from the Internal Repositories to the Media"*.

[40] These were described in the contract as CARR, CAMM, Iron Mountain and Tumbleweed.

[41] Being the total data from the four repositories; CARR (500 TB), CAMM (200 TB), Iron Mountain (60 TB) and Tumbleweed (70 TB).

cover BoA's costs actually incurred in relation to the archiving and extraction of such data in 2011 up to a maximum of $1.5m (the *"Extraction Costs"*).[42]

(d) In addition, Autonomy Inc agreed to pay BoA a delivery fee of $2m for delivering the Legacy Data (the *"Delivery Fee"*). The delivery fee was to be invoiced on 1 January 2011 and was payable in annual instalments from March 2011 over five years, the first being in the sum of $920,000, the next in the sum of $420,000 and then three remaining of $220,000.[43]

(e) Autonomy Inc also granted BoA "*Credits for the Delivery of Legacy Data*" to be applied to the monthly data storage fees payable in the future in addition to the US$19.5m software licence fee (the *"Legacy Data Credits"*). These credits were incremental and were contingent on BoA delivering specific amounts of data by certain dates. In the event that BoA delivered in excess of 750 TB of data (as it was anticipated to do),[44] the total credits in specified instalments over five years would be $5.9m.[45]

139. The Claimants submitted that the arrangements committing Autonomy Inc to give BoA these credits amounted to the actual value of the revenue received being reduced by the amount of credit accordingly. Mr Patton emphasised that each credit was being given to BoA for doing what BoA was already obliged to do under the terms of the BoA contract; and in reality, the credits were simply the mechanism for reducing to $9 million the actual value of the BoA contract.

140. By way of further support for this contractual interpretation, the Claimants also referred me to contemporaneous exchanges between Autonomy and BoA and internally within Autonomy, which I addressed as part of my Main Judgment. Mr Patton took me in his oral closing to draft emails on 18 December 2010 (before the BoA transaction was concluded) which were prepared by Mr Hussain and copied to Dr Lynch with a view to presenting the transaction to BoA in a way and form which would both persuade BoA to enter into the transaction in 2010 and enable Autonomy not to have to make a deduction in respect of the credits by deferring them into the next year, as I described in paragraph [952] of the VAR Schedule to my Main Judgment. The Claimants took me also to an email from Mr Egan to BoA dated 23 December 2010, referred to in paragraph [959] of the same Schedule, in which he presented the proposed transaction as in effect a new investment of $10 million.[46]

141. Lastly, in addition to noting that the salesman in respect of the BoA transaction (a Mr Krakoski) was paid commission on the basis of a $10 million deal, and not a $19.5 million dollar deal, the Claimants emphasised that everything that happened after the

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42 See clause entitled 'Cost Reimbursement for Internal Repository'.
43 See clause entitled 'Data Delivery Payment'.
44 See the Media Inventory at Appendix A.
45 See clause entitled 'Credits for Delivery of Legacy Data'.
46 As I went on then to explain in paragraphs [953] to [964] of that Schedule, the efforts to conclude a deal with BoA proved unsuccessful, and that was the reason for instead breaking the overall proposed deal with BoA into smaller pieces and selling the pieces to different VARs as placemen as an expedient to generate recognised revenue in Q4 2010 to cover the shortfall left by the failure to close the BoA transaction: see paragraphs [965] to [971] of the same Schedule.

deal was consistent with their interpretation of the intended economic effect of the BoA transaction, at least in the sense that all the credits and payments were in fact made as predicted.

(f) The BoA Contract: Defendants' analysis and interpretation

142. Against this, the keystone of the Defendants' case in contending that the full $19.5 million (less only $0.5m for the early payment discount) should be brought into account is that the licence fee is expressly stated to be non-refundable, and furthermore, that it is clear from the termination provisions that although BoA had rights to terminate on 30 days' notice, it had no right in any circumstances to clawback any of that licence fee.

143. Although resting their case predominantly on the terms of the BoA contract as analysed above, the Defendants also rejected the Claimants' suggestion that the proper accounting in respect of the credits and payments had been a matter of *"unchallenged expert evidence at trial."* In Dr Lynch's closing submissions, their position was summarised as follows:

(1) Mr Holgate's agreement to the Claimants' pleading and Voluntary Particulars, which gave no description or explanation of the nature or terms of the credits or payments, nor even whether these were recorded in any contract, and if so which one, carried the Claimants no further forward.

(2) As Mr Holgate confirmed when cross-examined, all he had done was a number-checking exercise: he did not trace back to the source documents, and would probably have been unable to do such an exercise.

144. As to their interpretation of the BoA contract, the Defendants submitted that it is plain from the contract that the "*actual value*" of the software licensing part of the contract was $19.5m (less any early payment discount). There were no circumstances in which the software licensing fee of $19.5m was repayable to BoA. It was common ground that it was non-refundable.[47]

145. The Defendants contended further that:

(1) The early payment discount was already recorded in Autonomy's books as an expense under the heading 'Collection Fee'.[48] That accounting treatment had not been impugned in the accounting evidence.

(2) As to the other items, the Legacy Data Credits, the Delivery Fee and the Extraction Costs all form part of the 'Service' part of the contract. Autonomy would have earned further fees in providing that service both in relation to the existing body of BoA data and also through the provision by BoA of the additional Legacy Data.

(3) The Legacy Data Credits were plainly future credits to be set against future hosting fees after delivery of that data; these incentivised, but did not commit, BoA to deliver such data and were only claimable in the future if and as it did so. The Claimants had accepted in their submissions for the Quantum Directions

[47] See clause entitled "*Termination*" which refers to the software licence fee as "*non refundable*".
[48] As noted in the experts' Second Joint Statement.

Hearing that the credits were to be "*netted against monthly storage fees*"[49] connoting that the credits were only available if additional fees of at least the amount of the credits were otherwise payable by BoA to Autonomy and would not, on any view, reduce the software licence fees already received. The credits, which totalled $5.9m, were only available in the event that BoA provided the Legacy Data by the milestones identified. Mr Hill accepted that the BoA contract used the language of obligation in requiring BoA to deliver the Legacy Data; but he stressed that no scheduled dates were specified, nor any penalty for non-delivery, save that if BoA did not provide data in line with those milestones or decided not to proceed and terminated the arrangement then the credits were not available.

(4) The Court has already found that the software licence fee should be recorded as revenue in the form of a prepayment in respect of future services to be rendered by Autonomy.[50] There is no logical reason to deduct from that revenue the Legacy Data Credits. Doing so, has the effect of reducing the revenue of $5.9m (which had already been received in cash) to zero.

(5) As to expenses:

(a) The Extraction Costs were only payable by Autonomy in the event that BoA delivered the data by the milestone, and insofar as BoA had actually incurred any of the specified costs. Any such invoice would be rendered by BoA to Autonomy after 1 July 2011 and would be recorded by Autonomy as an expense at the appropriate time.

(b) The Delivery Fee (expressly payable in consideration for the delivery by BoA of the Legacy Data) was an expense incurred by Autonomy annually (from March 2011 to March 2015) as part of providing the service. Again, Mr Hill depicted this as an incentive payment to generate more lucrative hosting fees from the data delivered: in Mr Hill's words *"…it is all a deal to get the data in, and once the data [is] in, Autonomy earns huge hosting fees"*. It should not be regarded as reducing the revenue from the licence fee: it should be regarded as an expense against hosting fees, or a cost of sale. That is, indeed, how Autonomy did treat those costs: and that was a permissible treatment which the Claimants had not impugned (the burden being on them if they contested it).

(c) The Claimants had not advanced a case that such expenses were not properly recorded in Autonomy's books. In any event, there is no reason for concluding that the Extraction Costs or the Delivery Fee reduced the revenue that Autonomy had already received.

146. Mr Hill dismissed the contemporaneous documentation relied on by Mr Patton and referred to in the VAR Schedule to my Main Judgment as *"a salesman's way of looking at it and how they were selling it to Bank of America."* As to the point made by the Claimants that the data credits were virtually certain to be earned, since BoA would not

49 Claimants' Procedural Hearing Skeleton Argument for Quantum Directions Hearing at footnote 42.
50 Main Judgment paragraphs [3316] and [3391].

have made the agreements unless it wanted storage of its data, he submitted simply that this was not the test.

147. As to the Claimants' point that since the various payments and credits were more likely than not in due course to be paid to / earned by BoA, the Defendants submitted that:

(1) Revenue recognition in respect of that licence fee does not turn on how likely or not it was that the Legacy Data Credits would in due course be earned, or the other payments made for the reasons given below.

(2) If the Legacy Data Credits were earned, that would be in circumstances where incremental new data had been received, and the credits were to be set against future hosting fees. Those credits specifically related to, and were to be offset against those future fees. They could not operate to reduce to zero \$5.9m of the software licence fees already received.

(3) The Extraction Costs and the Delivery Fee were future payments in respect of the services, to be expensed at the appropriate time. There is no complaint about the treatment of such expenses. Again, this would not operate to reduce the licence fee revenue already received.

(4) As for the early payment discount, this was treated as an expense in Autonomy's books. That treatment has not been impugned.

(5) The Claimants do not suggest that any of the above items constitute a trade discount or volume rebate in respect of the licence fee for the purposes of IAS 18.10.

148. Dr Lynch also relied on the evidence-in-chief of his accounting expert, Mr MacGregor as to why he (Mr MacGregor) had not been able sensibly to address the hosting VPs at the time:

> *"I have reviewed the individual transaction voluntary particulars in relation to these Claimants' adjustments for the hosting arrangements and make the single comment that each hosted customer arrangement should be considered on its own facts … [I]t remains in dispute as to whether 'hosting' can be accounted for as the sale of a software licence, with associated services, or, according to the Claimants, should have been accounted for as solely the provision of a service, irrespective of the IDOL software license. As a consequence, I do not comment on the Claimants' hosting Voluntary Particulars at this time, either transaction by transaction or collectively, in advance of the determination of the disputed facts. I reiterate, however, that each individual transaction should be looked at on its own facts, once any determination of the hosting accounting issues is arrived at, since there are likely to be specific circumstances surrounding individual transactions that could also affect the accounting issues."* [My emphasis]

149. In the round, the Defendants submitted that in light of the benefits in locking in a large client at the expense of Autonomy's competitors, along with the substantial amount of additional data to be captured, there was a rational commercial basis for Autonomy to agree to meet the Extraction Costs, pay the Delivery Fee and provide the Legacy Data

Credits; and that these expenses did not reduce the headline consideration paid ($19 million net of early payment discount).

150. However, the Defendants did moderate their claim as to the amount involved. Although (as explained above) when first seeking to introduce the point, the Defendants had claimed that the point made a difference to Mr Giles's DCF valuation of about $1 billion (if the revenue were to be allocated to Q1 2011), Dr Lynch confirmed in his opening submissions at this hearing that the additional revenues fell to be pro-rated over the five-year course of the hosting arrangements, reducing the difference to some $381 million, and categorised as IDOL Cloud revenue.

(g) My determination of the BoA issue

151. In my judgment, despite the initial payment of $19 million by BoA, only $9.6 million (and not $19.5 million, less a deduction for early payment) should be taken as the true value of the BoA transaction for the purposes of the FSMA Counterfactual. Thus, I accept the Claimants' case in this regard.

152. In particular, I accept the Claimants' argument in their written opening submissions for this hearing that all the admissible material points in one direction: BoA was virtually certain to receive the credits and payments in their entirety, and this expectation was essential to BoA agreeing to conclude the transaction. In my view, the BoA contract, especially when set in context and having regard to its antecedent transactions, was structured to yield net revenue with an actual value of $9.6 million.

153. I also accept the Claimants' answer to the Defendants' point, which at first blush weighed with me considerably, that if the $9.9 million were not recognised as revenue, this would ignore the fact that Autonomy received this cash. The Claimants dismissed this as a false point, because the cash received is reflected in the cash balance and thus in the *equity* value; but in assessing whether, from a valuation perspective, that cash receipt should be relied on as predictive of Autonomy's cash flows in the forecast period such as to increase the *enterprise* value, the answer is that it should not: the fact that in reality and under the contractual provisions stipulated, the money was (in effect) to be returned to BoA by way of credits means that its initial receipt is a false predictor of future cash flows.

154. Mr Giles's suggested response, in cross-examination, that the cash as such would never go back to BoA is, of course, technically correct: but he accepted that, if and when triggered, the credits would be set against future cash flows: this seems to me to amount to substantially the same thing when assessing the effect of receipt in predicting future cash flows. Mr Giles also suggested that future reductions or credits against revenues should not be taken into account because (as he put it when cross-examined) *"they were invisible to the valuer"*. I do not see or accept the basis for this assertion. The BoA contract is clear in its provision for these future reductions and credits and was plainly visible.

155. Further, whilst it is important not to attribute to the valuer knowledge HP would not have had, I consider that in the counterfactual world and for the purposes of the FSMA Counterfactual it should be assumed that the BoA transaction (as other transactions) would have been accounted for in accordance with its true nature, purpose and effect, as known to those within Autonomy who put forward the transactions. The imperative

for Autonomy was (a) to have a 'headline' licence fee of $19.5 million which mirrored the amount notionally payable in, and recognised in Autonomy's accounts as revenue from, the precursor/placeholder VAR transactions which the BoA transaction was always intended to and did replace, but (b) to persuade BoA that it would not actually be committing, in net terms, more than $9.6 million, as is clear from the pre-contractual communications I referred to earlier[51] and which I addressed at some length in the VAR Schedule. The purpose of the complex provisions for credits and deductions in the BoA contract was to reflect and realise this imperative, and to recognise in full the headline amount payable (and, I accept, actually paid) without taking into account the credits and other deductions would, to my mind, be to perpetuate the impropriety which the arrangements disguised.

156. Similarly, Mr Giles's speculative theory that the credits and repayments were included to attract more future revenue and should be treated as expenses incurred to that end, rather than as reductions of the licence fee, is inconsistent with the facts as demonstrated by evidence I have already accepted: the credits and discounts were not offered to attract more revenue, but as the means of preserving the 'headline' figure (and replace the precursor VAR arrangements which were, in aggregate, of that amount) whilst ensuring that the true cost to BoA would only in fact be the net amount.

157. Accordingly, in my judgment, (a) on its true construction the BoA contract was intended to limit BoA's net outlay to $9.6 million, (b) only the net amount should be recognised as revenue, and (c) that (as I understand now to be agreed) revenue should be pro-rated over five years and classified or categorised as IDOL Cloud revenue.

(10) Treatment of costs of loss-making VAR and Reciprocal transactions in FSMA Counter-factual

158. Another difference between the experts is as to the extent to which losses and costs of historically uneconomic transactions should be excluded for the purposes of projecting Autonomy's future performance.

159. In particular, there is a dispute as to how the VAR and Reciprocal transactions which I have found to be improper in my Main Judgment are to be accounted for; and, in particular, whether the additional costs and losses relating to them are to be included in the FSMA Counterfactual.

160. The Defendants accepted that both the VAR and the Reciprocal transactions should be included in the restated accounts/FSMA Counterfactual, though with no revenue from the VAR transaction being recognised until the final (direct) transaction was accomplished. Thus, it is common ground that, like hardware revenues, the VAR and Reciprocal revenues from contrived transactions which I have found (in my Main Judgment) to have been wrongly recognised are to be removed[52]. The dispute is as to

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[51] The email from Mr Hussain to Dr Lynch dated 18 December 2010 referred to in paragraph 952 of the VAR Schedule to my Main Judgment is illustrative: *"I don't believe that BofA is actually committing more than $10.5 million in this deal. The…actual situation [is] that the new commitment is only $10.5m…."* (As explained by the Claimants, the figure then was $10.5m rather than (the eventually agreed) $9.6m.)

[52] This also appears to dispose of the point whether deferred revenues from VAR and Reciprocal transactions should be included, as Mr Holgate (somewhat surprisingly) at one time suggested: they should not be. Mr Giles assumed in his own valuation that the product of the adjustments should treated as a decrease in accounts

the additional costs and losses (caused by MAF payments to VARs or losses on Reciprocal transactions).

161. The Defendants submitted that to correct the accounting, not only the revenues but also the associated costs of paying MAFs to VARs, and losses on Reciprocal transactions, should be excluded. Mr Giles considers it obviously logical that *"once the uneconomic nature of the Reciprocal and VAR/MAF transactions is known, management would disclose the impact of those transactions."* Mr Giles proposed the following adjustments as being attributable to the relevant (successfully impugned) VAR and Reciprocal transactions:

(1) a reduction in COGS of $5.8 million;

(2) a reduction in operating costs of $13.2 million;

(3) A decrease in depreciation of $7.0 million; and

(4) A decrease in capex of $10.0 million.

162. Such adjustments would obviously enhance the apparent future cash flow generating capacity of Autonomy, and add further support for Mr Giles's depiction of Autonomy in the RTP as a leaner but more efficient business, with higher gross margins, very high levels of cash conversion, and (overall) enhanced growth and momentum. (The reclassification of improperly accelerated revenue would also be re-characterised as deferred revenue.)

163. The Claimants do not accept that these costs and losses should be so excluded. The Claimants' position is that in the case of the VAR and Reciprocal transactions, correcting the accounting simply entails removing the fraudulently recognised revenue (or deferring fraudulently accelerated revenue), but not the costs and losses.

164. In maintaining that the losses and additional costs should still be included in Autonomy's accounts they reason, in summary, that the losses and costs were not separately identified or apparent. Absent separate disclosure, a valuer would regard the amorphous costs and losses as simply incidental to the overall business. To strip out such costs would involve far more detail than was ever in fact published, or required to be so, and there is no basis for treating them for the purposes of the FSMA Counterfactual as visible to the valuer either. The Claimants described Mr Giles's approach as *"not explained, not based on instructions, and…wrong in law"*.

165. Nevertheless, the Defendants have adopted Mr Giles's position, and he and they put forward a number of different reasons for this approach. Turning to the competing arguments in more detail, the Defendants' primary (or, at least, their first) contention was that the same approach should be taken in this regard as the agreed approach in relation to hardware transactions, and that on that basis their impact, including their losses and costs, should altogether be excluded.

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receivable. He noted in his third report that if he did not make that assumption, and instead treated it as deferred revenue for the purpose of projecting future deferred revenue, that would increase his estimate of standalone value by $225 million, with synergy value unchanged.

166. The Claimants rejected this attempt at equivalating the position in respect of the costs and losses of VAR and Reciprocal transactions with the agreed position in relation to the impugned hardware transactions. They submitted that there was no real comparison. They emphasised that in my Main Judgment I determined and directed that the impugned hardware business should be disclosed; and that on that basis there was no disagreement between the experts that the hardware business, including its associated costs, would be discontinued (as I explain in [48] above) and its associated costs would likewise be required; but they submitted that there was no such determination or direction in the case of the costs and losses referable to the VAR/MAF and Reciprocal transactions.

167. I agree with the Claimants that there is no sustainable analogy with the disclosure I have required, and the consequentially agreed treatment, of the hardware transactions. In the case of the hardware transactions, which I have found to have been valid but improperly accounted for, it is to be assumed that impugned transactions would still have taken place, but would have been properly accounted for by disclosing and reporting them separately from software revenues. Thus, in the case of hardware, the transgression could be, and it should be assumed that it would have been, cured by disclosure. Autonomy's directors would have had every reason in those circumstances to disclose also the associated costs and losses. In line with the approach to correcting the accounts implicitly required by FSMA, it is to be assumed that they would have done so without adverse repercussions, and that loss-making hardware transactions would not have been continued after the disclosure. Put another way, in the context of hardware, the impropriety was non-disclosure and was 'cured' by disclosure, with an inevitable consequence (as Mr Giles noted and agreed in his third report) of investors excluding such transactions and all their associated costs and losses altogether for the future and thus for the purposes of the valuation of Autonomy in the RTP.

168. The position is different in the case of the impugned VAR sales and the Reciprocal transactions. I have held that those transactions were contrived (as to which see my Main Judgment at paragraphs [2337*ff*])[53] and that no revenue should have been recognised in respect of them, making it necessary (as is common ground) for Autonomy's accounts to be corrected to that extent. However, the impropriety of the transactions is 'cured' by removing the revenue which was contrived as a means of inflating profit; the Claimants are correct in submitting that in my Main Judgment I made no further determination in respect of the losses and costs, and there is not the same basis for concluding that a valuer would have been alerted to them.

169. Mr Patton, on behalf of the Claimants, submitted that, accordingly, in the FSMA Counterfactual:

> *"you will simply see the true revenues and the true margins and so on, so the costs will be in that but they will not be visible to HP. HP will not see them. In the FSMA Counterfactual, HP will not know that there were MAFs paid and there were Reciprocals paid.*

[53] Put summarily, I concluded that the VAR transactions were undertaken with paid 'placeholders' which were never intended to have effect once the real and 'direct' transaction for which they were holding the place was accomplished; and that the Reciprocals were dummy transactions under which in effect Autonomy funded its own sales in order to recognise revenue from them.

So when it comes to value the business it has absolutely no reason to do anything other than take the revenues and the margin figures at face value and value on that basis."

170. In those circumstances, the Defendants fell back on their alternative argument that Autonomy would have chosen voluntarily to disclose the costs and losses concerned, on the basis that its directors would have assessed that disclosure in that form would have a positive effect, rather than a negative one, on market sentiment and HP.

171. Seeking to counter the Claimants' point that, on the contrary, revelation of improperly incurred costs and losses would surely have provoked a powerful adverse reaction from the market, and would not have increased Autonomy's value, but reduced it, Mr Shivji suggested (in his oral closing submissions) that there was no need for *"some enormous mea culpa"* and that an anodyne or bland disclosure which should not have been either very remarkable nor materially off-putting would have been possible.[54]

172. I initially felt that some such anodyne (but not misleading) words might have been devised which it is reasonable to suppose would not have provoked an adverse market reaction. However, I have become increasingly less convinced by this. I am not persuaded that the anodyne description which Mr Shivji suggested would be sufficient would have been so, despite the beguiling way in which he presented it. To my mind, and in agreement with the Claimants, any disclosure of such costs and losses would inevitably have led to inquiry and revelation of impropriety, with negative effects on the perception of Autonomy and its value.

173. Moreover, there remains force in the Claimants' point that Mr Giles could never be pinned down as to when disclosure would have been made of an activity which went on over some 10 quarters.

174. In short, Mr Giles and the Defendants never provided a compelling answer to the point that what HP could not see in the published information as reconstructed, it could not make allowance for in constructing its Deal Model. There is the further difficulty that none of this factual hypothesis was mentioned at the Main Trial, and so no-one was cross-examined on it.

175. In the circumstances, I do not feel able to accept Mr Giles's theory, as adopted by the Defendants, that the VAR/MAF and Reciprocal losses and costs would expressly and separately have been disclosed.

176. The Defendants' last remaining argument was that visibility of the costs should simply be assumed. The Defendants advanced this argument in various forms.

177. One form of the argument was Mr Giles's contention that the costs and losses on the VAR/MAF and Reciprocal transactions should be excluded from the income statement for valuation purposes on the basis that these would not be included in the *'continuing operations'* of Autonomy.[55] Mr Giles suggested that this was required for the purpose

[54] He suggested that all that would need to be said would be along the lines that *"...we have done these deals, they were loss-making, we are not going to be continuing this, or we don't think this is a useful line of business…"*.

[55] The phrase used by Mr Giles to denote his model of Autonomy's business in the future, assuming the cessation of *"uneconomic transactions or those judged to have no economic substance"*.

of IFRS accounts; and in any event that their removal would be required from the Adjusted EBITDA calculations forming the basis of the valuations and defined by Autonomy in the following terms:

> *"Although IFRS disclosure provides investors and management with an overall view of the company's financial performance, Autonomy believes that it is important for investors to also understand the performance of the company's fundamental business without giving effect to certain specific, non-recurring and non-cash charges. Consequently, the non-IFRS (adj.) results exclude share of profit/loss of associates, post-acquisition restructuring and legal costs and non-cash charges for the amortisation of purchased intangibles, share-based compensation, interest on convertible loan notes, non-cash translational foreign exchange gains and losses and associated tax effects. Management uses the adjusted results to assess the financial performance of the company's operational business activities."*

178. The Claimants did not accept this. They disagreed with the suggestion that IFRS rules required disclosure. Mr Bezant accepted that this was not within his expert valuation role, but (as a Chartered Accountant) noted that the test for the purpose of the IFRS rules was whether the IFRS classification of *"discontinued operations"* applied and opined that the criteria were plainly not satisfied. They disagreed also that the EBITDA calculations applied to require disclosure and removal.

179. I am not persuaded by this form of the Defendants' argument that visibility of the costs should be assumed. I would not accept the application of IFRS rules in the absence of expert evidence. I do not consider that the Adjusted EBITDA statement quoted by Mr Giles sufficiently mandates removal of costs.

180. The second form of the argument that visibility of the costs should be assumed was (as it was put in Mr Giles's fourth report) that

> *"irrespective of how we assume valuers would know about these losses we <u>ought</u> to exclude them. Otherwise, the Claimants would receive an economically unjustified windfall".*

181. Mr Shivji elaborated on this appeal to overall fairness in his oral closing argument, as follows:

> *"…the only point is, is it right to project a business in the future that will have this historical baggage when in fact it will not be part of Autonomy's future, and we have taken it out in our valuation approach and we say that is what someone, an investor or someone looking to acquire a new business, would do."*

182. Although this was the Defendants' last resort, it is to my mind the most potentially viable form of argument on the particular point. It is plainly of a different nature than the arguments above, in that it is not based on the hypothesis of disclosure (whether as a matter of self-interest or accounting requirements) nor on the notion of an *"omniscient valuer"*. In my view, what it comes down to is whether I should direct that in the construction of the FSMA Counterfactual, it is necessary to strip out the costs and losses, not because that is what would have been required to achieve proper accounting, but because I am persuaded that the inclusion of their improper "baggage" unfairly skews the result and confers a windfall on the Claimants. Mr Giles raised this point in his

supplemental expert report (dated 14 August 2019) for the Main Trial and was cross-examined on it in that context. When cross-examined, he tended to resort to and to some extent elide the more general point with his theory that the losses should be stripped out because uneconomic business would not be continued; but he also adhered to the simpler position that in any event *"not to have taken out those losses…would have been a windfall"* (as he put it in one of his answers). On this approach, no duty of disclosure is involved and it is not necessary to speculate as to the disclosure which would have been required and made; nor is any recourse to accounting rules or conventions required. The disclosure would in effect be made to give fair and proper effect to my findings in my Main Judgment, and to ensure a valuation on a fair and proper basis and that an inappropriate windfall is not conferred on the Claimants.

183. After some equivocation, given that this argument is very different than the variants previously advanced, I have concluded that in the FSMA Counterfactual the losses and costs referable to the VAR/MAFs and the contrived Reciprocal transactions should not be included. I accept Mr Shivji's argument that this is necessary to ensure that the FSMA counterfactual is not constructed on a basis which would result in a windfall to the Claimants that would inevitably arise if costs and losses were included which, in point of fact, would not arise or be incurred when the "uneconomic transactions" are discontinued.

184. The valuation difference resulting from this conclusion is difficult to assess. Mr Bezant conducted (for the purpose of his reports in the Main Trial) a sensitivity analysis as to the effect of stripping out losses from MAF payments to VARs and from Reciprocal transactions on his loss assessment. He concluded that the difference, applied to his other figures, would be $137 million and that this "*would not materially affect [his] assessment of the Claimants' loss."* Mr Giles, however, considered that the result would be a further material increase in cash flow capacity of Autonomy[56], demonstrating (in his words) *"that the underlying business (once uneconomic arrangements are set aside) was capable of generating more cash flow on a lower revenue base…"* That of course chimes with Mr Giles's main theme that Mr Bezant has throughout failed properly to address and take into account Autonomy's enhanced cash generating capacity in the RTP.

185. Mr Giles estimated that removal of the VAR/MAF and Reciprocal transactions would reduce COGS by $2.5 million and operating costs by $3.3 million with increased cash flow of $5.2 million. However, and particularly since I have not entirely accepted either expert's approach to valuation, I do not propose to attribute a separate numerical estimate of the effect on Autonomy's standalone value of the conclusion I have reached in respect of the costs and losses I have determined should be excluded. The overall result would support a more optimistic view of Autonomy's cash flow generating capacity and cash flow margins for the future. As such, that conclusion seems to me to be consistent with Mr Giles's more optimistic approach to Autonomy's growth potential and provide some limited further support for his view that Autonomy would continue to be a high growth, high margin company in the RTP.

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[56] In his third report, Mr Giles accepted that although the consequence of the accounting adjustments in respect of "uneconomic transactions" was to reduce reported revenues in H1 2011 from about $476 million to about $418 million, since cash flow was not affected the cash flow margin increased substantially from 25% to 29%.

186. I turn next to considering in turn the more specific differences between the experts as broadly described in paragraph [66] above.

(11) IDOL Product revenue growth rates

187. The largest (in materiality/value terms) of the difference between the parties respective experts' DCF valuations in the FSMA Counterfactual relates to their contrasting approaches in forecasting IDOL Product revenue growth rates. This accounts for about $1,543 million of the difference between them in their respective revised DCF valuations.

Comparison of the forecasts of HP in the Deal Model, and of Mr Bezant and Mr Giles

188. It is common ground that, even if (as I have now determined) no additional revenues from the BoA transaction are to be brought into account, the historical growth rates for IDOL Product in the counterfactual world would have been much better than they were in the actual world, especially in Q1 and Q2 2011.[57]

189. Mr Giles provides figures based on the inclusion of BoA revenues recategorized as IDOL Product on two alternative bases: (a) on one basis, he includes all the revenues in the figures for H1 2011, and (b) on the other basis, the BoA revenues are pro-rated over five years. Although Mr Giles's headline figure, based on the RCC, for year-on-year H1 2011 organic growth rate in the Restated Position was 50.8% (compared to 13.3% in the Reported Position), once the amounts included by Mr Giles for BoA revenues are stripped out (as I consider they should be) the growth figure on the RCC basis reduces to 41.2%. Mr Bezant's figures for H1 2011 were 37.2% based on the RUS and 41.2% based on the RCC.

190. Mr Bezant notes in his seventh report that when forecasting growth rates for Autonomy's IDOL Product revenues, HP based its forecast for H2 2011 and 2012 on investment analysts' forecasts. This implied annual revenue growth of 18.0% in 2011 and 10.8% in 2012. HP then forecast revenue growth rates to taper to a constant rate of 5.0% from 2015 to the end of the forecast period in 2021.

191. Mr Bezant's assessment was that:

    (1) growth in H2 2011 should be forecast by reference to the average historical growth in IDOL Product revenues observed across 2009 to 30 June 2011 (based on a compound annual growth rate ("CAGR") measure of growth). That approach results in his forecast for annual growth in 2011 being 26.7% (based on the RUS) and 28.0% (based on the RCC), compared to the rate of 18% assumed by HP in the Deal Model.

    (2) after the near-term, growth should be forecast to taper to 5.0% per annum by 2017. HP had likewise adopted a growth assumption of 5% for the medium to long term, but HP assumed a taper period to 2015 (leading to HP's lower overall forecast).

[57] On Mr Bezant's RUS approach, all stated growth measures for IDOL Product are improved. For his RCC approach, all stated measures for IDOL Product (aside from FY 2010) are improved.

192. Mr Giles's assessment was that:

   (1) growth in H2 2011 should be forecast by reference solely to year-on-year growth of IDOL Product revenues in H1 2011. (This accounts for a difference of some $800 million compared to Mr Bezant's approach.)

   (2) after the near-term, growth should be forecast to taper to 7.0% by 2021. (This accounts for a difference of some $400 million compared to Mr Bezant's approach.)

193. The dispute between the parties in forecasting future IDOL Product revenue growth thus has two interrelated elements:

   (1) Disagreement as to the interpretation of historical IDOL Product growth rates and as to what should be taken to be the historical 'baseline' for the purpose of forecasting future growth;

   (2) Disagreement as to the method and basis of extrapolating a forecast of the rate of future growth over the period from H2 2011 to 2021, having regard also to the effect of the anticipated IT market shift to cloud services.

Disagreement about the 'baseline'

194. I have already made my determination of a fundamental difference between the experts as to whether further undiscounted BoA revenues should be taken into account in the calculation of IDOL Product revenue in Q1 2011: I have determined they should not be included. However, the experts also disagreed fundamentally in their interpretation of Autonomy's historical IDOL Product growth figures and what they should be taken to reveal as to the future prospects for that part of Autonomy's business. The most acute point of difference between them in this context was as to what figure should be taken as a reliable baseline from which to forecast future IDOL Product revenues, given the rapid growth in Q2 2011.

195. In his expert reports prior to my Main Judgment, and in particular in his first and fourth report for the Main Hearing, Mr Bezant had dismissed the growth rates implied by the Q2 2011 revenues as stated in Autonomy's 'True Position' as an *"outlier"*, and he excluded those rates in seeking to establish his 'baseline'. He explained this in more anodyne terms as placing *"more weight on the general trend in Autonomy's Updated True Position IDOL Product revenue growth rates between LTM Q2 2010 and LTM Q1 2011"*[58]; but the reality is that he placed no weight or credence on the Q2 2011 revenue figures at all. I indicated scepticism about this approach when Mr Bezant gave oral evidence at the Main Trial.

196. In his two reports (his sixth and seventh) for this hearing, he accepted that Q2 2011 was not such an *""outlier" relative to the rest of the period"* that it should not be taken into account in the RTP. However, he considered the general trend to be volatile, and did not consider that the Q2 2011 figures represented a higher sustainable level of performance and growth rates in the future. Although he now (in his sixth report) included Q2 2011 results, he preferred to *"rely on the average growth rate over the full period for which*

[58] Last Twelve Months.

I have data (including Q2 2011).” He justified this, and the inevitably (and considerably) lower ‘baseline’ thereby yielded, in the light of what he described as (i) the historical variability in Autonomy’s quarterly IDOL Product revenues; (ii) the contemporaneous expectations of the wider IT industry at the time that the market in which Autonomy operated would shift away from traditional licences towards cloud services; and (iii) the lower historical Core IDOL (particularly IDOL OEM) revenue growth rates in the RTP.

197. Mr Bezant accordingly relied on a more broadly spread historical growth measure, that is to say, CAGR, for the period 2009 to H1 2011 (and thus over seven financial quarters). The Claimants commended this as *“more appropriate for this volatile, non-recurring revenue stream. It is more likely to reflect sustainable growth.”*. Historical CAGR for IDOL Product between 2009 and H1 2011 was 15.4% (based on the RCC), and it is that which Mr Bezant used as a ‘baseline’ from which to forecast future IDOL Product growth rate.

198. Mr Bezant and the Claimants characterised Mr Giles’s approach in placing sole reliance on H1 2011 for the purposes of forecasting growth in H2 2011 and his assumption that H1 2011 growth alone would have been considered determinative of longer term growth forecasts as *“highly unrealistic”*; and in Mr Bezant’s opinion, the result was a *“forecast growth trajectory that is overstated.”*

199. Mr Giles did not accept either Mr Bezant’s methodology or his criticisms. He pointed out, in relation to Mr Bezant’s methodology, that *“Although Mr Bezant no longer entirely ignores the Q2 2011 results, the impact of the Q2 2011 growth rates is diluted by virtue of the extended period over which Mr Bezant calculates the CAGR – he now applies the CAGR of LTM revenues between Q4 2009 to Q2 2011 whereas he previously applied the CAGR of LTM Q2 2010 to Q1 2011.”* That brought into the calculation Autonomy’s last quarter performance in 2009, which Mr Giles considered was adversely affected by the global crisis and Autonomy’s significant exposure to financial sector firms; and the broader spread in any event reduced the influence of the most recent historical and observed results and, in particular, further diluted the effect of the observed growth in the last quarter.

200. Dr Lynch’s written closing submissions described Mr Bezant’s suggested growth rate for H1 2011 as *“inexplicably pessimistic”*. Mr Giles contrasted this with HP’s outlook at the time, noting that *“Mr Sarin observed organic growth of 13% for H1 2011 and adopted a 5% more optimistic 21% for H2 2011 (and therefore 18% for the year as a whole)”*, and adding that in his view, Mr Sarin’s approach *“clearly demonstrates significant optimism in regard to IDOL Product growth.”*

Disagreement as to the method and basis of extrapolating a forecast of the rate of future growth over the period from H2 2011 to 2021

201. Mr Bezant further sought to justify this criticism of Mr Giles’s approach and his assumptions as to the predominant weight to be given to Q2 2011 in establishing a ‘baseline’ for the purpose of forecasting near-term growth on five grounds:

(1) First, Mr Bezant stressed the nature of IDOL Product revenues: they arise from one-off sales of licensed software. Unlike IDOL Cloud and IDOL OEM revenues, IDOL Products are not recurring: they *“are lumpy and volatile in*

nature". Further, *"there would also likely be significant variability in future revenues"* with *"an inherently greater level of uncertainty…compared to expectations of recurring revenue streams."* Mr Bezant's view was that a valuer or HP *"would not simply assume that growth observed in the preceding six months would have launched Autonomy's IDOL Product business on a significantly higher growth rate over the next ten years (as assumed by Mr Giles)."* [Mr Bezant's emphases.]

(2) Secondly, in Mr Bezant's view, *"Q2 2011 appears anomalous, and would have invited scrutiny"*: it was unlikely that HP or the market would have relied on that single period uncritically. In their written closing submissions, the Claimants sought, on this basis, to marginalise Q2 2011 as simply *"a lucky quarter."* To extrapolate from it a pattern of future growth *"…ignores the reality of Autonomy's business, where it was often a matter of good fortune or happenstance whether a large deal concluded in the instant quarter or slipped into the next one".* [ibid.]

(3) Thirdly, and as mentioned above and elaborated later, market expectations at the time were that there would be a shift away from traditional market sales (such as IDOL Product) towards cloud sales (IDOL Cloud). In such circumstances, it was unrealistic to extrapolate from IDOL Product results in a single period before the shift had gathered pace.

(4) Fourthly, there was no basis for Mr Giles's apparent suggestion that HP's own forecasts focused predominantly on historical growth only in the preceding six months. As to the longer term forecast, Mr Bezant also drew attention to the fact that in earlier reports prior to the Main Trial (his first and second) Mr Giles had suggested that revenue growth rates in the medium to long term should be the same as in the Deal Model, and he questioned Mr Giles's stated reason for his change of view (being Mr Sarin's subsequent evidence at Trial that *"Where we used our own projections (in particular for later years), we paid particular regard to Autonomy's publicly reported organic growth to date…"* (and see paragraph [4035(6)] of my Main Judgment quoting this)).

(5) Fifthly, it must be borne in mind that the Q2 2011 results were not released until 27 July 2011, six days after HP's Board of Directors had authorised a maximum acquisition price and 20 days before HP's Board was advised that Autonomy had agreed to a purchase price. In point of fact, therefore, the Q2 2011 results would not have guided those assessments at the time, and Mr Giles has failed to explain what bearing the results could have had or what effect they would have had on the negotiated price.

202. Mr Giles stood by his approach in placing such a focus on the Q2 2011 results (and especially the improvement in performance between Q1 2011 and Q2 2011) and then in forecasting forward as being in line both with his argument that the likelihood that the latest results before the Acquisition are likely to provide the surest 'baseline' for assessing future growth, and also with what he perceived to have been the approach of Mr Sarin at the time.

203. He pointed out that although Mr Bezant had observed organic year-on-year growth of 41.2% in H1 2011, he had adopted a rate of 28% for 2011 as a whole, implying an H2

2011 year-on-year growth rate of 17% (which was thus lower than HP had adopted). Mr Giles considered this inexplicable, given the better performance in the counterfactual world already noted above.

204. Further, citing Professor Damodaran as a widely quoted authority on valuation, Mr Giles rejected the CAGR measure adopted by Mr Bezant as *"not a suitable measure for forecasting"*. He went on to describe that measure as *"fundamentally flawed, due principally to the fact that the CAGR is simply calculated using just two inputs, i.e., the beginning figure and the end figure…ignoring intermediate observations and any trends in growth rates over the period."* Indeed, he suggested that in his experience, any trained analyst (such as Mr Sarin) would be aware of this failing, and it was notable that Mr Sarin had not adopted the measure.

205. Mr Giles was cross-examined at the Quantum Hearing as to why in the context of establishing the 'baseline' figure for IDOL Product his focus was on H1 2011, whereas in the context of his assessment of IDOL Cloud growth he propounded as being the norm his *"trend growth"* analysis and had examined the trend over the whole historical period from 2009 to 2011 as the basis for his forecast for H2 2011 and beyond. Mr Giles again primarily based his answers on (a) the evidence of Mr Sarin and Mr Apotheker at the Main Trial and (b) the non-recurring special and skewing effect of the global financial crisis in 2009. He also referred to a passage in my Main Judgment (at paragraphs [4025(3) and (4)] and [4035]), which he relied on as providing further factual support for his perception of Mr Sarin's actual approach, and more particularly, his specific reliance on the IDOL Product organic growth figures in the Q1 2011 and Q2 2011 quarterly reports.

206. Returning to the experts' competing figures for IDOL Product growth, in the course of his oral opening Mr Shivji provided to me a useful tabular analysis of the historical and forecast growth figures for IDOL Product put forward (a) in the Deal Model (b) in Mr Bezant's sixth expert report (on both the RUS and the RCC basis) and (c) in Mr Giles's third report. Mr Shivji returned in his oral closing to amplify his submissions on IDOL Product principally by reference to this analysis, which is set out below:

Historical Period

		Deal Model (1)	MB6 (RUS) (2)	MB6 (RCC) (3)	TG3 (RCC) (4)
LTM Q2 2011		265.0	286.3	263.6	263.6
Q1 2010A	A	46.5	47.4	43.3	43.3
Q2 2010A	B	62.0	60.6	59.6	59.6
Q3 2010A	C	58.6	58.8	52.2	52.2
Q4 2010A	D	83.5	79.3	66.1	66.1
Q1 2011A	E	54.4	66.4	59.6	59.6
Q2 2011A	F	68.5	81.9	85.7	85.7
Q3 2011E (5)	G	73.6	71.3	61.9	83.6
Q4 2011E (5)	H	99.2	92.3	76.1	83.6
H1 2011A	I = E + F	122.9	148.3	145.3	145.3
H2 2011E	J = G + H	172.8	163.6	138.0	167.1
H1 2011A	I/(A+B) - 1	13.3%	37.2%	41.2%	41.2%
H2 2011E	J/(C+D) - 1	21.6%	18.5%	16.6%	41.2%
Change from H1 to H2	K = J - I	8.4%	-18.7%	-24.6%	0.0%
Consistent methodology with MB1 / MB4 (6)					
H2 2011E			26.40%	18.60%	

Forecast Period

		Deal Model (1)	MB6 (RUS) (2)	MB6 (RCC) (3)	TG3 (RCC) (4)
2011		18.0%	26.7%	28.0%	41.2%
2012		10.8%	15.9%	16.5%	24.1%
2013		8.0%	10.4%	10.8%	15.6%
2014		6.0%	7.7%	7.9%	11.3%
2015		5.0%	6.4%	6.4%	9.1%
2016		5.0%	5.7%	5.7%	8.1%
2017		5.0%	5.0%	5.0%	7.5%
2018		5.0%	5.0%	5.0%	7.3%
2019		5.0%	5.0%	5.0%	7.1%
2020		5.0%	5.0%	5.0%	7.1%
2021		5.0%	5.0%	5.0%	7.0%

207. Mr Shivji particularly emphasised the following metrics:

(1) In the LTM (Last Twelve Months of) Q2 2011, Autonomy's licence sales exceeded one quarter of a billion dollars in all metrics ($265 million in the Deal Model, $263.6 million according to both experts on the RCC basis and $286.3 million on the RUS basis put forward (only) by Mr Bezant).

(2) The experts' agreed figures showed that licence sales tended to be highest in the second quarter of the year.

(3) In the Deal Model, HP had forecast a growth rate in H2 2011 of 21.6% as against an observed growth rate of 13.3% in H1 2011, resulting in a growth rate for 2011 as a whole of 18.0%. Excluding BoA revenue, Mr Giles took 41.2% as the growth rate in H1 2011 in the RTP and forecast the same growth rate of 41.2% in H2 2011, so that his growth rate of 2011 as a whole is 41.2%. For H1 2011 in the RTP, Mr Bezant took the same growth rate as Mr Giles (on the RCC basis) of 41.2%; but in sharp contrast with Mr Giles, he forecast growth of only 16.6% for H2 2011 (a fall of 24.6 percentage points from H1 2011, resulting in an overall growth rate of 28.0% for 2011).

(4) In the Deal Model, IDOL Product growth rate tapered down from 18.0% in 2011 to 10.8% in 2012, 8.0% in 2013, 6% in 2014 before levelling out at 5% for the remaining years from 2015 to 2021. Mr Bezant's corresponding figures (on the RCC basis) are 28.0% in 2011, 16.5% in 2012, 10.8% in 2013, 7.9% in 2014, 6.4% in 2015 and 5.7% in 2016, before levelling out at 5% for the remaining years from 2017 to 2021. Mr Giles's corresponding (but starkly contrasting) figures are 41.2% in 2011, 24.1% in 2012, 15.6% in 2013, 11.3% in 2014, 9.1% in 2015, 8.1% in 2016, 7.5% in 2017, 7.3% in 2018, 7.1% in both 2019 and 2020, before levelling out at 7.0% in 2021.

208. Mr Shivji also emphasised that Mr Bezant had not only changed his approach to H1 2011 (which he had previously ignored as an 'outlier'), but also, though now accepting that it should be taken into account, has taken an average going back to 2009, with the effect (because 2009 was a very poor year) of reducing his growth figures for 2012 from 18.6% to 16.5%. Mr Shivji queried what the rationale and point of *"pushing the clock*

back to 2009" could be, except to average out the effect of observed strong recent performance, *"putting the favourable performance to one side in order to focus more on the wider period of the unfavourable."*

209. According to the Defendants, the Claimants have simply sought to vanish away *"the stellar performance in this line of business"*, and they and Mr Bezant have overlooked the fact that the success of IDOL Product in the past reflected, and its prospects for the future would reflect, IDOL's capacity for *"machine learning"* or what would now be called "regenerative AI". Contrary to the suggestion made by Mr Patton in his oral reply in the Quantum Hearing, this aspect of IDOL's capabilities was a material reason for valuing the IDOL Product stream highly. In his first witness statement, Dr Lynch had indeed focused on this aspect of IDOL, stating (in a passage on which he was not cross-examined), that:

> *"Through this acquisition, HP would position itself at the forefront of the emerging marketplace of machine learning and artificial intelligence, combining IDOL with HP's Vertica to create the database of the future."*

210. The Defendants stressed the same basic point about this aspect of IDOL's capabilities in also qualifying the suggestion made by the Claimants that demand for IDOL Product would progressively erode as demand for IDOL Cloud increased. They submitted that the *"success of Autonomy's IDOL Cloud business was not mutually exclusive with the success of its IDOL Product business. IDOL Product had huge potential in big data analytics and artificial intelligence / machine learning, irrespective of the potential of Autonomy's IDOL Cloud business."*

211. Mr Giles summarised in his third report his objections to Mr Bezant's approach and the pessimistic 'baseline' figure he put forward as follows:

> *"In summary, Mr Bezant's approach departs substantially from the organic growth that would have been reported in H1 2011 and from HP's evident approach. Given the high growth observed in H1 2011 and the clear increasing trend, there is no basis for the rapid collapse in IDOL Product growth that is adopted by Mr Bezant….and the consequent impact on valuation."*

My assessment of the approach of the experts and my preferred approach to IDOL Product growth

212. The difficulty of resolving what figures to include in the FSMA Counterfactual in respect of IDOL Product growth is exacerbated by my reluctant conclusion that, with respect, neither expert has provided an assessment on which I consider I can comfortably rely.

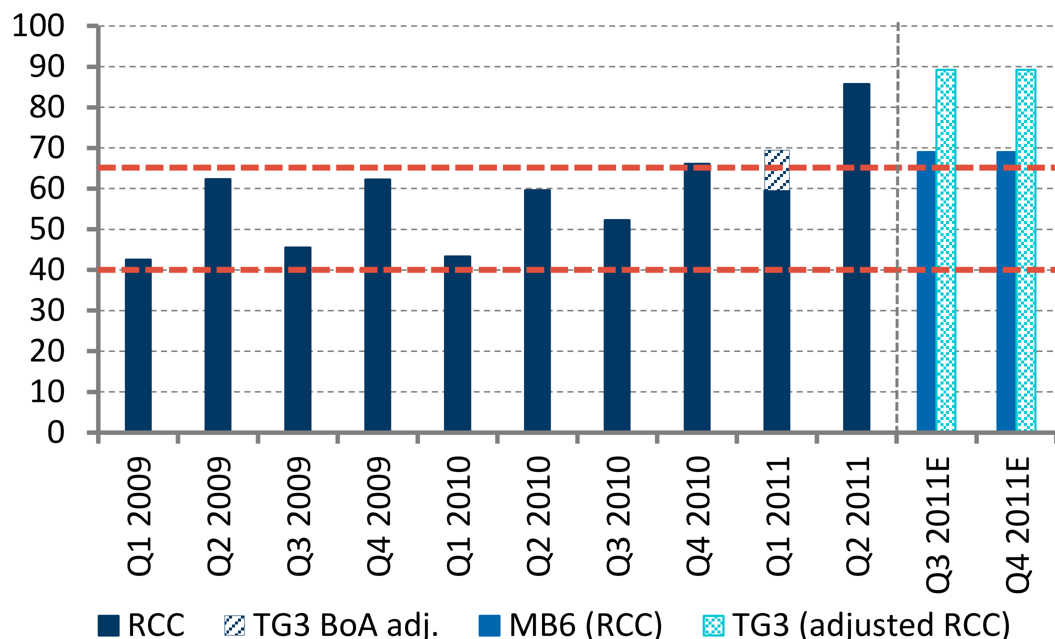
213. Whilst I agree with Mr Bezant that there is a question whether, and to what extent, IDOL Product growth in H1 2011 should be taken as providing a reliable indication of future growth trajectory, I am not persuaded by his resort to 2009 to leaven out the figure. 2009 is plainly likely to have been a tough and unrepresentative year, given what I accept to be Autonomy's particular exposure to the downward effect of the global crisis on demand for licences amongst its predominant customer constituency of large financial institutions. Mr Bezant's resultant figure for growth for 2011 as a whole of 28.0%, connoting a very considerable reduction in H2 2011 compared to H1 2011, seems to me

to be difficult to reconcile with his acceptance that growth in H1 2011 was 41.2% and with Mr Sarin's evidence as to his approach and the assumptions evident in the Deal Model. I am not persuaded either by Mr Bezant's projection of such a dramatic falling off in IDOL Product growth from 41.2% in H1 2011 to 16.6% in H2 2011 and then down to 10.8% in 2013. Further, although I note that Mr Bezant did defer to 2017 the plateau growth figure of 5% (in contrast to the Deal Model assumption that it would be reached in 2015), I am not persuaded that growth would have deteriorated to 5.7% by 2016.

214. I agree with the Defendants that Mr Sarin must have placed weight on the Q2 2011 results in projecting a higher growth rate for H2 2011 than was reported for H1 2011. Further, it is clear that Mr Sarin regarded this as (in Mr Apotheker's own words) *"a key comparator"*, as is further supported by his evidence in his witness statement (as well as the oral evidence of Mr Apotheker) and by the fact that in the nature of things, an analyst would tend to put more weight on the most recent data.

215. Against this, however, Mr Giles's approach in projecting growth in H2 2011 to be the same as in H1 2011 appears to me likely to be simplistic, and to exaggerate likely growth on the basis of a single exceptional period of performance. Mr Giles's figures and more general outlook are also skewed by his inclusion of BoA 'revenue' of an additional $9.9 million (which I have disallowed). As pointed out in Mr Bezant's seventh expert report, if the $9.9 million which Mr Giles sought to add to the Q1 2011 figures in respect of the BoA transaction is stripped out, IDOL Product revenues in Q1 2011 would have fallen in the RTP relative to Q4 2010, and quarterly IDOL Product revenues would fluctuate between around $40 million (in Q1 2009) to around $65 million (in Q4 2010) over the 9 quarters between Q1 2009 and Q1 2011 (though in Q2 2011 that rose sharply to $85 million). This is helpfully illustrated in Figure 5-2 in Mr Bezant's seventh report.

Mr Bezant's illustration in his seventh report of quarterly historical IDOL Product revenues and forecast IDOL Product revenues in H2 2011 (USD millions)



216. I also accept the fact that IDOL Product revenues, being based on one-off licence sales, are *"lumpy and volatile in nature"*. In my view, it is unlikely that analysts would have considered the stellar, but exceptional, results in Q2 2011 to be a reliable basis, on their own, for projecting future growth without any firm evidence to explain the sudden increase and justify such a step-change in the market demand for licence sales. Mr Sarin based his own approach in forecasting IDOL Product revenues for H2 2011 and 2012 to a considerable extent on analysts' reports and projections, and I doubt that he would have departed far from their expectations, especially when supported by his own assessment of prior period revenues from other data. I also agree with Mr Bezant's and the Claimants' view that Mr Giles and the Defendants have overstated their position in asserting that both my own findings and the evidence demonstrate that Mr Sarin focused primarily on H1 2011 growth: I did not make such a finding in my Main Judgment (whether in paragraph 4035 as suggested by Mr Giles or at all), and the construction of the Deal Model, and more particularly the presentation in it of historical revenues by revenue category between 2008 and H1 2011 as part of the revenue forecast workings, suggests a broader focus.

217. That said, however, and as indicated above, I accept that it is more likely than not that both analysts and Mr Sarin would, and indeed the evidence suggests that they did, tend to place greater weight on the most recent data, especially (as Mr Giles noted) in the context of a company in the fast-moving technology business. Furthermore, and as Mr Giles emphasised in his third report, Mr Bezant's own projections assume, for example, that while H1 2011 IDOL Product growth in the RTP was very substantially higher (41%, compared to 13%) than in the Represented Position, growth in H2 2011 should be taken to be dramatically lower than in the Represented Position (17% compared to 22%), which is, to my mind, unlikely.[59] Since Mr Bezant bases this unlikely assessment on using a CAGR method calculated over 1 January 2009 to June 2011 that also casts doubt on the measure itself. Growth rates would probably have been lower in H2 2011 than the exceptional performance in H1 2011; but considerably higher than in the Represented Position.

218. In the round, I consider that Mr Bezant's approach has considerably underestimated the growth in IDOL Product business for the purposes of the FSMA Counterfactual, and in consequence has undervalued the IDOL Product line of business in his stand-alone valuation of Autonomy.

219. Conversely, however, Mr Giles's projection of IDOL Product revenue growth for H2 2011 is skewed by the inclusion of BoA revenues, and is excessive; and in then extrapolating from the exaggerated figures he took for 2011 all his projections for subsequent years, he has overvalued the IDOL Product line of business.

220. In this state of uncertainty, I can attempt no more than a broad estimate of the growth figures which Mr Sarin would have attributed in a Deal Model in the RTP to IDOL Product and of the difference this would have made to the standalone value of Autonomy.

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[59] I take into account also Mr Sarin's own expectation of higher growth in H2 2011 (21%) than in H1 2011 (13%) and thus 18% for the year as a whole.

221. In making a broad brush estimate, I consider I should be guided by the following parameters and considerations:

(1) I should disallow the inclusion of BoA revenues of $9.9 million (consistently with my earlier conclusions in that context) and reduce Mr Giles's growth forecast accordingly. I consider that none of the revenue from the BoA transaction should be included, even on the pro-rated basis allocation to IDOL Cloud which Mr Giles put forward as his alternative (in place of his initial suggestion of recognising the entirety of the relevant BoA revenues upfront in IDOL Product). In his 'bridge' set out under paragraph [319] below, Mr Giles ascribed a value of some $381 million to his "alternative BoA correction", reducing his standalone value in the RTP to $9,143 million. Mr Giles suggested that this reduction is excessive because in his view (addressed in paragraphs [153] to [154] above) there was *"no justification for Mr Bezant assuming [he] would have assigned* zero *value to the cash received as he suggests"*. He did not quantify what additional value should be ascribed instead in this regard. It would not be such as to affect my overall approach, and I consider that I should broadly accept Mr Giles's position as to the overall effect of disallowing altogether the BoA revenues of $9.9 million as illustrated in his 'bridge' set out under paragraph [319] below.

(2) I should not follow Mr Giles's approach in taking the growth figure in H2 2011 as being the same as in H1 2011; but I should take a higher figure than in HP's Deal Model and a higher figure than Mr Bezant's suggestion based on his selection of CAGR (which I do not consider to be correct, especially given the difficulties specific to 2009).

(3) I should take into account and attribute higher and longer term growth and value to the anticipated explosion in demand for "big data" processing and machine learning and the excellence of Autonomy's "big data" product (including what BarCap described as *"real-time and predictive analytics"* and its pre-eminent capabilities in the field of unstructured data, which, in my view, Mr Bezant consistently underplays).

(4) I should assume a 'glide path' towards a 'plateau' of around 6% by 2017/2018 continuing at 6% until the end of the period in 2021 (that percentage being mid-way between Mr Bezant and Mr Giles). This more gradual pattern of reducing growth only after 2017/2018 is to reflect higher levels of growth in the early and mid-term and my view that they would have been maintained for longer than Mr Bezant allows for, given the resilience and continuing good growth prospects for Autonomy's IDOL Product line of business in parallel with and (despite the market shift to cloud services) in addition to growth in IDOL Cloud, and Mr Sarin's evidence in this regard.

(5) I should also take into account, more amorphously, HP's evidence on Big Data being (in Mr Apotheker's words) *"a huge element of our strategy",* the value placed by HP in assessing likely growth on Autonomy's *"massively scalable" "analytics for big data",* artificial intelligence and *"machine learning"* and HP's own assessment of the scale of the big data market ($31 billion) in assessing stand-alone value (as well, of course, as its synergy value in (as BarCap

put it in their presentation to HP's Board on 18 August 2011) enabling HP *"to leapfrog traditional analytics vendors in addressing Big Data."*).

222. In summary, it is plain, and I find, that IDOL Product historical growth rate would have been materially higher in the RTP than in the Represented Position, and Mr Bezant has also considerably underestimated what in the RTP would have been IDOL Product's forecast growth rate from 2013 onwards. Accordingly, I consider that HP would have placed a materially higher standalone value on Autonomy's IDOL Product business than in Mr Bezant's RTP valuation, but a lower value than in Mr Giles's RTP valuation.

223. In the round, I consider that Mr Sarin and HP would, in the RTP, have adopted growth estimates for IDOL Product in H1 2011 more in line with Mr Giles than Mr Bezant. I also consider that Mr Sarin and HP would have taken a considerably more optimistic view of Autonomy's IDOL Product business and the growth prospects for Autonomy's market leading offering in big data (especially unstructured data) and machine learning (or what would now be called Artificial Intelligence) than Mr Bezant's suggested values imply. Although I consider Mr Giles's uplift of $1,170 million to Mr Bezant's figure for IDOL Product as reflected in the third 'bar' in his 'bridge' set out under paragraph [319] below overstated, I would add at least $650 to $750 million to Mr Bezant's valuation on that account alone, with some potential for more optimism and higher additional value (deploying my broad brush) in light of the prospect of exponential expansion of the market for 'big data' and 'machine learning' in which Autonomy's offering was pre-eminent.

(12) IDOL Cloud revenue growth rates

224. I turn to the competing forecasts of the revenue growth for IDOL Cloud, and the contribution of this line of business to Autonomy's stand-alone value in the FSMA Counterfactual. This is an area of considerable complexity in which, again regrettably, I have not found the approach of either of the two valuation experts entirely satisfactory.

225. The following table, which was included in the Claimants' written opening for the Quantum Hearing, illustrates the composition of IDOL Cloud revenues corrected in line with my Main Judgment to identify and depict revenues from hybrid-hosting deals spread over the term of the hosting contract (rather than up-front):

Claimants' corrected breakdown of reported IDOL Cloud revenue ($m).

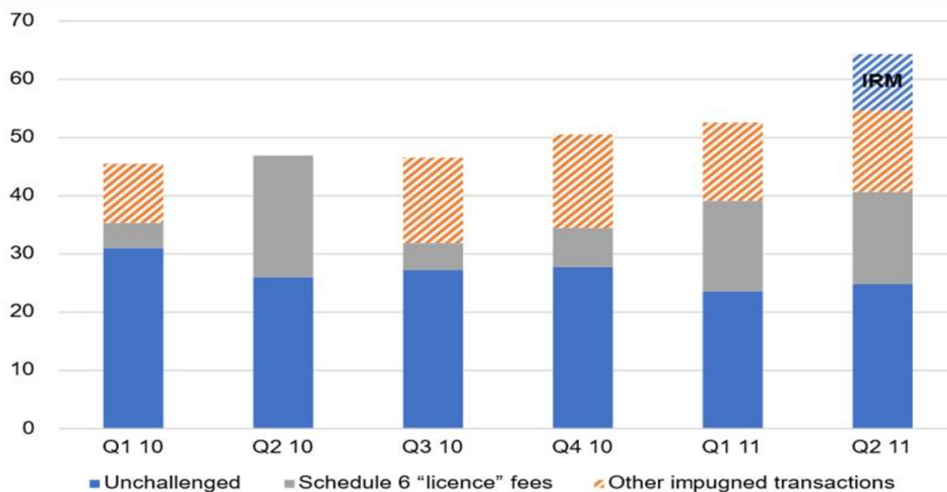

Figure 10 in Claimants' Written Opening

226. Although, using the RCC, the experts were agreed about the historical growth figures (excluding any additional BoA revenues), the experts' respective forecasts for IDOL Cloud growth were far apart. Thus:

    (1) Mr Bezant forecast IDOL Cloud revenues in the period between H2 2011 and 2021 of $4,172.3 million, whereas

    (2) Mr Giles forecast IDOL Cloud revenues for the same period of $6,985.3 million, so that

    (3) (excluding any additional BoA revenues) Mr Giles's forecast was some 67% higher than Mr Bezant's, contributing about $1.4bn to the difference between their DCF valuations of Autonomy on a stand-alone basis in the RTP,[60] and increasing the synergy value to $7,692 million.

227. The following table, again taken from the Claimants' written opening submissions for the Quantum Hearing, shows the differences between the experts in this context (the figures being derived from (a) the Deal Model (b) Mr Bezant's sixth report and (c) Mr Giles's third report):

Claimants' presentation of historical and forecast IDOL Cloud growth: per the Deal Model and the experts' DCFs.

	Deal Model	**RUS**	**RCC**		**+BoA in Cloud**
	HP	Bezant	Bezant	Giles	Giles
Historical					
YoY growth: 12-month periods					
2010	22.7%	8.8%	28.3%		28.3%
LTM Q1 2011	18.7%	0.3%	12.6%		12.8%
LTM Q2 2011	15.3%	7.4%	13.2%		13.8%
YoY growth: six-month periods					
L6M Q1 2011	15.1%	(4.7%)	9.9%		10.3%
L6M Q2 2011	16.6%	8.5%	0.5%		1.7%
Growth 2009–H1 2011					
CAGR	20.7%	8.9%	18.3%		18.7%
Giles "trend growth"	22.7%	9.8%	16.8%		17.3%
Revenues					
2009–H1 2011	462.1	306.9	317.1		317.8
Baseline (LTM Q2 2011)	215.0	134.1	145.6		146.4
Forecast					
YoY growth: 12-month periods					
2011	13.0%	8.4%	0.5%	5.5%	7.1%
2012	16.4%	8.4%	0.5%	15.1%	18.1%
2013	25.0%	15.0%	12.0%	29.5%	31.4%
2021	10.0%	6.0%	6.0%	7.8%	8.0%
CAGR					
LTM Q2 2011–2016	28.2%	24.5%	21.1%	32.6%	34.3%
LTM Q2 2011–2021	19.9%	15.4%	13.8%	21.5%	22.7%
Revenues in forecast period (H2 2011–2021) ($m)					
Cloud	8,865.4	4,398.1	4,172.3	6,985.3	7,597.7
multiple of baseline rev's	*41.2×*	*32.8×*	*28.7×*	*48.0×*	*51.9×*

TABLE 6 {A/9/90}

[60] Mr Bezant's overall stand-alone DCF valuation in the RTP being $5,834 million, compared to Mr Giles's figure of $10,146 million (all figures being on the RCC basis).

Mr Bezant's projections of IDOL Cloud growth (RUS and RCC)

228. In his DCF valuation for the Main Trial, Mr Bezant adopted the RUS; and since the Excluded Transactions have an immaterial effect on IDOL Cloud revenue in the RUS, his forecasting for IDOL Cloud growth in the RUS is effectively the same now. In the RCC, reversing the adjustments for the Excluded Transactions adds about $12 million of baseline revenue to IDOL Cloud because the Prisa and Amgen transactions were allocated to IDOL Cloud in the Hussain Revenue Spreadsheets.[61] Historical IDOL Cloud organic revenue growth is more volatile, and lower in H1 2011, when based on the RCC rather than based on the RUS, reducing Mr Bezant's estimates. On both bases, however:

(1) Mr Bezant's analysis is that between January 2009 and June 2011, 'True' IDOL Cloud revenue growth was significantly lower than represented. That analysis is based on the average historical growth between those dates. He acknowledged that YoY growth in 2010 appeared to be 28.3%; but against this, he pointed out that IDOL Cloud revenues had contracted by 19.8% in 2009. For H1 2011 he took IDOL Cloud YoY growth in the RCC to be just 0.5%.

(2) Mr Bezant then carries this dismal figure for H1 2011 in the RCC forward into the following periods. For 2011 and 2012 in the RCC, Mr Bezant assumes YoY organic IDOL Cloud revenue growth would be the same as for H1 2011 (that is, 0.5% again, see the Table under paragraph [227] above). Mr Bezant acknowledged that in basing his near-term growth forecast on this single half-year period, he was departing from the approach he adopted in his forecasts of IDOL Product revenue; but he expressed the view that, as the Claimants put it, this was appropriate in the case of IDOL Cloud *"for what ought to be a stabler, recurring "layered" revenue stream, where short-term changes in growth are therefore more significant."*

(3) Stripping out the contribution from IRM cloud revenues, as he considers is appropriate, Mr Bezant forecasts organic IDOL Cloud revenue growth to peak to 12% in 2013 (as he put it, *"to reflect the shift from IDOL Product revenues to IDOL Cloud revenues"*) before tapering down (using a 0.5 interpolation rate) to a constant rate of 6.0% over the eight-year period to 2021.

229. Mr Bezant acknowledged that in the Deal Model, HP had forecast IDOL Cloud organic revenue growth to increase from around 16% per annum in 2012 to 25% in 2013, tapering over the forecast period of 8 years from 2013 to 2021 to 10% per annum in 2021. However, he explained his lower than represented growth figures in the RCC in the early years on the basis that IDOL Cloud revenues were growing at a lower rate than assumed in the Deal Model, largely because IDOL Product revenues were growing at a higher rate. He presented what he called *"the transition"* over eight years to a steady growth rate of 6% as *"broadly consistent with the transition that HP expected in the Represented Position"*.

[61] On Mr Bezant's figures, however, IDOL Product figures, including other adjustments, are in aggregate some $23 million lower than in the RUS, resulting in overall Core IDOL revenues being lower by some $11 million.

230. Mr Bezant provided the following table to show his forecasts of YoY IDOL Cloud revenue growth on the RCC basis (excluding any contribution from IRM's cloud business from 2011 to 2012):

Mr Bezant's forecasts of year-on-year growth rates of Autonomy's IDOL Cloud revenues (excluding the effect of IRM from 2011 to 2012) (RCC)

	HP's forecasts based on the Represented Position	My forecasts based on the RCC	Difference (percentage points)
2009A	20.0%	(19.8%)	(39.8%)
2010A	22.7%	28.3%	5.6%
2011E	13.0%	0.5%	(12.5%)
2012E	16.4%	0.5%	(15.8%)
2013E	25.0%	12.0%	(13.0%)
2014E	22.0%	9.0%	(13.0%)
2015E	18.0%	7.5%	(10.5%)
2016E	14.0%	6.7%	(7.3%)
2017E	13.0%	6.4%	(6.6%)
2018E	12.0%	6.2%	(5.8%)
2019E	11.5%	6.1%	(5.4%)
2020E	11.0%	6.0%	(5.0%)
2021E	10.0%	6.0%	(4.0%)
CAGR (2011 to 2021)	**16.9%**	**9.5%**	**(7.4%)**

Notes: (1) A = Actual historical performance as reported; and E = Estimate.
(2) Excludes the effect of acquired IRM revenues from 2011 to 2012.

231. The overall result forecast by Mr Bezant was that by the end of 2021, IDOL Cloud revenues would be down by two-thirds compared to HP's projections, resulting in a drastic diminution in IDOL Cloud's market share.

Mr Giles's dismissal of Mr Bezant's approach on the grounds of its "four overarching flaws" and other defects and his own projections of IDOL Cloud growth

232. Mr Giles and the Defendants dismissed this conclusion as far too pessimistic, and based on numerous flaws.

233. In Dr Lynch's written closing submissions, there were said to be *"four overarching flaws in the Claimants' / Mr Bezant's analysis on IDOL Cloud…"*. These can be summarised as follows:

(1) Mr Bezant and the Claimants have made their projections by reference to revenue recognised in each year: they have not properly taken into account historical deferred revenue and overall *"billings"* in assessing the overall health and growth potential of Autonomy's IDOL Cloud business, and have failed to factor in deferred revenue release (which were described by Dr Lynch as *"missing cashflows"*) in respect of Autonomy's hybrid hosting transactions;

(2) they have also adopted what was described as an *"irregular approach"* by excluding from their assessment of IDOL Cloud growth revenues any additional

revenues from the cloud business acquired by Autonomy from IRM in June 2011;

(3) Mr Bezant's excessive (if not exclusive) focus on an egregiously poor quarter in H1 2011 as the basis for projecting future IDOL Cloud revenue growth, leads to an unduly pessimistic assessment; it is incorrect and also inconsistent with the Claimants' approach to IDOL Product growth, which he and the Claimants had kept low on the basis of what they called the market *"shift to the cloud",* and the likelihood (in Mr Giles' view) of an *"inflection point"* in about 2013/2014 when IDOL Cloud revenues would exceed IDOL Product revenues, and with the general market expectation of exponential growth in the cloud market;

(4) Mr Bezant and the Claimants appear also to have failed to understand properly the nature of Autonomy's IDOL Cloud offering, and have not taken into account properly its particular make-up nor its characteristics of special value; further they have under-estimated Autonomy's strength in cloud infrastructure.

234. I must also consider two further differences between the experts:

(1) the way that each considered IDOL Cloud revenues would have been reported in the FSMA Counterfactual (and, in particular, whether Autonomy would have presented *"multi-year hosting revenues"* from licence sales separately from its *"Other IDOL Cloud"* revenues), and

(2) the suitable interpolation factor to plot the development of IDOL Cloud growth over the period from 2012 to 2021.

235. Although I have separated them out for the purpose of elaborating and assessing the strands of these issues, they are all inter-connected; and it is their cumulative effect according to the sequence in which they are taken into account which is relied on by Mr Giles in his assessment of DCF value. I consider, however, that it may assist to address and elaborate the issues in turn, though in a slightly different sequence, which I hope will become self-explanatory. I turn first to two inter-related issues each numbered (1) in paragraph [233] and (1) in paragraph [234] above.

Issue (1) (see paragraph [233(1)] above): whether the Claimants' approach is flawed in not taking into account growth in deferred revenue in the RTP, especially that from multi-year 'hybrid hosting', with the result that the Claimants have underestimated IDOL Cloud growth?

236. It is an important facet of the Defendants' case that Mr Bezant has failed to take into account and model, and the Claimants have failed to assess, changes in deferred revenue in the historical position in consequence of the required redesignation in the RTP (compared to the Represented Position) of receipts from the licence fee element of the impugned hosting transactions. This has been a point of contention since the cross-examination of Mr Giles at the Main Trial; and it was one of the principal points on which I considered I needed further specific guidance at the Quantum Hearing. To explain and assess this it is necessary to elaborate a little about these receipts, which on Mr Giles's approach should be presented separately from the ongoing hosting fees that formed the other part of the same overall hybrid hosting arrangements, and demonstrate a different pattern of growth.

237. As noted in my Main Judgment at paragraph [39(2)], after Autonomy's acquisition of Zantaz in July 2007, hosting became an increasingly important part of Autonomy's business. In what might be called the 'standard' model of this line of business, customers were typically required to pay for hosting fees on a weekly/monthly/quarterly basis. However, Autonomy (through Zantaz as the group company principally undertaking the hosting business) developed a variation of this line of business which, as time went on, became its preferred model. This was what was referred to as "hybrid hosting".

238. The structure of hybrid hosting is described in paragraphs [3296] to [3300] of my Main Judgment. In essence, the distinguishing feature of the arrangements was that the customer would pay a substantial upfront fee for a software licence which purportedly entitled that customer to move its data and the Digital Safe or e-Discovery system in-house. Although the licence holder would be obliged to continue to pay periodic payments for hosting services for so long as Autonomy hosted its data, the ongoing payments for hosting services were at a substantially discounted rate. As well as being presented as an inducement to customers and a means of attracting lucrative business for Autonomy, the idea (and, as I have found, the principal incentive for Autonomy) was that instead of recognising revenue from hosting contracts over their lifetime as and when paid, the licence fee element should be treated as an outright sale and recognised immediately as earned revenue in the accounts (see further, paragraphs [3305] and [3306] of my Main Judgment).

239. In my Main Judgment (see paragraphs [3307] to [3311]), I accepted that there were business arguments is support of the structure. It was an attractive overall deal for some customers, especially those with large data storage needs; but it held an attraction for Autonomy also in that it tended to lock them in and increase their propensity to expand their data hosting needs and store more data for which Autonomy charged. However, I concluded that the licence conferred illusory rights, because, as a practical matter, it was nigh-on impossible to move Digital Safe in-house without continuous support and prohibitive expense; and that in reality it was simply a device to enable Autonomy to justify treating its sale as a completed transaction analogous to a sale of goods justifying immediate accounting recognition of the sale proceeds as earned revenue from the sale of the hybrid hosting licences. In other words, the true or predominant purpose of the licence arrangements was to provide Autonomy with another means of accelerating revenue recognition.

240. Accordingly, I determined (see paragraphs [3389] to [3392] of my Main Judgment) that receipts from licence sales should not be treated as earned revenue but as deferred revenue. In accordance with that determination, it is common ground that it is necessary, for the purpose of constructing the RTP and FSMA Counterfactual, to redesignate the receipts from hybrid hosting as in part (as to the licence fee) deferred, and in part (as to ongoing periodic payments) properly recognisable as revenue immediately.

241. That process of redesignation is made more complex by the fact that (as noted by Mr Giles in his third report) (a) not all the Schedule 6 multi-hosting deals (only 48.3%) were actually reported within IDOL Cloud, the balance being reported within IDOL Product,[62] (b) separately, less than 20% of the revenue booked to IDOL Cloud is derived

[62] In his third report (prepared for the Quantum Hearing), Mr Giles noted that in contrast, in the RTP all of the restated revenue attributed to the multi-year hosting deals (i.e. the revenue releases set out in Schedule 6) is assigned to IDOL Cloud.

from those multi-year hosting transactions, so that (c) three streams need to be considered, that is to say (i) licence fees derived from hosting transactions included in IDOL Cloud (which, reinforcing what he contends would be their continuing nature, he calls *"multi-year hosting"*); (ii) licence fees from hosting transactions included in IDOL Product and (iii) revenues from the hosting business included in IDOL Cloud other than the hybrid hosting transactions (which Mr Giles called *"Other IDOL Cloud"* revenue). However, it is common ground that in the counterfactual world, Autonomy's Cloud business would have generated (for as long as it was continued) significant deferred revenue balances[63] only to be released as and when the hosting services were to be provided.

242. In essence, the Defendants submit that the performance of IDOL Cloud in the FSMA Counterfactual cannot reliably be assessed without also examining the changes in deferred revenue in the historical position, and forecasting its growth. Mr Giles states in his third report, *"the deferred revenue balance (including its growth) constitutes a significant element of Autonomy's economic activity and is, thus, an important component of future cash flow projections in a DCF model."* Further, Mr Giles observed that investors are interested in *"bookings"* (i.e. contracts signed),*"billings"* (i.e. contracts that are invoiced during the period) and changes in deferred revenue (i.e. receipts from billings which cannot yet be recognised) as well as earned revenue (i.e. the receipts from billings which can be recognised as earned). It is these all together which (quoting from a report on SaaS business[64] by analysts called Update Partners) *"paint a more accurate picture of business performance and health than accounting revenues"*.

243. Thus, although at the Quantum Hearing he has no longer contended (as he had at the Main Trial) that Mr Bezant had simply not brought deferred revenue into account, it continues to be an important part of Dr Lynch's case (which was adopted by Mr Hussain) that the Claimants' approach in assessing the performance of IDOL Cloud in the FSMA Counterfactual failed to take into account properly the positive changes (i.e., growth) in deferred revenue arising from the upfront payments which distinguished Autonomy's hybrid hosting business in the counterfactual historical position. The Defendants invited me to note that *"whilst the accounting for Autonomy's hosting transactions changed, Autonomy's ability to generate cash from that line of business had not."* Accordingly, they submitted that an assessment of these changes is required to give a fair presentation of the health and overall performance of the IDOL Cloud business and its momentum: and that not to take deferred revenues into account is to ignore the full value of the cashflows arising from this line of business.

244. In Mr Giles's view, Mr Bezant had failed properly to assess changes in billings and bookings and in deferred revenue in presenting 'True' IDOL Cloud revenues in the

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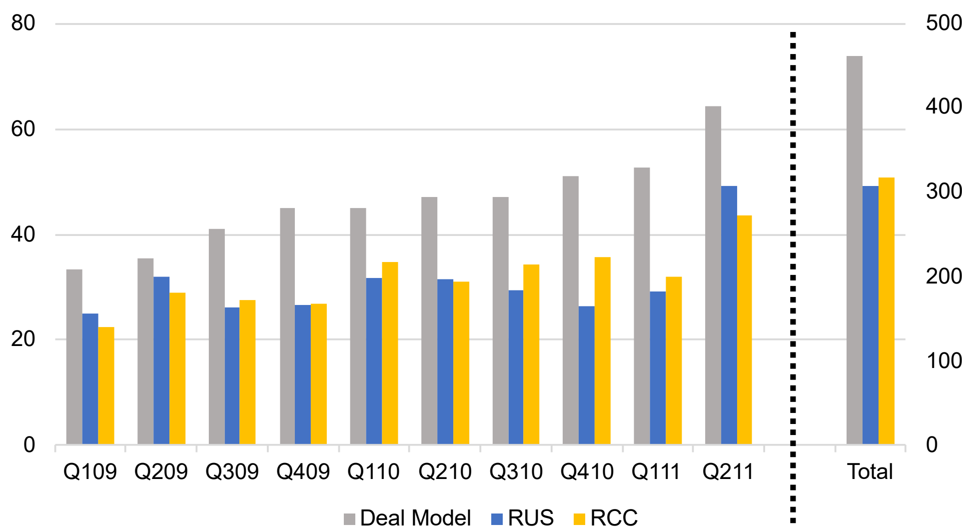
63 It should be noted that although the issue (Issue (5)) as to the separate reporting of multi-year hosting revenues and "Other IDOL Cloud" revenues affects the projections to be made, the separate reporting of deferred revenues was required in any event in consequence of the conclusions in my Main Judgment. Further, for the avoidance of doubt, it is common ground that Autonomy would have told the market that its hosted business was generating deferred revenue.

64 'Software as a Service'. In a typical SaaS model, a customer commits to a term limited contract, usually for between one and three years, which provides the right to use a software product during that period; the customer accesses the software via a web browser and the vendor/provider hosts and manages the systems on which the software is installed according to a service level agreement. (See also paragraph [3261] of my Main Judgment).

period Q1 2009 to Q2 2011. Mr Giles drew my attention in this regard, as clearly illustrating this flaw in Mr Bezant's approach, a table described as 'Figure 4' in the Claimants' written opening submissions. This table (as set out below) was provided by the Claimants to show 'Total IDOL Cloud revenues' as being around a third less than in the Deal Model (with the difference worsening over time). Mr Giles regards it as flawed, primarily because it only shows cloud revenues as between the actual and counterfactual, and does not include deferred revenues: it thereby is misleading, not least because it is not comparing like-for-like.

Claimants' Table of IDOL Cloud revenues per the Deal Model, RUS and RCC ($m) including IRM revenues in 'Figure 4' of their Opening Submissions.



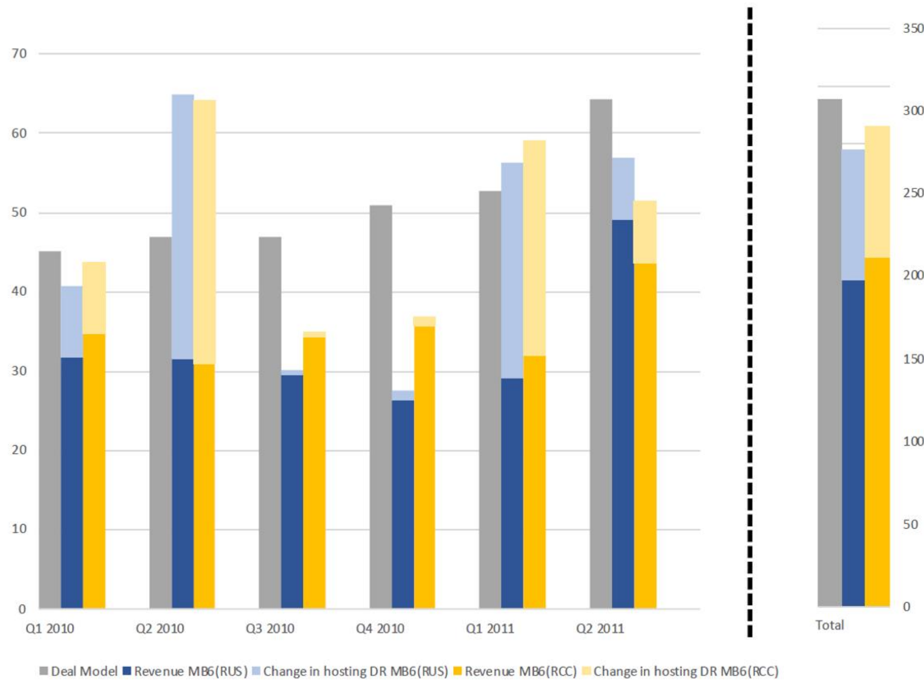
245. Mr Shivji addressed this point in his oral closing submissions as follows:

> *"…where a deal has been booked to the counterfactual world and there has been a pre-payment, the accounting will generate both revenue and deferred revenue, and we say that the claimants have fallen into error because their analysis of the cloud business only looks at recognised revenues and not the deferred revenue.*
>
> *Deferred revenue obviously has value because it is real revenue. It is guaranteed to be recognised. It is simply that you can't recognise it quite yet and the claimants place no value on that. Mr Bezant has not put forward any valuation which values any growing deferred revenue generated by this business."*

246. Mr Giles and the Defendants accepted (implicitly at least) that the materiality of the effect of this is almost exclusively predicated on what they presented as the enormous increase in deferred revenue (past and projected) arising from the redesignation of revenue from licence fees in respect of hybrid hosting contracts in the FSMA Counterfactual. The amount of that increase is in turn based on Mr Giles's approach in separating out revenues from multi-year hosting from what he called *"Other IDOL Cloud"* revenues; that is why Issue (1) in paragraph [233(1)] above and Issue (5) as identified in paragraph [234(1)] above are interconnected.

247. In the course of his oral opening, Mr Shivji provided a handout to illustrate the effect of that approach, as set out below:

First Defendant's amendments to Figure 4 of Claimants' Opening Submissions to include deferred revenue



248. According to this analysis, once deferred revenue is added back in, the overall activity across the entirety of IDOL Cloud business, though *"lumpier"* between Q2 2010 and Q4 2010, was materially the same, and the Claimants' depiction of substantial decline was incorrect. Indeed, according to Mr Giles, once the components of this IDOL Cloud revenue are examined in more detail, as Mr Giles considers is requisite, it would appear that deferred revenue arising from licence fees had grown exceptionally throughout the historical period to H1 2011, and should be forecast to increase throughout the forecast period. This should be reflected in a commensurate increase in the stand-alone value of IDOL Cloud in the RTP Deal Model.

249. Mr Giles elaborated his approach in his third report as follows:

> *"263. In the context of the Deal Model, the rapid historical growth in deferred revenue in the Restated Position would have influenced HP's deferred revenue forecast.*
>
> *264. I therefore adopt an approach to forecasting deferred revenue based on the approach for the multi-year hosting deals. I observe the annual growth rate at Q2 2011 is 16.2% but this includes organic growth of 5% plus the deferred revenue increase from the Iron Mountain transaction. I therefore apply the 5% organic rate to the restated observed level at the end of 2010 of $277.4 million before adding the Iron Mountain element of $31.7 million to give a total for 2011 of $321.8 million.*
>
> *265. As growth in billings to customers slows, deferred revenue growth will decline more than deferred revenue release. Accordingly, while deferred revenue growth is assumed to be 16.2% in 2011, I assume it will decline to 7% by*

2021. For the intermediate years I use the mid-point of interpolation factors for IDOL Product and Cloud (i.e., 0.4, which is the midpoint between 0.5 and 0.3).

266. As a result of these growth projections, deferred revenue grows to $716.1 million in 2021…

267. Adopting my approach to growth in deferred revenue increases the standalone value of Autonomy by $405 million to $9,621 million, and the synergy value remains at $7,203 million."

250. The Claimants rejected that approach in all its aspects and denied there was any such flaw in their approach. In addition to their overall objection that it would be unfair, at this late stage, to permit the Defendants to run what they depicted as a new argument which was not raised by Mr Giles until his post-trial evidence, the Claimants depicted Mr Giles's approach as entirely unrealistic. They characterised it as seeking to treat Autonomy's shift to the use of hybrid hosting deals as having added very significantly to its standalone value, whereas in fact it provided only a timing benefit of advance payment, with the postponed disadvantage of heavily discounted future revenue streams likely to result. I deal with the Claimants' position in more detail below.

251. The Claimants accepted, of course, that insofar as customers paid the "licence fee" upfront, that led to an increase in deferred revenue. They also accepted, equally obviously, that given Autonomy's preferred and increasing use of hybrid deals and its objective of accelerating revenue recognition, it is unsurprising that, in the historical position, revenue from the licence fee element grew quickly. However, they submitted that the appearance of growth reflected only (a) in terms of business volume, the appetite of existing customers for a discount, and could not be relied upon into the future, and (b) the timing benefit of accelerated payment of a lump sum for the licence, which was offset by the deep discounting of storage rates and service charges for the hosting service, was likely to result in reduced future revenue streams over any longer period: customers are rational actors and would not agree to pay more overall in present-value terms.

252. As Mr Yelland put it when reviewing and then recommending the reversal of the push for hybrid deals after the Acquisition, *"Conversion of existing customer[s] is reducing T[otal] C[ontract] V[alue]. This is the only compelling business logic for [customers] to convert."* Or as I put it in paragraph [3392] of my Main Judgment, *"the customers paid a fee but it was Autonomy which ultimately paid the price by so heavily discounting future revenue streams."* In short, the Claimants submitted that any notion that the hybrid deals were capable of generating massive (or any) incremental value over the course of the relevant period is untenable.

253. The Claimants added that:

(1) as he conceded when cross-examined, Mr Giles's approach to the quantification of the value of the deferred revenue balance is premised on the continuation and rapid expansion of 'multi-year' hosting: and if, contrary to that premise, the hybrid model was discontinued, the deferred revenue balance (so far as comprised of revenues from hosting contracts) would instead unwind to zero.

(2) Mr Bezant had based his IDOL Cloud forecasts on historical revenues and revenue growth. IDOL Cloud revenues in any given time period in the RTP would contain releases of past deferred revenue, and so, by extension, its forecast revenues would include an element of assumed future deferred revenue release. Thus, according to Mr Bezant, he had already included the effect of releasing deferred revenue associated with the prepaid element of Autonomy's impugned hosting transactions. Accordingly, adding further revenues by reference to the deferred revenue balance would be double-counting;

(3) in any event, the release of deferred revenues has no effect on cash flows; that is because, by its nature, the release is of revenues for which the cash has already been received and there is no further cash inflow when the services to which the revenues relate (and to which the cash paid in advance relates) are provided;

(4) there is nothing of substance in an attempted reply by Mr Giles to the effect that his projections also took into account, but Mr Bezant had not, (a) deferred revenue relating to maintenance services as well as (b) an element relating to IRM. The Claimants pointed out that these elements were not only relatively small but, in any event, HP had known all about them and did not model any growth in respect of them after 2012, as indeed Mr Giles accepted.

(5) In answer to Mr Giles's argument that it was economically rational to assume that the hybrid model, if discontinued, would be replaced with something equally favourable, the Claimants forthrightly (and again, in light of my conclusions in my Main Judgment, with justification) responded that *"…this presupposes that the hybrid model was adopted for economically rational reasons, rather than in a bid to mislead the market. Since it was a mere device, there was nothing economically irrational about abandoning it – as HP did shortly after Dr Lynch's dismissal."*

(6) Moreover, and as elaborated later, Mr Bezant considers that even assuming continuation of the hybrid hosting line of business, Mr Giles has greatly over-estimated the amount of deferred revenue to be expected by (a) applying unrealistic annual growth rates based on separating out *'multi-year hosting'* from *'Other Cloud revenues'* and extrapolating growth projections for them separately; and (b) ignoring the fact that period-to-period movements in deferred revenue are determined by the net of (i) new deferred revenue received in the current time period; and (ii) releases of deferred revenue balances carried forward from prior time periods, and which now fall to be recognised as revenue in the current time.

254. My assessment of the dispute as to the treatment and any projections of growth by reference to deferred revenues (especially those generated by hybrid hosting business) is in paragraphs [326] to [329] below. I turn to the basis of Mr Giles's forecasts of extraordinary deferred revenue growth: the segregation and separate presentation of multi-year hosting revenues and his forecast of extraordinary growth in that segment of Autonomy's business.

Issue (5) (see paragraph [234(1)] above): whether in the RTP Autonomy would have distinguished between and presented separately (a) multi-year hosting revenues and (b) "Other Cloud revenues"

255. It is Mr Giles's opinion that in light of the redesignation I have required, Mr Bezant's approach in treating all the restated IDOL Cloud revenue[65] in the RTP as *"homogenous"* is inappropriate.

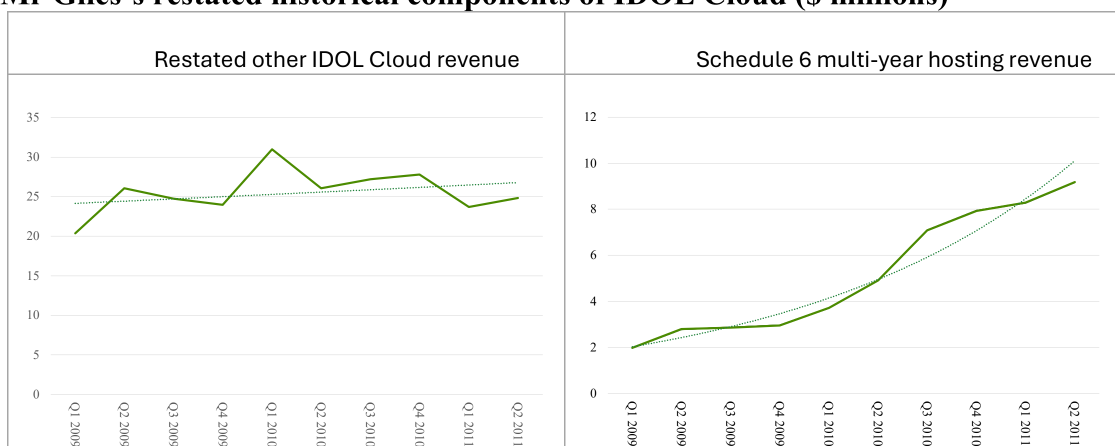
256. Mr Giles introduced this argument by making the point that in the Represented Position, just over half of the revenues from multi-year hosting deals were separately allocated as IDOL Product (rather than IDOL Cloud) revenues. Mr Giles's argument is that my conclusion that there was no substance in the licence and no basis, therefore, for treating the sale of a licence as akin to a sale of a thing justifying or requiring allocation to IDOL Product, means that a different revenue allocation is required which respects the characteristics of this revenue stream, including the deferred revenue generated. Mr Giles contends that Mr Bezant's approach ignores these characteristics and is not appropriate because *"the revenue in respect of the multi-year hosting deals that involve substantial deferred revenue adjustments behaves very differently from revenue recognised in respect of the Other IDOL Cloud deals"*, and their comparative growth rates *"are so different that it is logical to treat them distinctly."*

257. Mr Giles considers also that it is in the nature of this line of business that although *"historical revenue is lumpy because it is driven by a small number of large deals"* it was likely to grow strongly in the future, because:

> *"As more hosting contracts came up for renewal, renewals would have driven growth (rather than being initially entirely dependent on signing new customers). This layering of revenue is inclined to produce strong growth."*

258. He illustrated the effect of the separation of multi-year hosting revenues from 'Other IDOL Cloud' revenues in a graph as follows:

Mr Giles's restated historical components of IDOL Cloud ($ millions)



Source: Appendix B.2

65 In the Reported Position, just over half of the multi-year hosting revenue was included within IDOL Product rather than IDOL Cloud. In the RTP, all of the (restated) revenue attributed to multi-year hosting deals (i.e. the revenue releases set out in Schedule 6) is accounted for as IDOL Cloud.

259. Mr Giles rejected any suggestion that whether or not to distinguish and present *"multi-year hosting revenues"* separately from *"Other Cloud revenues"* was an accounting issue on which he was not qualified to opine. He did not suggest that any accounting rule or practice required it; rather, he takes the view that it is the presentation which any director wishing (entirely properly) to enhance the apparent performance of the company and to highlight a *"new source of rapid revenue growth"* would adopt. In other words, he presents it as the application of the commercially obvious. In his view, the separation of such different streams of revenue, given the very different patterns of growth, would have been so obviously sensible (and advantageous in terms of the likely beneficial market response) that the directors would have adopted it as matter of course to emphasise the success of the business under their management. He sought to draw an analogy with Autonomy's voluntary disclosures of the growth in "commit" figures, which were not required by any accountancy rule, but which he suggests were emphasised for similar reasons.

260. The advantages to the Defendants of the separation of *"multi-year hosting revenues"* from *"Other Cloud revenues"* are clear: the effect is to capture and project forward very exceptional growth of the former over the period to 2021 without the reducing or discounting drag of the latter. Thus, distinguishing between these two sources of revenue:

(1) for *"multi-year hosting deals"* (i.e. the licence element only of the relevant hosting transactions), Mr Giles based his forecast on a YoY growth rate of 102.5% in 2011, declining gradually over the next ten years to 10% in 2021; whereas

(2) for *"Other IDOL Cloud"* revenues (relating to the remainder of the revenues from Autonomy's hosting business, including revenues referable to the acquisition of selected assets of the digital division of IRM in Q2 2011), he forecast a growth rate of 52.3% in 2011, reducing to a constant rate of 4.7% by 2021, as follows:

Mr Giles's Table showing total IDOL Cloud forecast revenue and growth rates if "multi-year hosting deals" and "Other IDOL Cloud" revenues are split up

		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Deal model	A	190.1	290.3	391.8	489.8	597.6	705.1	803.8	908.3	1,017.3	1,134.3	1,259.1	1,385.0
Growth rate	B		*52.7%*	*35.0%*	*25.0%*	*22.0%*	*18.0%*	*14.0%*	*13.0%*	*12.0%*	*11.5%*	*11.0%*	*10.0%*
MB6 (RCC)	C	135.7	211.7	278.9	312.3	340.4	366.0	390.7	415.6	441.3	468.2	496.5	526.3
Growth rate	D		*56.0%*	*31.7%*	*12.0%*	*9.0%*	*7.5%*	*6.8%*	*6.4%*	*6.2%*	*6.1%*	*6.0%*	*6.0%*
TG3 (Cross-check)													
Other IDOL Cloud	E	112.0	170.7	222.9	267.1	307.2	321.7	336.8	352.6	369.2	386.6	404.7	423.7
Growth rate	F		*52.3%*	*30.6%*	*19.9%*	*15.0%*	*4.7%*	*4.7%*	*4.7%*	*4.7%*	*4.7%*	*4.7%*	*4.7%*
Multi-year hosting deals	G	23.6	47.9	83.7	130.0	184.2	243.5	305.7	369.5	434.6	501.3	570.1	627.1
Growth rate	H		*102.5%*	*74.7%*	*55.3%*	*41.7%*	*32.2%*	*25.5%*	*20.9%*	*17.6%*	*15.3%*	*13.7%*	*10.0%*
	I	135.7	218.6	306.5	397.1	491.4	565.2	642.5	722.2	803.9	887.8	974.9	1,050.9
	J		*61.1%*	*40.3%*	*29.5%*	*23.8%*	*15.0%*	*13.7%*	*12.4%*	*11.3%*	*10.4%*	*9.8%*	*7.8%*

Source: Appendix B.2, tab 'TG3 revenue growth'

261. Mr Bezant and the Claimants rejected Mr Giles's argument that Autonomy would have distinguished between *"multi-year hosting revenues"* and *"Other IDOL Cloud revenue"*: first, as being an impermissibly late idea raised only after my Main Judgment and having nothing to do with the Excluded Transactions, and secondly, as being a

departure from the approach evident from the Deal Model, and wholly artificial and implausible.

262. In more detail, they submitted that:

(1) The idea was homespun by Mr Giles, had never been trailed at trial, let alone pleaded, was unsupported by factual evidence and had never been addressed with Dr Lynch or any other witness. No good reason for not raising it until after the Main Trial had been given.

(2) Mr Sarin had never forecast 'multi-year' hosting as a separate category. There is no evidence he would have done so in the FSMA Counterfactual, not least because this was never put to him in cross-examination.

(3) Separation out of 'multi-year' revenues is artificial because it involves treating revenues from the same hosting contract, where the service being provided and charged is identical, as separate revenue streams. Even Mr Giles's suggested fundamental rationale that the requirement for upfront payment justified separation was factually flawed since in some cases the licence fee was payable in instalments.

(4) It was Mr Bezant's unchallenged evidence that none of Autonomy's peer SaaS businesses separately reported revenues from contracts involving upfront payments. According to the Claimants, *"the notion of separately reporting this sort of revenue stream, merely because it derives from upfront payments, has never happened in the real world"*.

(5) It was not put to Mr Bezant in cross-examination at the Quantum Hearing that it made sense to report *"multi-year hosting revenues"* separately: indeed he was questioned only about what would be the effect, expressly on the basis that the cross-examiner was not getting into *"the whys and wherefores as to whether that is a good idea."*

(6) The separation of the income streams would depict rapid growth which tended to obscure the cost over the longer term of the discounts offered in hybrid hosting: as Dr Lynch accepted when he was cross-examined at the Main Trial, it was inherently difficult to persuade customers to pay upfront for a future service, and faster growth could only be achieved by deep discounting of the overall price. Mr Giles orally floated a new theory that it might be possible to achieve an equilibrium where the discount offered was less than Autonomy's cost of capital; but he did not develop or substantiate this theory.

(7) In the Represented Position, the reason why revenues from hybrid licence fees grew so quickly was not because of widespread enthusiasm for the method of payment, but what the Claimants described (with justification in light of my own conclusions in my Main Judgment) as *"the Defendants' obsession with pulling forward long-term revenues into the current quarter"*. Further, there is nothing to suggest that the discounts were calculated by reference to Mr Giles's new cost-of-capital theory.

263. Turning to the valuation effect, another of the many curiosities in the dispute about quantum is the difference between the parties as to the effect of separating out revenues derived from multi-year hosting deals and other Cloud revenues. Mr Giles downplayed its consequence in value terms. In his third report, he said he had "sense-checked" his forecasts by not including any such separation; and he reached a standalone value of $9.94 billion which was *"not materially different"* from his central estimate of $10.1 billion. Contrastingly, and though dismissing it as wrong, not pleaded and unsupported by any evidence, the Claimants pointed to the "sense-check" as *"nothing of the sort"* and (with a view, of course, to rubbishing it as spurious) presented the separation as having central importance in the Defendants' approach to IDOL Cloud revenue growth projections. To quote Mr Patton KC in his oral closing submissions, the Claimants characterised it as *"absolutely fundamental to the forecast of huge revenue growth of over 100% in the multi-year category"* and as *"also fundamental to the growth in the deferred revenue balance, because that comes from these multi-year contracts"*.

264. In any event, Mr Bezant dismissed Mr Giles's calculation of growth rates in respect of the portion of the deferred revenue balances attributable to the hybrid hosting line of business on the basis that:

    (1) Mr Giles's approach assumes the highly successful continuation of hybrid hosting but (as Mr Giles accepted) if that business stopped, there would be no further increase in deferred revenue and the deferred revenue associated with the hosting transactions would unwind to zero, and

    (2) his growth rate of 16% was unsupportable and an obvious mistaken application of an inorganic measure rather than (at best) the organic measure he had himself identified of 5%.

265. At least when combined with Mr Giles's approach to the assessment of IDOL Cloud revenue growth, and the deferred revenue arising in respect of the licence element, the Claimants characterised the effect of the distinction between the two sources of revenue on Mr Giles's valuation as being to capture growth reflective of the initial popularity of what in effect (on my findings as to the artificiality of the licence) is merely a different payment method, insulated from its costs in terms of likely diminished future receipts, and presented (and used as a basis for forecasting) as if it were recurring.

266. In Mr Bezant's opinion, the flaws in Mr Giles's approach to deferred revenue forecasts are further demonstrated by the results of its application. According to Mr Bezant's analysis and critique of Mr Giles's forecasted figures, it would appear that Mr Giles has implicitly forecasted annual *"billings"* (i.e. cash received for future services) to grow from around $68 million in 2010 to $167 million in 2013 and $674 million in 2021 – that is to say, a ten-times increase over an 11-year period. In Mr Bezant's opinion, these figures *"seem highly implausible"* in the context of a business that had *"billings"* of about $179 million over a period of three years from around mid-2008 to mid-2011, predominantly from a limited pool of ten large customers (who accounted for some 83% of the total licence revenues from Schedule 6 transactions) casting doubt on the dependability and sustainable growth of the line of business.

267. The Claimants also pointed out that if Mr Giles's theory that *"multi-year hosting revenues"* should be presented and projected separately from *"Other IDOL Cloud"* is rejected (as they urged it should be), he had made no attempt to assess growth rates if

the Cloud business is considered on an aggregate basis, and thus he had never provided an actual calculation.

268. In response to Mr Bezant's criticisms of this suggested accounting treatment of revenues from "hybrid hosting" in the counterfactual world as being inconsistent with Mr Giles's earlier approach, without basis in fact, and wrong in principle, Mr Giles elaborated his position as follows:

(1) Any change in his approach was *"a function of the findings in the Judgment, the resulting impact on the Restated Position and the availability of the cross-check approach introduced by Mr Bezant in [his fourth report]."*

(2) In Mr Giles's opinion, Mr Bezant is wrong to suggest that any change to show *"a new source of rapid revenue growth"* was unjustified because the two sources of revenue which Mr Giles suggested should now be reported separately had been evident since the introduction of "hybrid hosting" and yet never separately reported. This was not true as the relevant growth was *"due to the adjustments"*, and the consequential deferred revenue was simply not evident in the Reported Position.

(3) Mr Giles considers that Mr Bezant is also wrong to suggest that the distinction between the two categories is artificial and *"without substance"* because both relate to multi-year hosting revenues; in his view, there is a clearly identifiable distinction between revenue from up-front payments and deferral of revenue over a number of years in the case of the impugned Schedule 6 transactions on the one hand, and accounting for annual or project-specific contracts paid on a monthly pay-as-you-go basis (giving rise to little or no deferred revenue) on the other hand.

(4) Mr Giles considers further that Mr Bezant is wrong also in dismissing the separate identification of the growth of revenues from impugned hosting licences on the basis that the purpose of the hybrid deals was improperly to accelerate revenue recognition, and that it does not therefore follow that such growth truly reflects growth in the underlying hosting business. Mr Bezant has no basis for supposing that without the spur of revenue acceleration the business would not have been continued (as in fact it was for some months after the Acquisition).

(5) Similarly, in Mr Giles's opinion, Mr Bezant is wrong again in his assertion that, in light of my conclusion in my Main Judgment that the *"licence was a device to obtain accelerated recognition of revenue, for which the customer paid a fee but for which it was Autonomy which ultimately paid the price by so heavily discounting future revenue streams",* any distinction between the two streams would be misleading since *"the generation of impugned hosting licence revenue…came at the cost of cannibalising revenue in…[the] "Other IDOL Cloud" category"*. Mr Giles did not accept that this followed from my Main Judgment, and his position was that Mr Bezant could not otherwise support the theory. Mr Giles suggested that Mr Bezant had failed to factor in sales of multi-hosting deals other than to existing customers, as well as features differentiating the multi-year deal and the SaaS (pay-as-you-go) customer bases (within which there would be many customers who would not have been in a position to pay up-front fees).

269. The Defendants stressed more generally that the FSMA Counterfactual is to be constructed on the basis of the correct reporting of the business undertaken without the sort of value judgments implicit in the Claimants' criticisms. Dr Lynch's written closing submissions acknowledged that the Court had indeed made findings *"about the motivation behind these deals and about the appropriate accounting"*; but sought to wipe the slate clean in the construction of the FSMA Counterfactual on the footing that:

> *"In the counterfactual world, there would have been no acceleration of revenues on these deals such that the reported revenue would simply have reflected the amount of business actually done in the relevant quarter."*

270. My determination of these opposing arguments and my assessment of the fairness and sustainability of Mr Giles's argument that *'multi-year hosting'* revenue should and would have been reported separately for good, proper and obvious commercial reasons is in paragraphs [330] to [334] below.

Issue (2) (see paragraph [233(2)] above): whether IRM cloud revenues and synergies associated with Autonomy's acquisition of the IRM cloud business should be incorporated as "Other IDOL Cloud" revenue in H1 2011?

271. In relation to paragraph [233(2)] above, it will have been seen already that another dispute related to whether and if so, with what effect, revenues from "IRM cloud business" should be taken into account, particularly for the purpose of estimating IDOL Cloud revenue growth in Q2 2011 and 2012 and then projecting IDOL Cloud growth to 2021.

272. Autonomy had completed its acquisition of the digital business of IRM (which included archiving, eDiscovery and online backup) on 3 June 2011. The purchase price was $380 million, with rather pessimistic estimated prospective annual revenues of $130 million to $140 million. Thereafter, IRM cloud operations and their revenues and any associated synergies (as the Claimants belatedly accepted there undoubtedly were) became part of Autonomy's overall business; the first quarter when IRM cloud revenues were brought into account was Q2 2011; but the first full year in which such revenues were brought into account was in 2012.

273. When first presented, it appeared that the question was whether IRM cloud revenues should be included at all in the assessment of IDOL Cloud growth. However, at least in its final iteration, the dispute was rather different and more subtle than had at first appeared. It became clear (at least, as I understood the parties' respective positions) that all parties accepted that IRM cloud revenues should be taken into account from the first full year of integration in 2013 and thereafter. The real dispute is as to Mr Giles's approach in (a) forecasting IRM cloud revenues to grow significantly in excess of his own estimate of overall 'organic' growth for 2013 and 2014 because of synergies expected to result from the IRM acquisition, and in then (b) forecasting growth in those augmented 2014 revenues to the end of 2021 at the same rate as the rest of his *"Other IDOL Cloud"* forecast.

274. The basis of Mr Giles's approach, which Mr Bezant and the Claimants rejected, is that it was clear from Mr Sarin's evidence in the Main Trial, and from various iterations of HP's Deal Model, that HP envisaged that (a) *"IRM post-acquisition would be growing far in excess of its organic growth assessed on a standalone basis "* and that (b) the

combined Autonomy and IRM cloud businesses *"would outperform Autonomy's own organic growth on its standalone business"*. Mr Giles reasons that accordingly, the same expectations of IDOL Cloud growth in excess of Autonomy's organic growth before the IRM acquisition should be translated over to the assessment of IDOL Cloud growth in the RTP/FSMA Counterfactual.

275. The dispute is thus about the rate of growth of the integrated IDOL Cloud/IRM cloud business and, in particular, the extent (if any) the effect of synergies expected from the combination and integration of the two cloud businesses might enhance that rate of growth. There is then also a question about the effect of this on DCF values in the FSMA Counterfactual.

276. The Defendants' case is that Mr Bezant and the Claimants had *"wholly ignored this key aspect of Autonomy's business and treated Autonomy and IRM as two standalone businesses going forward [which] serves to undervalue their expected strong combined performance."* In Mr Giles's view, Mr Bezant's exclusion of IRM revenues and synergies resulted in him adopting as his baseline unjustifiably low growth forecasts at the beginning of the forecast period, and especially a "precipitous" drop to 12% in 2013.

277. The Defendants dismissed attempts by the Claimants to support their approach that only "organic" growth should be taken into account. As Mr Shivji put it in his oral closing submissions:

> *"My learned friends keep on talking about inorganic or organic growth for this part of the business, but it is slightly meaningless, because HP's approach was to look at the aggregated business and how it would grow and…HP…didn't base their analysis on the organic growth rates of the standalone Autonomy and the standalone Iron Mountain."*

278. The Defendants submitted that inclusion of synergy growth in the combined businesses *"is the only sensible course"*; and that *"the most logical explanation for Mr Sarin's growth projections"* is that HP had included in its Deal Model, not only revenue contributed by the IRM business, but growth of the integrated business in excess of both observed organic growth and forecast IDOL Cloud growth excluding the IRM business. The projected growth rates were 25.0% in 2013 (compared to standalone growth for Autonomy of 16.4%) and 22.0% in 2014. For the three years 2013 to 2015, that amounted, according to Mr Giles in his third report, to additional revenue of $34 million, $28 million and $10 million. Mr Giles set this out in tabular form as follows:

Mr Giles's Table of IDOL Cloud Iron Mountain revenue in the Deal Model ($ millions)

		2009	2010	2011	2012	2013	2014	2015
Revenue per Deal Model	A	96.2	190.1	290.3	391.8	489.8	597.6	705.1
Less: IRM	B			(75.4)	(141.8)			
Organic revenue per Deal Model	C	96.2	190.1	214.9	250.1	489.8	597.6	705.1
Annual organic growth	D		*97.7%*	*13.0%*	*16.4%*	*25.0%*	*22.0%*	*18.0%*
Change in growth rate from 2012	E					*8.6%*	*5.6%*	*1.6%*
Excess revenue over organic growth in 2012	F (AxE)					33.8	27.6	9.7

Source: Appendix B.2, tab 'IRM revenue in Deal Model'

279. Mr Giles also cited Mr Sarin's evidence in his witness statement for the Main Trial that *"we revised our Cloud revenue projections for Autonomy to reflect the contribution from the Iron Mountain hosting business from the second half of 2011"*. In cross-examination, he elaborated that he took Mr Sarin also to mean that he had taken into account not only the IRM revenues but also the growth to be expected from their integration because of the synergies thereby released.

280. When further pressed (in cross-examination) to identify any evidence that the only reason why Mr Sarin had used 2013 growth rates that were higher than 2012 is the contribution of revenue and synergistic growth on consequence of the acquisition and absorption of IRM he simply gave his opinion that *"the evidence points in that direction"* and that this is his *"professional expert opinion"* as a professional analyst.

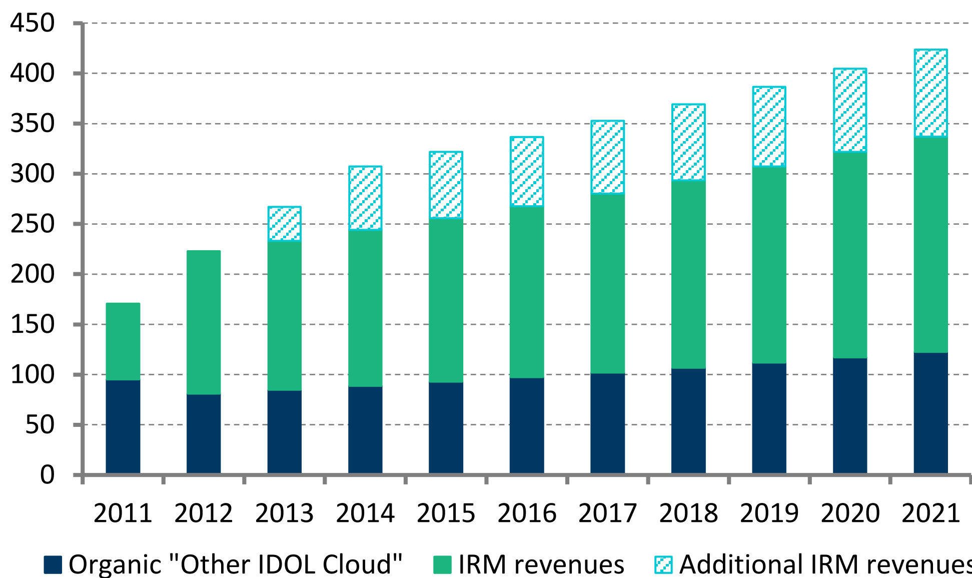
281. The figures and bar chart below (provided by Mr Bezant in his seventh report) illustrate the effect of this approach on aggregate *"Other IDOL Cloud"* revenues, as below:

Mr Giles's forecast of IRM revenues (USD millions)

	2011	2012	2013	2014
IRM revenues	75.4	141.8	148.4	155.4
Additional IRM revenues			33.8	62.9
Total IRM revenues	**75.4**	**141.8**	**182.2**	**218.3**
Growth in total IRM revenues		**n.m.**	**28.5%**	**19.8%**

Note: IRM revenues in 2011 reflect revenues after the acquisition in June 2011.

Mr Giles's forecast of "Other IDOL Cloud" revenues (USD millions)



282. In standalone valuation terms, the direct effect of these enhanced or additional revenues is to increase Mr Giles's overall valuation by about $287 million. More indirectly, Mr Giles adds in deferred revenue referable to the IRM transaction in Q2 2011 in the sum of $31.7 million. The Claimants estimate that this adds another some $119 million in supposed value on Mr Giles's approach to forecasting deferred revenue (thus suggesting

the total increase in valuation by reference to the inclusion of IRM revenues and their projected synergy-fuelled growth to be some $400 million).

283. The Claimants submitted that this is a new argument and should not be permitted to the Defendants at this late stage; but that, in any event, it is without foundation:

(1) This was not an issue raised at the Main Trial. The Claimants described it as *"an unevidenced subjective theory of growth which did not occur to Mr Giles until after the trial"* and which raised a question of fact which was never put to Mr Sarin and was not expert opinion.

(2) Any suggestion of enhanced growth at a rate in excess of Autonomy's own IDOL Cloud business in consequence of the combination of the two businesses is fanciful. IRM's business was declining (what Mr Hussain described as a *"negative growth trajectory"*).

(3) In those circumstances, Mr Bezant also suggested that an increase of about $287 million in Mr Giles's calculation of standalone value in the RTP (even leaving aside a further indirect increase referable to additions to deferred revenues) is so *"highly implausible"* as to point strongly to the invalidity of his approach.

284. Further as to (1) in the preceding paragraph [283], the Claimants submitted that Mr Giles's argument (a) is based, not on expert opinion, but on an assertion of fact about what HP and Mr Sarin actually did, (b) has nothing to do with the Excluded Transactions, and (c) could and (if to be pursued) should have been advanced at the Main Trial, when it could have been addressed by HP's factual witnesses (and, in particular, Mr Sarin to whom Mr Giles ascribes the mental process on which he now relies), but was not.

285. The Claimants added, as to (a) in the previous paragraph, that the assertion of fact based on an inference is without foundation, and that Mr Giles's insistence that this increase was *"additional to organic growth"* and his supposition that there was no other explanation for the organic Cloud business growth from 2012 to 2013 shown in HP's Deal Model other than growth attributable to synergies flowing from the IRM acquisition[66] were demonstrably wrong.

286. To support this, the Claimants provided an analysis of various iterations of the Deal Model which were said to show that versions pre- and post-Announcement of the IRM acquisition applying the same growth forecasts demonstrated that although HP had indeed increased its Cloud growth projections for 2013 to 2015, this was not by reference to the acquisition of IRM, but in response to the due diligence call and Mr Johnson on 10 August 2011 reallocating some overall projected growth as between IDOL OEM and IDOL Cloud. It is the case that over the course of these calls, a variety of adjustments were made (by HP) to the figures showing the evolution of total cloud revenue growth for the purposes of HP's Deal Model. The reasons for the adjustments are less clear. I accept that they are not entirely explicable by reference to either (i) reallocation of OEM revenue or (ii) expectation of IRM cloud growth. But whilst they

[66] Mr Patton put to Mr Giles in his cross-examination at the Quantum Hearing that no synergies were expected; Mr Giles rejected this, and the Claimants subsequently retracted that suggestion in their written closing submissions and accepted that *"It is true that synergies were expected."* The question is thus whether the admitted expected synergies explain the higher growth projections or not.

tend to indicate some further optimism about IDOL Cloud's prospects, they do not seem to me to provide support for Mr Giles's more extravagant suggestions as to the value of perceived synergies further to the acquisition of IRM and its cloud business.

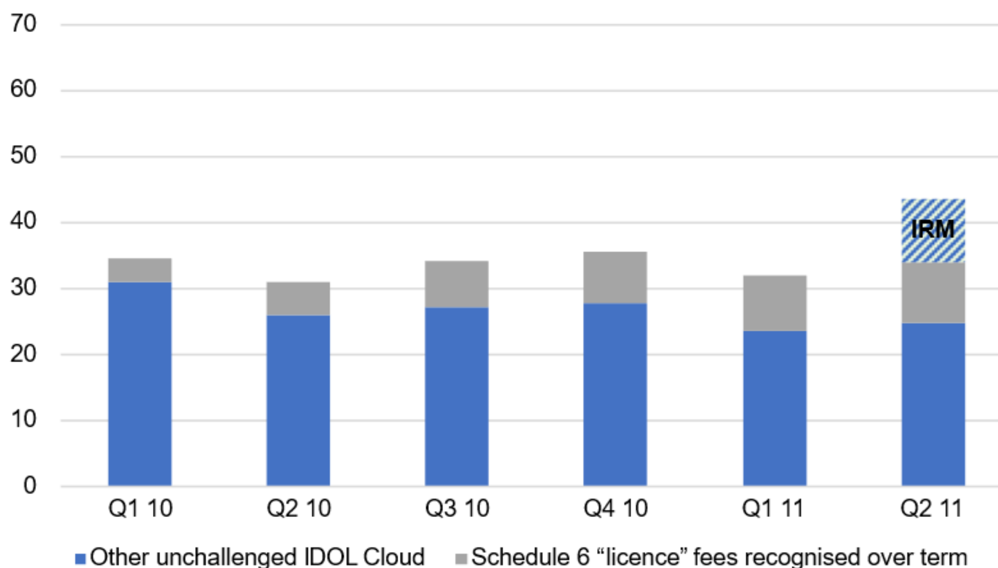
287. In elaboration of (2) in paragraph [283] above:

(1) Mr Bezant's approach was to estimate IDOL Cloud growth in Q2 2011 and 2012 solely by reference to "organic" growth, by which he meant excluding altogether in those periods the effect of acquired IRM revenues on the basis that these revenues (because "acquired") were "inorganic". He did this even though he accepted that HP's year-on-year growth forecasts for 2011 and 2012 included the effect of the contribution from acquired IRM revenues, justifying this on the basis that since the first full year of *"acquired"* IRM revenues was 2012, their inclusion in earlier years would "distort" the comparison. In Mr Bezant's opinion, the inclusion of IRM cloud revenues boosts disproportionately the apparent growth rates in those years in a way which cannot be assumed to continue, and creates a distortion. He told me when cross-examined that the distortion was because

> *"…as I said, Iron Mountain affects the early year growth rates because you bring it into the equation and it boosts the growth rate in its year of acquisition and it boosts the growth rate* [in] *the first full year after acquisition and then it is fully integrated."*

(2) Having excluded IRM cloud revenues altogether, on the basis that such exclusion was necessary both to get back to "organic rates" and to provide a fair comparative "flight path" with that adopted by HP (which, according to Mr Bezant, itself was confined to organic growth), Mr Bezant and the Claimants conclude that in the period Q1 2010 to Q2 2011, *"IDOL Cloud revenue was … lower than as reported…and overall, excluding IRM, barely growing at all."* This was graphically illustrated in Figure 11 in the Claimants' opening submissions for the Quantum Hearing:

Breakdown of IDOL Cloud revenue ($m) according to the Claimants



288. Mr Patton also points out that Mr Hussain had said in Autonomy's Earnings Call for Q2 2011 that at the time of the acquisition, *"the [IRM] business was on a negative growth trajectory"*. The Claimants submitted that this revealed Mr Giles's thesis that HP/Mr Sarin anticipated from it a positive boost to overall growth to be *"a very improbable analysis"*.

289. Further, the Claimants suggested that Mr Giles's effort to cast doubt on the Claimants' approach as involving a "precipitous drop" in 2012 to 2013 which was too sharp to be credible was (as Mr Patton put it to Mr Giles in cross-examination) *"a highly misleading comparison, because the 2011 and 2012 rates are inorganic, while the 2013 rate is organic."*

290. On the basis of Mr Bezant's analysis and approach, the Claimants submitted in summary that, even if the Defendants can properly pursue this new line of argument:

(1) The suggested inclusion of IRM revenues and synergies in 2011-2012 artificially boosts the growth rate in those years and provides a misleading basis for thereafter depicting the Claimants' estimates as showing an unlikely "precipitous fall" and a false baseline for projecting future growth.

(2) In any event, there is no proper basis for Mr Giles's premise that Mr Sarin had included IRM revenues and synergies in plotting his "flight path" for future growth.

(3) The differences between the position as represented and the RTP are such that there is no reason why the flight path adopted by Mr Sarin should be taken as the pattern.

(4) None of these theories can fairly be run now and none is justified.

291. I address these rival positions as to whether or not IRM revenues and synergies associated with the acquisition of IRM's cloud business should be included in paragraphs [335] to [343] below.

Issue (3) (see paragraph [233(3)] above): the dispute about forecasting methods in assessing IDOL Cloud revenue growth

292. As to paragraph [233(3)] above, the nature and scope of the dispute about forecasting methods evolved over the course of the Quantum Hearing and the submissions presented (both written and oral).

293. Initially (that is, in his written submissions) this was presented by Dr Lynch as a disagreement as to whether to assess historical performance (and, in particular, IDOL Cloud performance in H2 2011 and 2012) by reference to (a) compound annual growth rates ("CAGR", sometimes referred to as *"the geometric average or geometric mean"* method) or (b) the OLS method (Ordinary Least Squares regression analysis), also referred to as "trend growth", which is favoured by Mr Giles. However, the basic disagreement between the experts evolved into a rather simpler one about what periods to take in predicting future from past growth.

294. Thus, the primary dispute between the parties in this context has become whether some process of assessing IDOL Cloud performance over the years 2009 to 2011 (be it the CAGR method or the OLS method) should be adopted and applied as the base line for growth over the forecast period, or whether, instead, only H1 2011 growth should be taken to be the base point for forecasting H2 2011 and 2012 and future performance (as was Mr Bezant's actual approach).

295. In particular, and as clarified in Dr Lynch's closing submissions, in his primary analysis and forecasts for IDOL Cloud revenues, Mr Bezant focuses only on the especially low recorded growth rate for IDOL Cloud of just 0.5% in H1 2011 as the basis for his near-term forecast of IDOL Cloud growth (for H2 2011 and for 2012). He adheres to that notwithstanding that he accepts that (on the RCC basis) IDOL Cloud revenues were up by 28% year-on-year in 2010, that the market expectation was of strong Cloud growth and that he has also down-rated the performance of IDOL Product growth because of an anticipated *"shift to the cloud"*. His reasoning is that in the particular context of the IDOL Cloud business, which he described in cross-examination as *"supposed to be an accretive, repeat business ... so that your most recent results give you a sense of the basis that you are building from…",* he considers that *"growth in the recent past is more informative of near-term growth prospects".* Further, he pointed out that the figure for year-on-year growth in 2010 must be set in the context of negative growth of 20% in the previous year.

296. The forward effect of the adoption of this extraordinarily low growth rate in the early years is illustrated in a handout headed "First Defendant's Handout 7" which was put to Mr Bezant in cross-examination by Mr Shivji. This depicts both IDOL Product and IDOL Cloud revenues. What it shows is that if Mr Bezant's approach is adopted, (a) in 2011, IDOL Cloud revenues are down 27% on the Deal Model (at $211.7 million compared to $290.3 million), and (b) by 2021 his forecast IDOL Cloud revenues are down 62% (from $1,385 million to $526.3 million) whilst at the same time (c) there is no compensating uplift or significant change in IDOL Product revenues, so that (d) despite market expectations of a *"shift to the Cloud"* and Autonomy's strength in that market, there is (contrary to expectation) no point at which (on these projections) IDOL Cloud becomes bigger than the IDOL Product business (or, in other words, there is no *"inflection point"*). These figures are contrasted with Mr Giles's calculations (in column (4)). I set out the table below:

	Deal Model (1)		MB6 (RUS) (2)		MB6 (RCC) (3)		TG3 (RCC) (4)	
	IDOL Product	IDOL Cloud	IDOL Product	IDOL Cloud	IDOL Product	IDOL Cloud	IDOL Product	IDOL Cloud
2011	295.7	290.3	311.9	204.6	283.3	211.7	312.4	220.7
2012	327.6	391.8	361.3	281.9	330.1	278.9	387.7	313.3
2013	353.8	489.8	399.0	324.2	365.6	312.3	448.1	411.6
2014	375.1	597.6	429.7	358.3	394.4	340.4	498.6	516.5
2015	393.8	705.1	457.0	387.8	419.8	366.0	544.2	602.8
2016	413.5	803.8	483.0	415.5	443.8	390.7	588.1	693.9
2017	434.2	908.3	507.2	442.7	466.0	415.6	632.4	788.1
2018	455.9	1,017.3	532.5	470.5	489.3	441.3	678.3	884.6
2019	478.7	1,134.3	559.1	499.4	513.8	468.2	726.7	983.6
2020	502.6	1,259.1	587.1	529.8	539.5	496.5	778.1	1,085.9
2021	527.7	1,385.0	616.4	561.5	566.4	526.3	832.6	1,173.1

297. Mr Giles rejects Mr Bezant's approach as being based on *"a single poor quarter…"* and as being another example of what Mr Shivji in his written closing submissions described as *"cherry-picking his metrics to find the weakest performance"* and in his oral closing as *"just hunting for the negative data and driving down value".* Mr Bezant ignores or excludes from his forecast strong growth in Q2 2011. Further, the pessimistic growth rate selected by Mr Bezant also ignores or leaves out of account, on the asserted basis that the growth was *"too volatile"*, significant increases in deferred revenue in Q1 2011 and thereafter, thereby again understating (in Mr Giles's view) the true level of IDOL Cloud business activity.

298. In Dr Lynch's written closing submissions, the more general point was also made that if IDOL Cloud revenues had been projected simply to keep pace with the market as projected by one of Mr Bezant's preferred forecasters, Forrester, those revenues at the end of the period would in fact be higher than even Mr Giles's forecast. The Forrester rate envisaged a multiple increase in the market of 6.25 from 2011 to 2020 ($21 billion to $132 billion). Multiplying Mr Bezant's 2011 RCC Cloud revenues of $211.7 million by the same factor gives revenues of $1.3 billion for 2020, which exceeds Mr Giles's estimate of $1.1 billion ($1.086 billion of revenues plus deferred revenues of $47.9 million).

299. Put another way, whereas the Deal Model (and Mr Giles's approach) envisaged that the combined Autonomy and IRM would hold their market share of around 1%, Mr Bezant's approach envisages a collapse in market share from about 1% in 2012 ($279 million out of a total market of $33,090 million) to around 0.4% by 2021 ($526 million out of a total market of $140 billion). These figures are especially arresting given that Autonomy had a very significant established presence in the market, including (it seems from Autonomy's financial reports that are not suggested to be incorrect in this respect) *"the world's largest private cloud infrastructure".*

300. In the experts' Second Joint Statement, Mr Bezant sought to undermine Mr Giles's comparisons with the market on the basis that he had drawn his information from research relating to the 'Cloud Infrastructure market' (which he suggested was dominated by Amazon Web Services, Microsoft Azure and Google Cloud) and (so he said) *"not the Content Management, Search and Discovery, or Archiving markets that Autonomy's software related to."* Mr Bezant went on to state that *"Mr Giles cites research in respect of a market that is not relevant to understanding expectations of the markets in which Autonomy operated in 2011"* [emphasis as supplied by Mr Bezant].

301. However, and as Mr Giles pointed out in response, (a) both Perella Weinberg and Qatalyst included infrastructure companies as comparators, (b) Autonomy specifically highlighted its goal of establishing itself in "the key infrastructure…" 'space', (c) Mr Bezant himself included infrastructure companies in his discount rate calculations and (d) Barclays explained its rationale for its choice of comparables as *"Focused on infrastructure software companies of scale…".* Indeed it was the Cloud Infrastructure market that HP was looking to get a foothold in through Project Cielo (see paragraph [141] of my Main Judgment).

302. These more general points, together with the fact that the market was growing and, even in 2011, already discernibly shifting to the cloud (which, indeed, Mr Bezant gave as a reason for a lower near term forecast for IDOL Product growth), generated a number of questions in cross-examination (and from me after its conclusion) about the arresting

and (to my mind at least) counter-intuitive estimate of growth of just 0.5%. Mr Bezant nevertheless adhered to his line. In that regard, he described *"the longer term trend"* as *"volatile and uncertain",* and *"the most recent past"* as showing *"no particular growth"*, so justifying his decision to take 0.5% growth in H2 2011 as both the growth in 2012 and the base line for growth thereafter, albeit with an uplift to 12% in 2013 (lower than the Deal Model because of prior relatively poor performance) *"to reflect the shift from IDOL Product revenues to IDOL Cloud revenues"*.

303. As to the corollary of his approach, that Autonomy's market share would be down two-thirds by 2021, Mr Bezant:

(1) accepted that he had based his assumption that by 2021 IDOL Cloud revenues would at last be growing year-on-year at the same rate (6%) as the market on the forecast for year-on-year growth rate of the global cloud computing market in 2020 published by Forrester Research,

(2) acknowledged that in his modelling of the intermediate period, and by reason of its poor performance in 2011, Autonomy's IDOL Cloud revenue growth would not replicate the market, but instead increasingly fall behind it, resulting in relative overall decline; but

(3) nevertheless insisted that the overall result was fair, because of *"the combination of starting smaller and growing less fast over an extended period of time"*, and unsurprising because:

> *"If it hadn't been holding share in the recent past and in a market that was growing strongly, then there is no reason to believe it would continue to hold market share…It is a function of how well it has done in the past, in absolute terms and relative terms, and how well it might do in the future in absolute terms and relative terms, that combined give you these market share outturns."*

304. That is in one sense a statement of the obvious; but what, to my mind, it re-emphasises is the overriding importance in Mr Bezant's approach of his pessimistic forecasts for H2 2011 and 2012 growth at just 0.5% in a period of strong market growth.

305. I should mention that Mr Bezant did in this context also put forward CAGR figures, to compare them with Mr Giles's approach using the OLS or trend growth method. Mr Bezant provided a table to illustrate the comparison, entitled *"Revenues, year-on-year growth rates, CAGR, and "trend growth" of Autonomy's IDOL Cloud revenues"*, which is in the form below:

Mr Bezant's Table of Revenues, year-on-year growth rates, CAGR, and "*trend growth*" of Autonomy's IDOL Cloud revenues (including Mr Bezant's notes)

	Represented Position	MB6 RUS	MB6 RCC	TG3: Impugned hosting licence	TG3: Other IDOL Cloud	TG3: Total (RCC)
Revenues (USD million):						
2008[(1)]	129.1	131.8	131.8	N/A	N/A	131.8
2009	155.0	109.5	105.8	10.6	95.2	105.8
2010	190.1	119.2	135.7	23.6	112.0	135.7
H1 2010	92.1	63.3	65.7	8.6	57.0	65.7
H1 2011[(2)]	107.4	68.6	66.0	17.5	48.6	66.0
Year-on-year growth:						
2009	20.0%	(16.9%)	(19.8%)	N/A	N/A	(19.8%)
2010	22.7%	8.8%	28.3%	123.4%	17.7%	28.3%
H1 2011[(2)]	16.6%	8.5%	0.5%	102.5%	(14.9%)	0.5%
CAGR (2008 to 30 Jun 2011)	**20.4%**	**(2.3%)**	**1.3%**	**N/A**	**N/A**	**1.3%**
CAGR (2009 to 30 Jun 2011)	**20.7%**	**8.9%**	**18.3%**	**111.2%**	**5.8%**	**18.3%**
"*Trend growth*" (Q1 2009 to Q2 2011)	**N.A.**[(3)]	**9.8%**[(4)]	**16.8%**[(5)]	**104.1%**	**4.7%**	**16.8%**[(5)]

Notes: (1) The RCC covers the period Q1 2009 to Q2 2011 and therefore excludes 2008 revenues. The 2008 revenues in the "MB6 RCC" and "TG3: Total (RCC)" columns are derived from my analysis of 2008 revenues in the RUS. (2) Excludes revenues from assets acquired from Iron Mountain in H1 2011. (3) I cannot calculate the "trend growth" in the Represented Position as Autonomy did not report (and HP did not estimate) IDOL Cloud revenues in 2009 on a quarterly basis. I note that higher "trend growth" rates correspond to higher CAGRs (between 2009 and 30 June 2011) and the CAGR of (overall) IDOL Cloud revenues in the Represented Position was higher than in the RTP. It follows that "trend growth" would likely have been higher in the Represented Position than in the RTP. (4) $e^{(4*0.0234)} - 1 = 9.8\%$. *(5)* $e^{(4*0.0388)} - 1 = 16.8\%$.

306. In addition to rejecting Mr Bezant's primary approach of focusing exclusively on H1 2011, Mr Giles considers that Mr Bezant's calculation of CAGR by reference to just two periods, (a) 2008 to 30 June 2011 and (b) 2009 to 30 June 2011, which is thus based and heavily dependent on using just those two inputs, is misplaced. The effect of its focus only on the first and last observations is that intermediate observations, and any trends on growth rates over the period, are not taken into account. Noting that these breakdowns were never reported by Autonomy, Mr Giles also considers that they *"cannot be assumed to be available in the Restated Position"*. (He acknowledged that use was made of a breakdown estimated by Goldman Sachs; but noted that there is no equivalent restated Goldman Sachs breakdown. He added that HP itself had not entered the quarterly breakdown for 2008 and 2009 in their Deal Model, and did not appear to have relied substantially on those figures.)

307. My views in relation to this dispute as to the appropriate approach to forecasting are set out in paragraphs [344] to [348] below.

Issue (4) (see paragraph [233(4)] above): Mr Giles's view that Mr Bezant has misunderstood/ignored important characteristics of Autonomy's IDOL Cloud offering and the strength of its cloud infrastructure

308. Mr Giles also considers that Mr Bezant has not taken into account either (a) the expectation in the wider market of very strong growth in cloud computing, or (b) the scope, special characteristics and strengths of Autonomy's IDOL Cloud offering. He suggests that Mr Bezant appears to have misunderstood, in particular, Autonomy's standing in cloud infrastructure business.

309. I have already referred (in paragraphs [233], and [299-301] above) to clear signs that Mr Bezant did indeed underestimate and perhaps even overlook Autonomy's strength in the cloud infrastructure market, and its potential for accelerating growth.

310. In cross-examination, Mr Bezant denied that he did not understand that Autonomy's IDOL Cloud offering extended to cloud infrastructure; and he somewhat grudgingly had to admit that, actually, Autonomy provided the world's largest private cloud infrastructure, and was the leading company by the amount of data stored in that 'space'.

311. I return to my assessment of this alleged *"flaw"* in the Claimants' approach in paragraphs [349] to [351] below.

Issue (6) (see paragraph [234(2)] above): Interpolation factor

312. Issue (6) as adumbrated in paragraph [234(2)] above relates to the disagreement between the experts is as to what 'interpolation factor' should be adopted to project IDOL Cloud growth rates between 2011 and 2021. (As Mr Giles explained in his third report, 'interpolation' is the making of estimates between observations, as opposed to 'extrapolation' from a set of observations; and the factor determines the rate at which the near term growth forecasts converge on the long term forecast.) Mr Bezant sometimes called this the *"flight path"*.

313. To adopt Mr Bezant's simile, the starting point (the growth rate at the beginning of the period), the fixed or 'steady state' growth rate (projected for the end of the term) and the angle of descent (the rate of convergence towards the growth rate at the end of the period) will necessarily have a considerable impact on value. In relation to the projection of IDOL Cloud growth, the experts were in disagreement on all these parameters.

314. Mr Giles's initial and long-term growth rates reflected his views as to (a) separation of "multi-year deal" from "Other IDOL Cloud" revenues and (b) the inclusion of "Additional IRM revenues". As to the interpolation factor itself, Mr Giles selected 0.3 as more closely tracking HP's own chosen path,[67] whereas Mr Bezant chose 0.5 as being more appropriate given his view that the pattern of growth in the RTP was very different in the RTP compared to the Represented Position.

315. It is the experts' disagreement on the initial and long-term parameters for IDOL Cloud growth which has the greatest effect. As regards IDOL Cloud business, the disagreement between the experts in relation to these parameters results in a valuation impact of up to $942 million (adopting Mr Giles's estimate of the difference made by adopting his preferred interpolation factor). However, as noted (by Mr Bezant) in the valuation experts' second joint statement, most of this difference relates, not to the interpolation factor itself, but to the initial and final growth parameters. Thus, Mr Bezant calculated that using his growth forecasts, reducing only the interpolation factor from 0.5 (his selection) to 0.3 (Mr Giles's selection) makes a very much reduced difference of $86 million.

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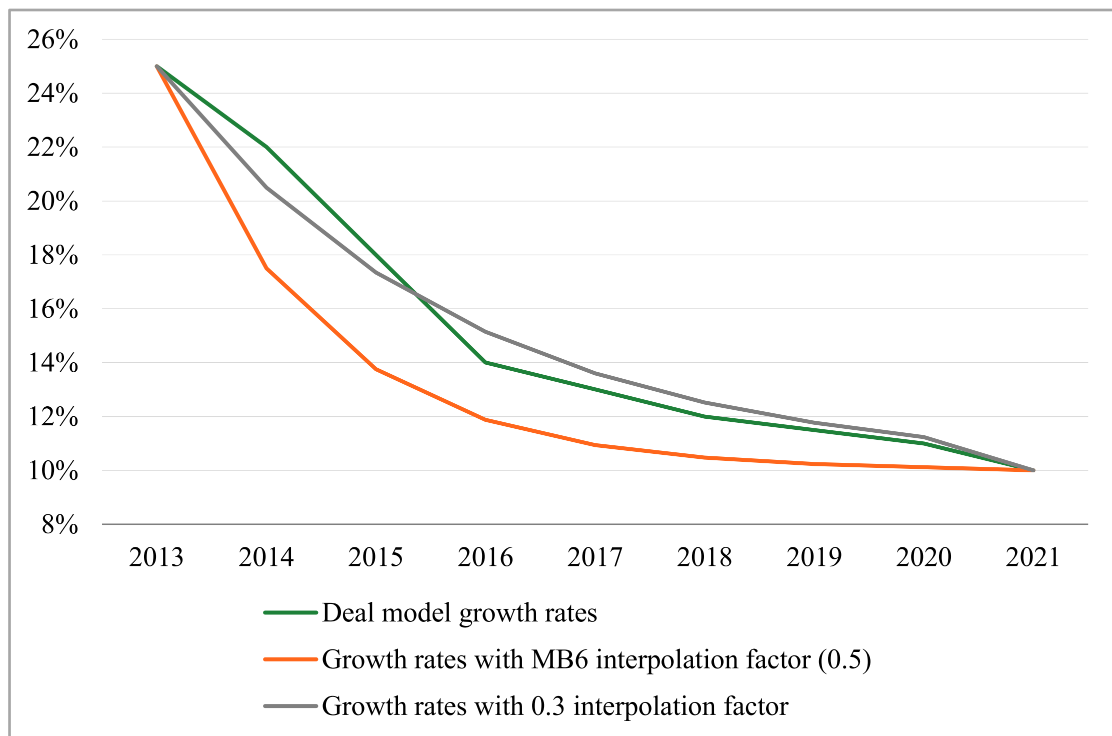
[67] Though it is to be noted that HP did not use an interpolation factor to taper growth: rather, its "flight path" or (as Mr Giles preferred) "transition curve", appears to have been based on Mr Sarin's subjective assessment. Mr Sarin's evidence, which I have accepted (see paragraph [4035(6)] of my Main Judgment), is that in setting the forecasts *"in particular for later years"*, HP *"paid particular regard to Autonomy's publicly reported organic growth to date."* Mr Sarin added that *"...given a business like Autonomy, with various revenue segments, there are different growth rates, different capital investment assumptions, all of that factors into a much more thoughtful free cash flow number than just trying to take history and grow it at a certain rate."*

316. There was what might be called a battle of the graphs in which the parties sought to establish and illuminate their respective positions. The relevant competing graphs appear in the course of my discussion below.

317. Mr Giles's justification for his choice of interpolation factor (of 0.3) is that he considers that *"it best tracks the profile HP adopted"*. In his third report, he illustrated this, as well as the difference in the profile if instead Mr Bezant's chosen factor (of 0.5) is applied to the Deal Model,[68] in the following graph:

Mr Giles's comparison of the impact of different interpolation factors (IDOL Cloud) (% per annum)

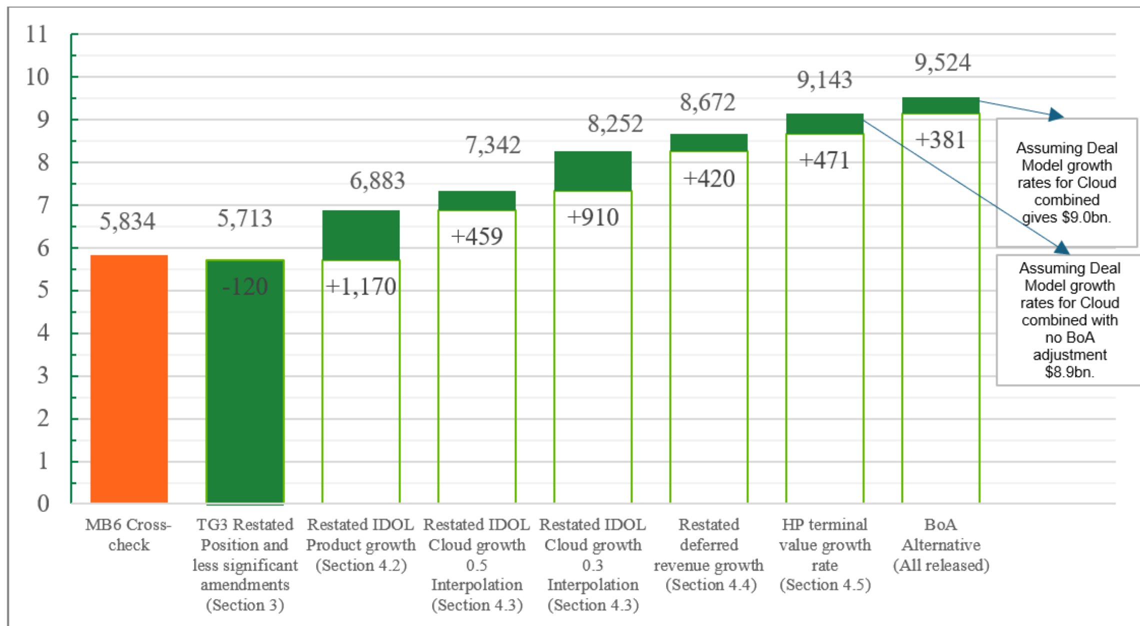


Source: Appendix B.2

318. Mr Giles accepted in cross-examination that the projections for 2011 to 2021 in the Deal Model itself were not based on an interpolation factor: rather, Mr Sarin had made his own assessment and judgement. However, Mr Giles made the point that it had been Mr Bezant who had initially proposed that the "flight path" should follow the profile in the Deal Model; he quoted Mr Bezant's first report, in which Mr Bezant had stated that in circumstances where he did not *"know the basis on which HP tapered growth"*, his objective had been to *"generate a transition curve that is similar to the profile applied by HP"*. Mr Giles suggests that an interpolation factor of 0.3 fits that profile well, whereas Mr Bezant's suggestion of a factor of 0.5 does not.

68 Mr Giles clarified in cross-examination that the red line in the graph does not use Mr Bezant's figures for growth: rather it applies Mr Bezant's favoured factor to the Deal Model growth rates.

319. As regards the effect of the different interpolation factors, Mr Giles (in the same joint statement) ascribed the substantial difference of view in large part to *"the order in which the issues are addressed in the 'bridge'"* (the *'bridge'* being a presentation in a bar chart to show the impact of the four main categories of issues in dispute between the experts, accounting for the overall difference between their respective counterfactual DCF calculations: see further paragraphs [417] to [420] below). An amended version of this *"bridge"* or bar chart, provided in the course of Mr Shivji's oral opening submissions (and showing in the right-hand boxes variations according to whether or not Mr Giles's arguments as to (a) the separation of multi-year Hosting revenue from "Other IDOL Cloud" revenue and (b) the BoA transaction issue are accepted) is set out below:

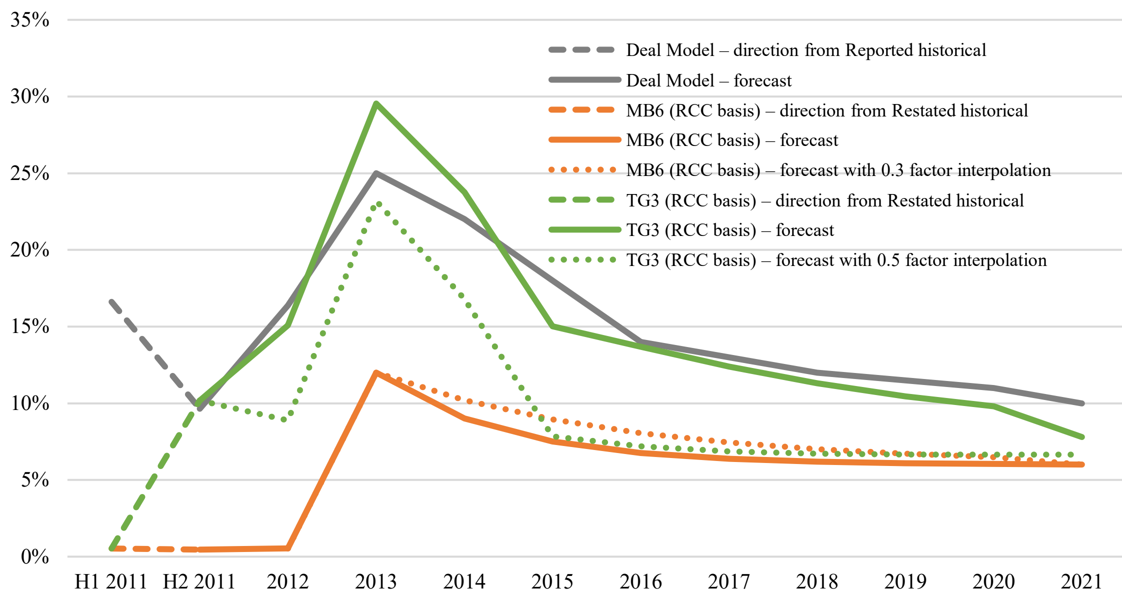


320. Mr Bezant and the Claimants reject this approach, fundamentally because they do not accept the separation of revenue streams on which Mr Giles's approach is premised; but quite what their own prescription was never became clear. In their written submissions (both opening and closing) for the Quantum Hearing the Claimants stated baldly that *"Mr Bezant uses a factor of 0.5"*. But Mr Bezant himself does not refer to any interpolation factor for IDOL Cloud in any of his reports; and in cross-examination he told me that he had not engaged with *"the question of the relevant interpolation factors or alternative interpolation factors"* thinking (he continued) that *"it is Mr Giles who has introduced that, to compare my work to his."*

321. What is more clear is that Mr Bezant does not accept that the pattern for growth rates in the True Position should mirror the pattern in the Deal Model. As the Claimants put it in their written closing submissions:

> *"Mr Giles contended that 0.3 better matched HP's flight path. However, whether that is a virtue or a vice depends on the extent to which growth in the counterfactual resembles growth in the represented position. Mr Bezant pointed out that there was "no reason" why the growth rates in the true position should mirror those in the represented position."*

322. Secondly, the Claimants submitted that even if what they preferred to call "the flight path" in the Deal Model is taken as a guide, but adjusted to reflect the RTP, a factor of 0.5 is a closer match. In their written closing submissions, and by reference to the graphic illustration provided by the Claimants as a handout at the Quantum Hearing and set out below, the Claimants contrasted (a) the Deal Model presentation, depicting (in grey) organic growth as peaking at 25% in 2013 and then dropping by 15 points to 10% in 2021, and (b) Mr Bezant's projected organic growth rates (in orange), showing a much gentler drop from 12% in 2013 to 6% in 2021. (The figure below also includes the Claimants' depiction (in green) of Mr Giles's projections; but it should be noted that Mr Giles made clear, when cross-examined on the document, that he did not accept that the depiction was either accurate or informative, not least because the orange line took no account of deferred revenues or "synergies" to flow from the acquisition of IRM cloud; he relies instead on the illustration under paragraph [317] above.) Focusing on the grey and orange lines, and albeit that the growth rates were reduced, Mr Bezant considered that, redone on an organic basis, the flight path shown by the orange solid line (based on an interpolation factor of 0.5) *"resembles the Deal Model flight path as well, if not better, than the dotted orange line (0.3)."*



323. Thirdly, and as foreshadowed previously, Mr Bezant identifies as a further and important flaw in Mr Giles's approach that he only applies an interpolation factor to 'multi-year hosting' which, when separated out from *"Other IDOL Cloud"*, shows exceptional growth. He notes that Mr Giles has not used any interpolation factor for *"Other IDOL Cloud"*, and has not made any assessment of the effect of applying his suggested interpolation factor to the two IDOL Cloud revenue streams combined.

324. I address my view as to this rather unsatisfactory dispute between the experts, where each has promoted an interpolation factor claiming it to be the best reflection of HP's approach, though HP's own approach was not based on any interpolation factor at all, in paragraphs [352] to [361] below.

My assessment and adjudication of these competing approaches to IDOL Cloud growth

325. For the purpose of their analysis, I have (as previously explained) addressed each facet of the Defendants' argument advanced as leading to their overall conclusion that the

Claimants have materially underestimated IDOL Cloud revenue growth and its effect on Autonomy's value in the FSMA Counterfactual world. However, it may already be apparent that it is their combination which results in Mr Giles's greatly increased figures, and that to some extent they shade into each other. The most obvious illustration of this is the inter-relationship between Mr Giles's theory that *"multi-year hosting revenues"* would have been distinguished from "Other IDOL Cloud" and separately reported and his calculation, on the basis of that theory, of very exceptional deferred revenue growth (which Dr Lynch described as the *"missing cashflows"*, see paragraph [233(1)] above). Nevertheless, I shall address in turn the six main facets of the Defendants' criticisms of Mr Bezant's approach to IDOL Cloud growth.

(1) Has Mr Bezant failed to take proper account of deferred revenue growth?

326. I consider first the argument put forward by the Defendants to the effect (in summary) that, in measuring the size, and projecting what would have been the growth, of Autonomy's IDOL Cloud business in the RTP, the Claimants have (a) failed to take appropriate account of past and likely future growth in deferred revenue derived from Autonomy's hybrid hosting business, and (b) sought wrongly to justify that approach on the (in each case, flawed) basis that the line of business (i) has been found to be improper, (ii) would have been discontinued and (iii) its licence sales generated only deferred, and not earned, revenues which cannot properly form part of a projection of growth (unless and until released into the profit and loss account).

327. Before turning to my assessment of the substance of the argument, I must deal with the threshold issue raised by the Claimants: this is whether it is too late, and would be unfair, as well as contrary to the interests of finality in litigation, to permit the Defendants to rely on it now, having not advanced the argument in its present form at the Main Trial. I do not accept the Claimants' argument in this regard. The issue as to what effect on valuation the larger deferred revenues and, in time, the increasing deferred revenue releases, have, has to be addressed for the purpose of constructing the counterfactual. The experts were cross-examined on it at the Quantum Hearing. I do not consider the fact that the point was not put to factual witnesses in the particular form in which it now appears precludes it being raised: it is at heart an issue for the experts and ultimately the Court.

328. Turning to my assessment of the argument on the merits:

(1) I do not accept the Claimants' suggestion to the effect that simply because HP did not model growth in deferred revenue (nor deferred revenue release) in the future (and neither did either Perella Weinberg or Qatalyst) in the Deal Model, it was not necessary for Mr Bezant to take it into account in his modelling of the RTP Deal Model. With one caveat, I accept the view of Mr Giles and the submission of the Defendants that the difference is plain, and Mr Bezant's reasoning is flawed. In the Reported Position, there was no deferral of revenue in respect of hybrid hosting deals, whereas in the RTP it is to be taken that there would have been, and that must be taken into account. The caveat is that I accept the point made by the Claimants that HP did know, when constructing its Deal Model, about deferred revenue referable to the acquired IRM business: see sub-paragraph (10) below.

(2) I do not accept the Claimants' contention to the effect that a consequence of my finding that the purpose of the hybrid model was improperly to accelerate revenue should be that neither continuation of the hybrid hosting business nor the inclusion of any exceptional growth in deferred revenue from it should be contemplated in the RTP. The propriety of the business activity must be distinguished from the propriety of its accounting treatment. As I sought to make clear in my Main Judgment, the hybrid hosting model is not inherently improper: hybrid hosting deals did offer (and probably did in fact provide) some potential commercial benefits (see paragraphs [3308] to [3312] of my Main Judgment). Put another way, hybrid hosting might be a delivery mechanism which was entirely proper: and, for example, there is no suggestion that Zantaz had had any improper purpose when it introduced the product some time before its acquisition. More generally, the Claimants have always accepted that it is not necessarily wrong to forego further revenue to secure immediate cash.

(3) What was objectionable in the particular case of Autonomy was the objective of producing accelerated revenue by contriving to treat the revenues from licence sales as earned, rather than deferred, on the basis of the pretence of the licence having real and substantial 'stand-alone' value, and of the licence sale being a self-contained and completed transaction rather than part of a continuing service. In my judgment, it is not inconceivable that HP would nevertheless have continued the hybrid hosting structure of business for its other benefits notwithstanding that the revenues were required to be deferred to ensure (as Mr Bezant put it in cross-examination) that cash received for future services is *"properly accounted for as deferred revenues and not pulled into revenue in the wrong period"*[69]. As it was, HP did in fact continue the business, accounting for all revenues as deferred, for some months after the Acquisition; and see, in particular, paragraphs [3312] to [3314] (and [fn 402]), [3351] to [3355] and [3389] to [3392] of my Main Judgment.

(4) In the end, I took Mr Bezant to accept when cross-examined, and in any event I consider, that to understand the economic activity and momentum of Autonomy's IDOL Cloud business it is necessary to have regard to billings, and to factor in deferred revenue representing cash received from billings which will (over the course of the relevant contract) be released to, and included within, the earned revenue account. Much as the improper acceleration of the recognition of revenue, and the inclusion as earned revenue of cash paid in advance for future services, gives a misleading picture, so also is the picture inaccurate if projections are based on deferred revenue released during the base period without having proper regard for growth in billings and in deferred revenue (and deferred revenue release) and the potential for revenue growth they reveal.

(5) In this connection, it seems to me also that the Claimants' repeated references to IDOL Cloud revenues being so much lower in the RTP must be clarified and substantially qualified. That reduction refers to earned/recognised revenues, and HP's suggested approach of leaving deferred revenues out of account unless and

[69] (that being the objective of requiring advance payments for future services to be treated as deferred and released only as and when the service is actually provided). As Mr Bezant put it when cross-examined: *"This is cash being brought in against future periods, so it is not revenue that can be compared to revenue, it is not revenue that can be represented as revenue; it is cash that will be recognised as revenue in due course."*

until released does not capture growth in billings, or give a fair picture of the historic economic position, performance and potential of Autonomy's IDOL Cloud business as a whole as I consider it would have appeared to HP when projecting growth in its RTP Deal Model.

(6) However, I do consider misleading the treatment and at least implicit presentation of the licence sales revenues as annually recurring. I agree with the Claimants that the nature of the revenue from the sale of licences was not as represented: its immediate accelerated treatment as earned disguised the fact that it was derived from one-off sales which were not properly presented (even inferentially) as annually recurring.

(7) As to the proper treatment of deferred revenue and deferred revenue release in the RTP Deal Model, I am again in the difficult position of not being entirely persuaded by the approach of either expert. I disagree with Mr Giles's approach to the extent that its graphic description (see below, under paragraph [419]) may appear to include deferred revenue as if it were earned; but I also disagree with Mr Bezant that the counterfactual Deal Model should make no allowance or projection for deferred revenue growth. That was part of the performance of Autonomy to be measured. As Mr Shivji put it in his oral closing submissions, Mr Bezant and the Claimants have:

> *"…fallen into error because their analysis of the cloud business only looks at recognised revenues and not the deferred revenue.*
>
> *Deferred revenue obviously has value because it is real revenue. It is guaranteed to be recognised. It is simply that you cannot recognise it quite yet and the claimants place no value on that. Mr Bezant has not put forward any valuation which values any growing deferred revenue generated by this business.*
>
> ... [Indeed]
>
> *The DCF model places higher value on prepayments, because they come into your model immediately through changes of deferred revenue, and that goes through the working capital adjustments straight into your free cash flow. So if you have increases in deferred revenue, that gives you an immediate value kick in the impact on your free cash flows."*

(8) Of course, the Claimants are right that upon cessation of multi-year hybrid hosting, the deferred revenue balances attributable and expected to grow by reference to that line of business would have unwound to zero. That seems to me to be equally obvious: but it is nothing to the point unless cessation is to be assumed. The question then is whether, in a counterfactual world in which the hybrid hosting model offered no advantages in terms of accelerated revenue recognition, HP would have focused and discontinued that line of business or envisaged or assumed its continuation. That requires a determination of a somewhat speculative issue of fact which was not addressed at the Main Hearing, was not put to any witness, and which I did not determine as part of my Main Judgment. It is a question which, if any determination would be fair in such

circumstances, must depend on the evidence available at the Main Trial, which provides (in my assessment) conflicting indications.

(9) On the one hand, the fact that HP did in fact continue the hybrid model until May 2012 (as I found to be the case in my Main Judgment) militates in favour of a conclusion that HP did at the time of the Acquisition envisage its continuation. So too does the fact that, as part of the exercise to identify areas where the requirements of US GAAP differed to those of IFRS, HP did undertake a review to determine whether under US GAAP VSOE rules (explained in paragraph [2808] of my Main Judgment),[70] the revenue from the sale of licences could continue to be treated as earned revenue or would have to be treated as deferred revenue to be released over the lifetime of the hosting contract. That would suggest to me that at the time of the Acquisition, HP assumed its continuation, or at least had no plan to discontinue.

(10) On the other hand, the model was unusual: SaaS would have been the normally appropriate and common structure. Although popular with the sales force (who received commission on the first year sale), and offering some business benefits (such as enhancing ‘stickiness’ and increasing the customer’s propensity to expand its storage requirement as identified in my Main Judgment), the discounted revenue streams after the initial licence fee meant that the total contract value of a hybrid contract was in most, if not all, cases reduced considerably. Further, it appears from an internal HP memorandum that HP appreciated that (a) IRM had not adopted the hybrid model until after its acquisition by Autonomy, and its hosting business (which the same memorandum records[71] contributed as much as 60% of Autonomy’s SaaS hosted revenues) had until then been SaaS-oriented; and (b) as noted in sub-paragraph (1) above, in constructing its Deal Model,[72] HP did know about deferred revenue referable to the acquired IRM business, and yet did not project any growth in deferred revenues from that source for the years 2012 to 2021 (or thereafter), as Mr Giles had to accept when cross-examined. The position might have been clarified by Mr Sarin; but he did not offer evidence on, and was not asked about, the point.

(11) In my view, the burden of establishing that HP had decided to discontinue the business was on HP. I do not think it was discharged. In any event, in all the circumstances, and the question being, not what HP eventually decided to do, but what would have been its likely approach at the relevant time, I consider that at the relevant time (when it was constructing and finalising its Deal Model in the counterfactual world) HP would not yet have reached any firm decision

[70] and footnote 320 of my Main Judgment. As explained by the Claimants, in essence, VSOE refers to the evidence required in order to attribute a reliable fair value to individual components of a transaction.

[71] That memorandum also records that (a) generally the Total Contract Value of hybrid hosting agreements was substantially lowered and (b) only after *“the* [IRM] *acquisition by Autonomy there was a significant shift to the lic + hosted model in the 4 mths before Autonomy was acquired by HP. This provided a short term boost to revenue in Autonomy’s Q3 2011 results.”* But these matters would probably have not been evident to HP at the time (i.e. prior to the Acquisition).

[72] I accept that HP did not know pre-Acquisition that Autonomy was including non-recurring revenue in IDOL Cloud.

whether or not to continue the hybrid hosting model, and would have assumed its continuation for the time being.

329. Whether HP would have forecast any material growth in deferred revenue in the RTP, and if so, at what rate and with what effect on Autonomy's stand-alone value in the RTP Deal Model, is another question. Deferred revenue is not a separate revenue stream (except to the extent that releases from deferred revenue feed into the profit and loss account). Its growth net of releases depends on increased sales revenues. Thus, the answer to the question depends on the proper measurement of any increases in hybrid hosting licence sales revenue: as the Claimants put it in their opening submissions, *"the experts' respective approaches to forecasting movements in deferred revenue…are overwhelmingly predicated on Mr Giles's approach to IDOL Cloud forecasting"*. I address this next.

(2) Is Mr Giles correct that in the RTP the Directors of Autonomy would (entirely permissibly) have distinguished multi-year hosting revenues from "Other IDOL Cloud" revenues (see Issue numbered (1) in paragraph [234] above)?

330. A lynch-pin of Mr Giles's approach to the measurement and forecasting of IDOL Cloud growth, and indeed of deferred revenues arising from that business line, is his contention that in the FSMA Counterfactual *"multi-year hosting"* revenues (which showed extraordinary growth which he put as high as 102.5% in 2011) would have been separately reported from *"Other IDOL Cloud"* revenues (showing much less dramatic growth). (Mr Giles has not provided figures to show a rate for the two combined.)

331. It may assist at the outset to distinguish between (a) the accounting requirement for a separate entry to show deferred revenue (b) what Mr Giles presents as an obviously sensible expedient of separating out one source of IDOL Cloud business (hybrid hosting) from another for the purposes of forecasting growth and its value.

332. As to (a) in the preceding paragraph [331], I accept the Defendants' point that the separate reporting of deferred revenue would have happened whether or not I accept Mr Giles's view that Autonomy would have separately been incentivised to report its revenues on the multi-year hosting deals. This seems to me to be obviously correct. As to (b) in that paragraph, the separate reporting of deferred revenue is necessary to conform with the principles of accrual accounting and the reasoning in my Main Judgment. That is in contrast with Mr Giles's suggestion that it should be supposed that, in the RTP, Autonomy would have distinguished between, and chosen to report, two earned revenue streams from the same transactions: that has no basis in any accounting requirement, and depends on an hypothetical election for which there is no real factual support (and see below).

333. As to this:

(1) The argument now advanced based on an assessment of changes in the various components of IDOL Cloud revenue is, as Mr Giles accepted, an after-thought on his part. As the Claimants emphasised, it has not been prompted by my decision on the Excluded Transactions, with which it has no connection. The proper accounting for the hybrid hosting model was always in issue, though perhaps less starkly defined.

(2) Even though the parties had to address so many potential combinations of results and contingencies, and the presentation now made would have involved a considerable feat in thinking "around the corner" to be available as an argument and quantified, I agree with the Claimants that it is too late, and it would be unfair, to permit the Defendants to run this aspect of the argument now. It could and should have been put forward at the Main Trial, and both Dr Lynch and Mr Sarin could and should have been asked about it. That should be sufficient to dispose of the point: but I address the other matters raised in the context of this issue (Issue (1) in paragraph [234] above) for comprehensiveness.

(3) Had I considered it permissible for the Defendants to rely on their arguments in this regard at this late stage, I would not have felt it right to reject them on the basis advanced by the Claimants that in constructing the FSMA Counterfactual it must be assumed that HP would have projected discontinuance of the hybrid hosting line of business, even though it did in fact discontinue the line of business in 2012. At the time of the bid, I think it more likely than not that HP, in the counterfactual world, would have expected the line of business to continue.

(4) Further, I would accept that, contrary to the Claimants' submissions, there is some logic in Mr Giles's approach in separating out the two aspects of the Cloud business (or, more accurately in fact, three aspects because service and maintenance revenues and costs must also be brought into account). In general terms, it seems to me that there would be some logic in distinguishing between a prepayment model and a pay-as-you-go model.

(5) However, there is also logic, especially in the particular context of the hybrid hosting line of business, of an accounting presentation which reflects what I have found to be the reality: this is that the two lines of business need to be considered as one to present fairly the fact, on the evidence presently available, that the accelerated revenue in the hybrid model is generated at the expense of future revenue streams. Put more simply, on the present evidence, it appears that the reality is that there were not two separate lines of business with separate customers, but simply two different payment methods offered to the same customers for substantially the same product.

(6) Further, there is a real risk that the effect of accounting for the two separately would be to distance or divorce, to an unmeasured and perhaps unmeasurable extent, the revenue of the business line from its true cost.

(7) In that regard, I would accept, of course, that hybrid hosting deals did by their nature generate increased and accelerated net cash flows, with what Mr Giles described as *"positive cash flow implications"*, even though the licence fee element must be accounted for as deferred revenue (see later). I would accept also that the extent to which hybrid hosting revenue came at the expense of *"cannibalising"* (as Mr Bezant put it) SaaS and the *"Other IDOL Cloud"* revenue would require evidence to be quantified, especially given the factors given as examples to the contrary by Mr Giles such as (a) the (unknown) extent to which multi-year hosting deals might be sold other than to existing customers, (b) the (unknown) extent to which existing customers might purchase additional multi-year deals, and/or (c) the (undefined) extent to which there may be features differentiating the multi-year hosting deal and the SaaS (pay-as-you-go)

customer bases (for example, because of the latter not being in a position to pay large up-front fees). However, as it seems to me, these points can provide only a speculative and unquantifiable hope of generating more business (whether from existing or newly-attracted customers) against the economic reality that the price of hybrid hosting deals is a considerable discount of future earnings. That is because only if customers are offered a composite longer-term advantage will they be interested in early payment. The two must be seen together to measure the true success (or not) of Autonomy's IDOL Cloud business, and any growth forecast must likewise be based on the performance of both together.

(8) Thus, I cannot agree with Mr Giles's approach in carving out of historical IDOL Cloud revenue figures a single element to show and project forward from that exceptional growth. The licence fee was the price to the customer of lower subsequent hosting charges: in my judgment, it would not provide a full and accurate picture to look at the two in isolation. Accordingly, I agree with the Claimants that the separation of revenue streams now advocated on behalf of the Defendants could well give a one-sided or skewed view of the growth of IDOL Cloud revenues in a particular period, without taking into account the longer term cost of deep discounting future revenue streams, which would be misleading.

(9) My view in this regard may also be supported by the fact that Mr Giles was unable to provide any evidence of the separate reporting that he considered so commercially obvious having been adopted in any other context or company. That may be because it was a novel, or at least fledgling, business strategy. But it may also be because the treatment suggested is homespun, and its effect might well be to present as a long-term business line what in reality was akin to a short-term promotional selling strategy to accelerate revenue whilst at the same time hiving off the long-term costs (in terms of reduced future revenues) from Autonomy's SaaS business.

(10) The separation suggested could serve to obscure the true nature of the revenue or, alternatively, separate product from cost. I agree with Mr Bezant and the Claimants that growth of hybrid business would probably have an adverse effect on other revenue streams (what the Claimants called *"cannibalisation"*) and in order to understand historical receipts and revenue and to forecast its growth properly it is necessary to consider IDOL Cloud receipts and revenues as a whole. In my view, separation as urged by Mr Giles would carry a risk of perpetuating the effect of what I have found to be a fraudulent acceleration of revenue at the expense of future revenue flows.

(11) I accept that there was a mistaken tendency on the part of Mr Bezant and the Claimants to assume improper motivation when approaching disputed revenues. To that extent, it seems to me this point made on behalf of Dr Lynch has some validity and general importance. However, the suggestion of separating out the *"multi-year hosting revenues"* from the *"Other Cloud revenues"* is a step further, and if adopted would result in the accelerated revenues forming the basis for overestimated forward projections of deferred revenue growth which would not take proper account of the resulting slower growth of SaaS sales and the actual costs in the form of diminished future SaaS revenues.

334. In summary, I consider it more likely than not that HP would have adopted what might be termed a holistic approach to its forecasts for and valuation of Autonomy's IDOL Cloud business, including the deferred revenue referable to receipts from licence sales. Accordingly, I do not consider that Mr Giles's suggested approach of forecasting growth from a segregated part of what is in effect a combined sale and revenue stream would be right, still less should it be presumed to be what HP would have done in circumstances where it was never put to any relevant witness. On the contrary, I think it more likely that HP would have taken IDOL Cloud as a whole, including for the avoidance of doubt the accumulation of substantial deferred revenue and the prospect of accelerating deferred revenue releases, in modelling its likely future cash flows and DCF value. Whether or not in its modelling of IDOL Cloud growth HP would have included "Additional IRM revenues", as Mr Giles also suggested, is my next topic.

(3) Is Mr Giles right that HP projected growth rates by reference to "Additional Iron Mountain revenues" and that such growth rates should be replicated in the FSMA Counterfactual (see Issue (2) in paragraph [233] above)?

335. As to Mr Giles's adoption of higher annual growth rates in his forecasts of revenues in 2013 and 2014 (more precisely, his forecasts on a "trend growth" basis of *"Other IDOL Cloud"*) on the basis of the inclusion of *"Additional Iron Mountain revenues"*, which accounts for an increase in his DCF valuation of about $400 million, the first question I must determine is whether it would be fair to permit the Defendants to advance this argument at this late stage. In my judgment:

(1) It is important first to distinguish between (a) HP's inclusion in the Deal Model of revenues for FY2012 derived from or referable to the acquisition of IRM (which does appear to be the case) and (b) Mr Giles's proposition that it was the inclusion of that *"additional IRM"* revenue and its anticipation of further synergistic growth which explains HP's projection of growth rates for 2013 to 2015 substantially higher than its projected 'stand-alone' growth rates. Mr Giles emphasised that the two were separate in correcting Mr Patton's line of cross-examination:

> *"…you are mixing up two contexts, because the actual additional revenue, over and above organic growth, is a fact…The explanation about the extent to which it* [additional projected growth] *is attributable to Iron Mountain, that's a second issue."*

(2) I agree with Mr Shivji that there is no unfairness in proceeding on the basis that for the purpose of projecting cloud revenues, Mr Sarin and HP aggregated the revenues derived from the cloud businesses of Autonomy and IRM and envisaged that the aggregated businesses would perform better than the businesses on a separate, stand-alone, basis.

(3) I do not think it can realistically be gainsaid that whereas the combination of the two cloud businesses was expected and included in the Deal Model, the Claimants have, in forecasting IDOL Cloud growth by reference to 'organic' performance, erroneously treated Autonomy and IRM (differently) as two standalone businesses going forward. I think it fair to permit the Defendants to argue that this was erroneous.

336. I consider it likely that, for the purposes of its modelling and projections, HP would have included IRM's cloud business as if part of Autonomy's 'organic' IDOL Cloud business: and that would include any synergistic growth from the combination of the two businesses. In that context, I note that the Claimants appear to accept, and in any event, I accept and find, that the July version of the Deal Model did incorporate IRM revenues additional to Autonomy's stand-alone organic revenues. It seems to me to follow, and I find, that the Claimants have not sufficiently taken into account the expected strong performance of the combined entities.

337. Put another way, I consider the Claimants' argument that for the purpose of assessing historic and forecasting future growth of the hybrid hosting line of business, only 'organic' revenues should be included, and that those IRM billings and deferred revenues should be left out of account on the basis that they were 'acquired', is incorrect for the purposes of the RTP. In a sense, the difference between the experts in this respect is another example of their more fundamental difference of approach as to what the Deal Model in the RTP is to represent, and more particularly, whether it is to be constructed by reference to some perceived objective standard or so as to follow, as near as practicable and discernible, the logic of HP's approach in constructing its Deal Model in the Represented Position. In my judgment, the more appropriate course is to adopt HP's logic; and in the present context, I agree with Mr Giles and the Defendants that (as submitted by Mr Shivji) HP's approach was to model the performance of Autonomy and Iron Mountain together as one aggregated business right from the beginning, for all the forecast period. However, the fact is that, as noted in paragraph [328(1)] above, HP was aware, when constructing its Deal Model, about deferred revenue referable to the acquired IRM business, and did not project any growth in deferred revenues from that source for the years 2012 to 2021 (or thereafter), and it would not be right to envisage some different approach on their part in the RTP.

338. That said, HP's inclusion of revenues derived from the IRM acquisition (including revenues increased by synergies and cross-selling opportunities) in its assessment of FY 2012 does not necessarily explain why for the years 2013 to 2015 HP projected growth substantially in excess of standalone growth. That is the reason for my emphasis of the distinction set out in paragraph [335(1)] above. Mr Giles acknowledged this in cross-examination and accepted that the real dispute as to HP's forecast of higher than purely 'organic' or standalone growth rates is *"to what degree they are explained by the Iron Mountain transactions."* The question thus becomes whether the Defendants can fairly provide the answer to that question on the evidence of fact at the Main Trial.

339. As to this further question:

(1) A comparison of the various iterations of HP's Deal Model does show that (a) HP initially sought to model IRM revenues separately and to capture anticipated synergies, (b) HP's assessment was that after its acquisition, IRM would grow much faster than it had pre-acquisition, (c) later versions of the Deal Model, culminating in the final version, forecast revenue growth of the IRM and Autonomy cloud businesses on a combined basis (notwithstanding more general confinement in other contexts to stand-alone or organic revenues), and (d) HP repeatedly changed the growth rates (as their assessment evolved), but in every case they were higher than the organic standalone growth of IRM revenues.

(2) In seeking to explain these more positive projections of cloud growth, the Defendants are, of course, entitled to rely on Mr Sarin's evidence in his witness statement for the Main Trial that HP *"revised our Cloud revenue projections for Autonomy to reflect the contribution from the Iron Mountain hosting business from the second half of 2011"*. In my view, they were entitled to accept and rely on Mr Sarin's evidence in this regard: there was no reason to cross-examine him on his positive averment helpful to their case.

(3) They are also entitled to rely on the documented fact that Mr Johnson (who did not give evidence in these proceedings) made a late change to HP's Deal Model growth rates on 10 August which appears to reflect further optimism about the cloud business; and it was not possible to question Mr Johnson as to the reason (though Mr Sarin was also involved and he might have been asked).

(4) This evidence does appear to me to confirm that HP did project growth on the basis of the combination of the two cloud businesses (even though that was, in one sense, a departure from their usual projection based simply on standalone or organic growth). Nothing in it materially supports Mr Giles's view that this would result in growth rates into the future in excess of those projected for Autonomy's IDOL Cloud business before taking IRM-derived revenues (including any synergistic revenues) into account. Even if Mr Sarin's broad statement (as quoted in sub-paragraph (2) above) might be thought to support the view that he and HP did anticipate some boost to growth, that evidence does not identify what (if indeed any) part or proportion of the growth rate revisions to the Deal Model related to IRM, and does not exclude other factors. It would have been necessary to cross-examine Mr Sarin to elicit or test this.

(5) Mr Giles's analysis will not suffice to cover the evidential gap: it is not a gap that can be filled by expert evidence. Although he rejected any suggestion that his view was *"mere speculation"* and described his view as a professional expert opinion based on his review of the evidence in front of him, he had to accept in cross-examination this is *"ultimately a question of fact."* It is not, in my judgment, a question that can fairly be resolved by untested inference or expert supposition.

340. Furthermore, an analysis by Mr Bezant and the Claimants of HP's IDOL growth rate forecasts (and the resulting CAGR) for 2012 to 2015 in various iterations of the Deal Model which they summarised in Tabular form in their written opening submissions for the Quantum Hearing does appear to support their case that, initially at least, HP did not envisage that the inclusion of IRM revenues would result in any boost to the overall Cloud growth rate. I set out their table below:

Claimants' Table re Evolution of Cloud growth in the Deal Model.

		2012	2013	2014	2015	*CAGR 12–15*
(1)	Pre-IRM announcement	15.2%	16.8%	16.0%	15.0%	*15.9%*
(2)	c. July 2011: — *organic Cloud*	15.2%	16.8%	16.0%	15.0%	*15.9%*
	— *IRM business*	**new**	16.8%	16.0%	15.0%	*same*
(3)	During 4 Aug due diligence call	**37.0%**	**20.0%**	16.0%	15.0%	*17.0%*
(4)	After 4 August due diligence call	**35.0%**	**28.0%**	16.0%	15.0%	*19.5%*
(5)	Mr Johnson's 10 Aug 20211 adjustments	35.0%	**25.0%**	**22.0%**	**18.0%**	*21.6%*

341. The following elaboration was also provided by the Claimants:

(1) The first set of forecasts, derived from a version of the Deal Model dated 12 May 2011, pre-dates the announcement of Autonomy's acquisition of IRM.

(2) The second set is from a version of the Deal Model dated 13 July 2011 which clearly postdates the IRM acquisition and includes a separate model for the IRM business in its "IRM" tab. The Claimants point out that HP applied the same growth forecasts to the newly included IRM business as to Autonomy's existing IDOL Cloud revenues.

(3) The third set is taken from screenshots of the Deal Model shared with Autonomy's management during the 4 August 2011 due diligence call. By that time, IRM revenues have been moved to and assimilated within IDOL Cloud projections, leading to a substantial increase in 2012 growth and a smaller increase in 2013.

(4) The fourth set is from a version of the Deal Model forwarded to HP on 5 August 2011.

(5) The fifth and final set shows the results of changes made by Mr Johnson on 10 August 2011. The Claimants quoted Mr Johnson's explanation that *"OEM growth looks odd, 18% for 3 years in a row so I wanted to modify these to show more cloud growth…"*.

(6) This chronological analysis does appear to support the Claimants' case that HP never projected combined Autonomy and IRM revenue growth to exceed Autonomy's standalone IDOL Cloud growth, and that the upward revisions had some other explanation.

342. I should add that the greatly increased growth rate in consequence of the synergies to be derived from the acquisition of IRM and the inclusion of the "additional IRM revenues" as posited by Mr Giles does more generally appear unlikely. Although, given Autonomy's number 1 position and IRM's number 3 position in the field, some synergies and growth might reasonably have been contemplated, the digital business of IRM which Autonomy acquired was not that large. The acquisition price was $380 million with forward revenue estimates of between $130 million and $140 million (and thus a multiple of barely 3x revenues).

343. In short, whilst it would not seem to me to be right to exclude from projections the IRM revenues and synergistic growth of the combined businesses, nor to leave out of account the possibility of a positive boost to growth in the combined entity's overall cloud business, I cannot accept Mr Giles's approach in treating HP's projected growth rates in excess of standalone growth rates as entirely referable to and explained by *"Additional IRM revenues"* derived from synergies enabled by the combination of the businesses. In circumstances where neither the amount of the difference nor the proposition that all the revisions related to expected revenues derived from or generated by the acquisition of IRM was addressed to Mr Sarin, the state of admissible evidence is not such as to support the Defendants' case that HP projected super-growth by reference to the revenues and synergies expected from the assimilation of the IRM business, still less does it enable any estimation of any increase in growth rates.

(4) Is Mr Bezant's focus on H1 2011 for IDOL Cloud revenue projection flawed (Issue (3) in paragraph [233] above)?

344. I agree with the Defendants that Mr Bezant has focused too exclusively on H1 2011 in projecting IDOL Cloud revenues in the RTP Deal Model. That period does not seem to me to be representative of the overall performance of the IDOL Cloud line of business, and using it as a basis for projecting growth leads to results too surprising to be reliable.

345. In the result, and as stated previously, I consider Mr Bezant's assessment of IDOL Cloud growth of just 0.5% in H2 2011 and FY 2012 to be flawed. It is also, in my view, unrealistic. That is so especially having regard to (a) the *"shift to the Cloud"* anticipated by the market and which Autonomy was well placed to exploit, and (b) the counter-intuitive and (to my mind) plainly flawed effect of Mr Bezant's approach to near-term Cloud growth.[73]

346. Further, and although I have not agreed with Mr Giles's approach or conclusions as to the extent to which deferred revenue can be included in the assessment of historic and future growth (see above), it appears to me to be permissible and important to have regard to deferred revenue growth in assessing the momentum and future trajectory of the line of business which has generated it. Once proper account is taken of deferred revenue, even the performance in Q1 2011 is considerably less disappointing and tells strongly against Mr Bezant's approach in taking the figure for 'realised' revenue growth in that single period as an accurate basis from which to extrapolate future performance.

347. With the important caveat that cash must be distinguished, I have found helpful as illustrating the broader economic picture I consider HP would have had in mind the bar chart provided by the Defendants in opening, as set out below paragraph [319] above.

348. However, I consider that the Defendants also tended to adopt too selective an approach, and take a growth figure in one period as indicative of the future without taking into account the overall pattern revealed by comparison with the immediately preceding and subsequent periods: for example, Mr Shivji repeatedly emphasised the figure of 28% growth in the year 2010, but without full recognition of the fact that growth followed a full year of 20% decline in 2009.

(5) Has Mr Bezant failed properly to reflect the characteristics and strength of Autonomy' s overall Cloud business and its IDOL Cloud offering in particular?

349. More generally, I agree for the most part with the Defendants' fundamental criticism that Mr Bezant does not appear fully to have understood, or has simply not properly reflected, the established strengths, reputation and resulting values of aspects of Autonomy's pre-existing Cloud business. All of the major industry analysts (Gartner, IDC and Forrester) considered that Autonomy had a market leading offering.

350. As already noted in paragraph [310] above, Mr Bezant had to accept in cross-examination that Autonomy had the world's largest private cloud infrastructure; and was the leading company by the amount of data stored in that 'space', which might suggest its growth would at least keep up with the market. I did not find convincing Mr

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[73] Handout 7 provided to me by Mr Shivji illustrated the decline: on the RCC, in 2011, Mr Bezant's Cloud revenues are down 27% on the Deal Model ($290.3 million to $211.7 million); by 2021, Mr Bezant's forecast revenues are down 62% ($1,385 million to $526.3 million).

Bezant's evidence that he fully appreciated this aspect of Autonomy's business and its strength, and I note also his admission that he was not aware of HP's particular interest in Autonomy's position as a major player in the 'space'. In my view, Mr Bezant did not dispel the impression (and the view that I formed) that he did, in his reports, underestimate, and indeed ignore, this aspect of Autonomy's IDOL Cloud business, and the rapid growth expected of it and the Iron Mountain business it had acquired. The fact is that Autonomy, especially with the addition of the IRM cloud business, was and was likely to continue to be a well-established and exciting player in a rapidly growing market. As the Defendants emphasised, this was indeed a facet of Autonomy's business of interest to HP, and part of the rationale of *'Project Cielo'*. It is notable that the Claimants did not seek to gainsay or even to address this in their closing submissions, whether written or oral.

351. In short, in my view, Autonomy was, and if properly managed, would have continued to be, a strong, and in some contexts pre-eminent, provider of cloud infrastructure and software, which would in its RTP have broadly maintained success and market share, albeit from a smaller earned revenue base. In my judgment, Mr Bezant's approach has not given enough consideration to these more general strengths and the consequent likely momentum and trajectory of Autonomy's IDOL Cloud offering.

(6) My assessment as to the interpolation issue re IDOL Cloud revenue growth

352. The combination of (a) the fact that Mr Bezant has modelled IDOL Cloud growth rates for the near term (and in particular, in 2012) which, in my judgment, are far too low and (b) the fact that Mr Giles has modelled growth rates based on the separation of particular revenue streams and the inclusion of "additional IRM revenues" derived from the aggregation of the IDOL Cloud and IRM cloud businesses which are too high, has resulted in a gulf between them as to the significance of the dispute about the interpolation method and factor to be used to plot the pattern or "flight path" for IDOL Cloud growth from 2012 to 2021 and beyond (and see paragraph [314] above).

353. My task of identifying an appropriate method of interpolation is the more difficult because (as noted previously) Mr Bezant has (inconsistently with the Claimants' own presentation of their position) apparently disavowed any specific interpolation factor, whilst Mr Giles has, further to his separation of multi-year hosting from Other Cloud revenues, proposed a mixed solution: a factor of 0.3 for the one stream, and a 'trend growth' of 4.7% for the latter, but he has put forward no 'blended' rate. Thus, Mr Giles has provided sensitivity models to assess the impact of different interpolation factors to the one; but (as noted previously) he has never provided a recommended factor for the combined revenues.

354. Further, I cannot accept Mr Giles's start and end figures, which provide the two anchor points to be linked by the 'flight path'. In particular, I do not accept his projection of multi-year hosting revenue growth (excluding IRM revenues) of 102.5%, 74.7%, 55.3%, 41.7% and 32.2% between 2011 and 2015,[74] tapering down to 25.5% in 2016, 20.9% in 2017, 17.6% in 2018, 15.3% in 2019, 13.7% in 2020 to reduce to 10% in

[74] Compared to HP's forecasts in its Deal Model of IDOL Cloud revenue growth of 52.7% (including IRM revenues, 13.0% excluding) in 2011, 35.0% in 2012 and 25.0% in 2013 (with no 'additional IRM revenues' from 2013) and forecast growth trending down to 10.0% by 2021.

2021.[75] Those figures, to which he applies his recommended interpolation factor of 0.3, are based on segregating multi-year revenues, treating that as a separate revenue stream, and then forecasting growth by reference to figures swollen by receipts of cash in advance, without any downward adjustment of the cost of discounting, nor for the potential unreliability of and potentially 'lumpy' nature of future increments after the initial years.

355. In these circumstances, I am satisfied that Mr Giles's estimate of the difference that the choice of interpolation factor for multi-year hosting revenues makes (some $942 million) is exaggerated, and based on a number of contentions as to the construction of the RTP Deal Model that I have rejected. In particular, I cannot accept the application of Mr Giles's suggested interpolation factors separately to (a) multi-year hosting revenues and to (b) deferred revenue growth; and it is this which has the dramatic impact which results in numerical terms in such a substantial difference between the experts.

356. However, and once again, I cannot accept the Claimants' approach either. In particular,

(1) Mr Bezant's figures of 0.5% growth in IDOL Cloud revenues (excluding IRM cloud revenues) for H2 2011 and FY2012, which not only exclude IRM revenues altogether but also take no account of deferred revenue nor the underlying fact that the requirement to account for revenues from licence fees does not signify any reduction in the actual billings, sales and business done nor any substantial erosion of its momentum.

(2) The selection of the 0.5% figure for the initial historic period results inevitably in an accelerated and cumulative depression of Autonomy's IDOL Cloud forecasts throughout the forecast period which is not realistic.

(3) I agree with Mr Giles that Mr Bezant's forecast of growth of 12% for 2013 (compared to 25.0% projected by HP) is too low: again, it is based on a misunderstanding of the true level and potential of Autonomy's cloud business (especially as augmented by IRM cloud).

(4) I agree also that Mr Bezant has not been consistent in his reliance on Forrester. Thus, although he assumes that by 2021 Autonomy's relevant business would be growing in line with Forrester's predicted growth rate of 6% for the SaaS market, he appears to have ignored or substantially over-discounted Autonomy's growth between 2012 and 2021, and to have assumed that Autonomy would have progressively lost ground relative to the boom in the market that Forrester predicted for those intermediate years.

357. Overall, I do not consider that Mr Bezant's approach, implying (on the basis of lower YoY Cloud growth rates between 2009 and 2011) relatively anaemic growth rates between 2012 and 2020 and a marked failure to benefit from the boom years for the market between 2012 and 2020 and a striking collapse in IDOL Cloud market share by 2021, is realistic. Such a substantial collapse is, in my view, implausible especially in light of the sustained historical momentum of Autonomy's IDOL Cloud business in overall billing terms (i.e. revenue plus change in deferred revenue), (b) its excellent

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[75] Compared to HP's forecasts in its Deal Model of 22.0% in 2014, 18.0% in 2015, 14.0% in 2016, 13.0% in 2017, 12.0% in 2018, 11.5% in 2019, 11.0% in 2020, 10.0% in 2021.

software and infrastructure (which were unaffected by the accounting adjustments) and its premium reputation as a market leader, especially in unstructured data which was the market which was considered by analysts to have the highest growth potential; (c) the general expectation in the market that the cloud market was about to take off (as indeed it did, exponentially), (d) the reinforcement of Autonomy's leading position in the private cloud market and the enhanced prospect of additional synergistic growth pursuant to the integration of the IRM cloud business after 2011, and (e) the fact that many of the technologies that Autonomy was developing in 2011 (including the cloud/archiving, intelligent search and drawing meaning from unstructured data) could be expected to be boosted and developed dramatically under HP.

358. In these circumstances, in which Mr Giles has provided no 'blended' rate to model IDOL Cloud growth as a whole, and Mr Bezant has declined to enter into the fray except on a rather opaque and to my mind excessively jaundiced basis, I am left only with a broad brush to fulfil the task of determining the pattern of IDOL Cloud (with IRM cloud growth) until 2021.

359. However, there is both guidance and symmetry in the fact that (as I have already signalled) HP itself did not fix on any specified interpolation rate and adopted a more open-textured and subjective approach in projecting the 'flight path' with considerable reliance on a more general view of the development of cloud in the market. Thus, HP developed its view of the 'flight path' largely by reference not to Autonomy's past, but analysts' forecast of future prospects in the market concerned. HP placed particular reliance on sources such as (in particular) Gartner and Forrester, both of which forecast very rapid growth in the cloud market generally. I propose to adopt the same basic approach.

360. I consider that in the FSMA Counterfactual it is likely that Gartner and Forrester would have continued to regard Autonomy as having a market leading offering and as very well placed to be a leading performer in a general market they would have continued to consider would enjoy very rapid growth.

361. In short, I consider that HP would have projected a flight path or transition curve of IDOL Cloud and IRM cloud growth very similar in the RTP to that which they projected in the Represented Position, and broadly consistent with an interpolation rate of 0.35 and an end rate just under 10%.

My overall conclusion in respect of the proper estimate of the DCF value of IDOL Cloud

362. I have not accepted a number of Mr Giles's re-engineered accounting presentations. More particularly, I have not accepted his approach in separating out *'multi-year hosting'* and basing projections of growth on revenues inflated by advance payments, for which there is no evidence of incremental growth, and which cannot reasonably be reported separately from the rest of the cloud business undertaken with what appears to be substantially the same client base. Nor have I accepted his position as to the quantum to be attributed to projected growth of "Additional IRM" revenues, which I consider exaggerated the likely effect of the synergistic combination of the two businesses (though I have accepted that IRM cloud revenues should be brought into account, as also should the basic fact that the combination of the two businesses was likely to yield savings and enhanced revenues, and further reinforce Autonomy's position as a lead player in the cloud market).

363. Nevertheless, I consider Mr Giles's evaluation of the future likely success of Autonomy's IDOL Cloud business (including IRM cloud business, whose e-archiving and other services analysts also rated highly) in securing large deals, and his overall assessment of its momentum and potential, to be a much more realistic reflection of the way HP would have looked at this part of Autonomy's overall enterprise in the RTP than Mr Bezant's forecast of relative failure and ultimately very severely deteriorated market share.

364. In the RTP, as in the Represented Position, I consider that HP would have expected IDOL Cloud to be competitively placed to benefit from a market-wide shift from traditional licencing arrangements to cloud services over the longer term and to have substantially defended its percentage share.

365. I do not accept Mr Bezant's refrain that (to quote the Claimants' written opening submissions for the Quantum Hearing) *"True IDOL Cloud revenues were around a third less than those in the Deal Model (and the difference worsened over time)."* So much is riding on the limited meaning of the word "revenues" as to make this proposition liable to be misleading. As may have become obscured by the dispute over the proper accounting treatment of deferred revenue, and my decision that on the sale of a licence in a multi-year hosting deal the sale proceeds must be booked to deferred revenue and released into revenue over the period of the deal, the commercial fact remains that the cash price and aggregate receipt is not altered, nor is the cash flow. Autonomy's overall economic activity remained, in this respect, substantially as before. As Mr Giles puts it in his third report, *"Deferring revenue certainly lowers profits in the year of the deferral. However, it does not reduce profitability overall. This is because the deferral shifts profits to later years."*

366. Thus, confining the picture to earned revenues, even including Deferred Revenue Releases, does not tell the whole story: and there is, at least to that extent, substance in Mr Giles's view that the function of a DCF valuation is to deconstruct accounting requirements to get to the truth about a company's performance in terms of its momentum (as shown by billings) and cashflow prospects.

367. Overall, therefore, in terms of IDOL Cloud transactions generated and business done in each quarter (as distinct from the proper accounting of them), and in terms of the immediate receipt of cash (and thus cash flow), Autonomy's IDOL Cloud business is little different in the RTP than in the Represented Position as reflected in the Deal Model. I do not accept the submission made by Mr Patton at the beginning of his oral opening that there was a reduction in IDOL Cloud revenues which *"reveals…that Autonomy was not successfully pivoting to what everyone perceived to be the future of this industry."* That submission is falsely premised on cutting out entirely the deferred revenue generated. The reality was that Autonomy was in a strong position to "pivot" to the cloud, and any delay would not have been the result of some collapse in its IDOL Cloud (and IRM cloud) business, but because Autonomy's IDOL Product business, with its strength in "big data" (which Mr Shivji described, not unrealistically, as *"the precursor to AI"*), was growing strongly too (see also paragraph [223] above).

368. In my judgment, Mr Bezant has substantially understated (a) IDOL Cloud historic growth prior to H2 2011 in the RTP and (b) what growth for the IDOL Cloud line of business to 2021 and beyond should be extrapolated from the recreated pre-H2 2011 pattern and (c) the DCF value of the line of business in the round.

369. For the avoidance of doubt, I do not accept any suggestion of some slower or reduced *'shift to the cloud'* as a consequence of the larger amounts to be characterised as IDOL Product in the RTP. As Mr Giles explains in his third report, the real shift is in consequence of the re-characterisation of revenues in the RTP, resulting in more revenue being accounted for as IDOL Product and less as IDOL Cloud. This alters the 'revenue mix' (in terms of historically having a greater proportion of IDOL Product, and less IDOL Cloud and IDOL OEM), and also results in an over-estimate of the extent to which there had already been a *"shift to the cloud"*, both of which, I accept, do affect the attraction of the business, in this case negatively. Mr Giles himself accepted that the mix was less attractive; but that was, in his view, largely because of the loss of any substantial OEM business, which (though he conceded it to be *"the most attractive and highest growing element"*) he regarded *"as quite a small element, because OEM was quite a small part of the whole"* (even in the Represented Position).

370. Further, Mr Giles emphasises that the expansion of 'big data' etc was also an exciting sector of the overall market; and further, the mix of revenue did not substantially affect the underlying propensity of Autonomy to take advantage of the market shift to the cloud. He stressed that in the RTP and the FSMA Counterfactual, as in its Represented Position, Autonomy was an established cloud software provider, with a well-regarded cloud infrastructure, and with the same prospects as ever of retaining the same market share in the cloud sector.

371. The reality, as I see it, is that in terms of its billings and cash flow-generating capacity, and its prospects in the round, the IDOL Cloud business as a whole was not as different from its position as represented as Mr Bezant and the Claimants have sought to suggest. I do not consider that the prospects and value HP (and analysts whose views it also took into account) would have ascribed to Autonomy's IDOL Cloud business in the RTP would have so differed from its approach in the Represented Position as to warrant the reduction in the perceived DCF valuation of Autonomy by anything like the amount suggested by the Claimants.

372. That is so even though its cash flow generating capacity is exaggerated by Mr Giles's approach in treating multi-year hosting deals as a separate, reliable and recurring source without regard to the reality of doubts as to their sustainability and their cost in terms of discounted future revenues.

373. It is of some general interest in this context that when EY and Duff & Phelps were engaged to assist with the impairment analysis after the 'rebasing' exercise and HP's report of a $8.8 billion impairment of Autonomy's goodwill, including $5.5 billion referable to the alleged fraud, in December 2012, EY stated that they did not believe that the hybrid hosting sales would have *"a significant impact on the "run-rate" cash flows of the business"*. They added that, though accounted for in breach of US GAAP, and though the licence sales were to be *"followed by lower ongoing support revenue streams",* they did not believe that this would materially impact the valuation of Autonomy using a DCF valuation.[76]

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[76] EY ultimately considered that the *"revenue adjustments in the historic financial information (as these were used as the basis for the projected financial information)…do not have a material impact on the original valuation model (less than $300 million)."* I consider that figure too low for the total difference on the evidence

374. I also adopt, with some tempering to reflect uncertainties, Mr Giles's further *'sense check'* of what would happen if IDOL Cloud/IRM cloud revenues simply kept pace with the anticipated growth of the market, using Forrester's figures (Forrester being, as previously noted, a forecaster highly regarded by Mr Bezant). As to this:

(1) The Deal Model envisaged that Autonomy's cloud revenues would be $391.8m for 2012, equating to around 1% of the size of the market as predicted by Forrester at the time of $33,090 million.

(2) Forrester envisaged a multiple increase in the market of 6.25 from 2011 to 2020 ($21 billion to $132 billion). The First Defendant extrapolated from Forrester's forecast that by 2021 the market would be $140.5 billion. The Deal Model envisaged that Autonomy's IDOL Cloud turnover would be over $1.3bn in 2021, which is very slightly less than 1% of that. Multiplying Mr Bezant's 2011 revenues of $211.7 million by the same factor as is implicit in Forrester's assessment of market growth between 2012 and 2020 would give total revenues of $1.3 billion for 2020.

(3) This is higher than Mr Giles's estimate of $1.1 billion ($1.086 billion plus deferred revenues of $47.9 million).

(4) In his sixth report, Mr Bezant envisages Cloud revenues of c $279 million in 2012 out of a total market of $33,090 million, which is slightly less than 1%.

(5) However, on his calculations, Cloud revenues would have grown only to c $526 million by 2021, out of total market revenues projected by then of $140 billion, that is only around 0.4%.

(6) This assessment by reference to Forrester's projection of future sector growth tends to confirm my view that Mr Bezant has underestimated the strength of Autonomy's cloud offering and is consistently too pessimistic about IDOL Cloud growth.

(7) In my view, it might have been envisaged that Autonomy's market share would have slipped a little, but with its *"almost magical"* technology and the expectation of HP's network and support in a fast-growing and buoyant market, and its revenues from its IDOL Cloud offering, HP would have expected it either to outperform or grow broadly in line with the sector, enabling Autonomy to retain a market share not very substantially less than 1% of the total market by 2021 (and certainly considerably greater than forecast by Mr Bezant), with similar continuing prospects in terms of keeping pace with the market into the future.

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now available and in light of my conclusions in my Main Judgment; but I am grateful to be able to resort to my broad brush in noting their further observation that, even with the advantage of input into HP's Deal Model at the time (see paragraph [417] of my Main Judgment), they did *"not believe it is appropriate to consider hypothetical analysis to quantify an impact on purchase accounting. It is not possible to understand how all the various assumptions developed in estimating fair value would change in light of varying one or several other assumptions."*

(13) IDOL OEM

375. As will already be apparent from the numerous references to Autonomy's IDOL OEM business previously in this judgment, the issues relating to IDOL OEM were of a different nature to those relating to IDOL Product and IDOL Cloud. Whereas in the case of IDOL Product and IDOL Cloud business the dispute is as to growth rates and margins, there is no such disagreement in the case of IDOL OEM: the experts have agreed for the purposes of their reports that, according to the narrow definition of "OEM business" that I have adopted in my Main Judgment (see, for example, paragraphs [2974], [3135] and [4125] in that judgment), Autonomy's OEM business properly so-called (as to which see below) was negligible and would have had a zero-growth rate from 2012 to 2021.

376. It is not disputed that Autonomy's OEM business was, and was perceived by HP to be, particularly valuable. As explained in my Main Judgment, OEM revenues could be expected to be recurring and (because the manufacturer which was embedding IDOL software under licence would have itself borne most of the sales costs) very high margin. OEM business also demonstrated high regard for IDOL amongst other software companies, and widespread acceptance of the excellence of Autonomy software in the market. It follows that the absence of any substantial OEM business would have negatively affected HP's perception of Autonomy's value, even allowing for the fact that in the Represented Position HP included a figure for dis-synergies (of some $179 million, referable to OEMs competing with HP discontinuing their use of IDOL as embedded software after the Acquisition). However, the experts are disagreed as to the extent of this negative effect.

377. In that regard, it is important to bear in mind that although (and as a corollary of the narrow definition of true 'OEM business' that I have adopted) I have concluded that what Autonomy described as 'OEM-derived' business lacked essential characteristics of and was misleadingly described as true OEM business, that 'OEM-derived' business did nevertheless generate substantial revenues. The 'delivery mechanism' could be expected to continue after and notwithstanding the re-allocation of its revenues (predominantly) as IDOL Product revenues in the restated RCC and in the RTP.

378. The issue is thus not as to the performance of IDOL OEM as a separate business line, but rather as to the significance in terms of the forecasts of the future growth rate of IDOL Product and Autonomy, and in terms of the synergy value to HP of Autonomy's business, of Autonomy not having any substantial OEM business at all, and the allocation of Autonomy's 'OEM-derived' business and revenues to IDOL Product, resulting in a different and arguably less attractive mix of business lines and proven delivery methods for IDOL software.

379. In summary:

(1) Mr Bezant emphasises not only that HP would have regarded the true 'mix' of Autonomy's business lines once OEM business was reclassified as considerably less attractive, but also that HP would have expected lower growth because 'derived revenues' had not the recurring or 'annuity-like' quality of true OEM business and (more generally) because the market was moving away from IDOL Product (to which 'derived revenues' are now be allocated). Mr Bezant also stresses what he describes as the *"lumpy and volatile"* nature of IDOL Product

revenues and *"an inherently greater level of uncertainty as regards future IDOL Product revenues compared to expectations of recurring revenue streams"*.

(2) Mr Giles accepts that, without a separate and substantial OEM business, Autonomy would have been less attractive to HP; but, as he put it when cross-examined, he considers it *"actually quite a small issue"*. He emphasises that (quoting again from his evidence in cross-examination) that although the mix of the various delivery methods for IDOL software changed, *"overall, the same amount of cash has been collected and growth is higher…You have to look at the whole picture. And the picture is that the core IDOL is growing more quickly…"* Furthermore, the growth of IDOL Product, partly in consequence of the re-allocation of 'IDOL-derived' revenue, would not have been a disappointment. He considers that investors would have been excited by stellar growth of IDOL Product (see also paragraph [370] above): it would represent growth *"that is exciting: big data, artificial intelligence, machine learning…for use on their own premises, rather than for use on Autonomy's premises."*

380. These different approaches on the part of the two experts have informed their (very different) assessments of Autonomy's growth potential, and the other parameters making up their overall conclusions (including their assessments of synergy values and ultimately the likely agreed bid price). However, neither expert placed a value separately on the effect of the reclassification as IDOL Product of substantially the whole of what Autonomy had represented was its OEM business. Both experts made adjustments by reference to their (very different) assessments of Autonomy's other delivery methods (IDOL Product, IDOL Cloud and Hosting).

381. I take the same approach. Plainly, and as I have found in my Main Judgment, Autonomy's OEM business as it was represented to be was an impressive selling point from which HP took comfort (as a litmus test of IDOL's accepted excellence) and on which it placed reliance as offering reliable, recurring, high margin growth. Even if, in the RTP, Autonomy had chosen to explain and promote the attributes of OEM-derived (which I accept there were), that business had not the cachet of the true OEM business which Autonomy was represented to have established. Its absence might have been a negative influence on analysts and the market; and especially in the negotiations on the bid price in the RTP, which I address later, Dr Lynch would not have had and been in a position to parade this successful line of business and attractive business 'mix'. All this could (and as I explain later, would) have affected the bid price.

382. However, although OEM business was an attractive selling point, I consider that Mr Bezant and the Claimants have exaggerated the adverse effect on Autonomy's growth potential of the reallocation to IDOL Product of revenues derived from what had been presented to be OEM business. I suspect that the adverse effect would have been attenuated by an appreciation of the attributes of OEM-derived business. Further, I broadly accept Mr Giles's conclusion that overall, in terms of growth potential, the elimination of the OEM revenue category contributed materially to some erosion of the initially higher total revenue growth rates assumed in HP's Deal Model, but its main effect was to shift revenue between categories, contributing to enhanced IDOL Product growth. For reasons I have previously explained, I consider that this would have been more resilient than Mr Bezant allowed (not least because he appears to have overlooked important features of the business within the IDOL Product metric, such as the market potential and Autonomy's dominance in big data and machine learning). I am not

persuaded (contrary to Mr Bezant's suggestion) that the categorisation of Autonomy for the purpose of selecting comparator companies for trading and transaction multiples analysis would have been altered by this factor. Nor am I persuaded that it would affect materially the choice of interpolation factor or the bases of calculating Terminal Value (to which I turn next).

(14) Terminal Value calculation

383. So far, I have been addressing separately the component businesses together comprising Core IDOL. I turn now to a difference between the experts which applies to Core IDOL as a whole: this concerns the appropriate figure for the *"Terminal Value"* in the DCF valuation.

384. Terminal value is estimated in the last year of the forecast period (here, 2021) and is a sum representing the capitalised value of all future cash flows beyond the forecast period.

385. For the purpose of a DCF valuation, terminal cash flows (cash flows after the forecast period, in perpetuity) are projected on the basis of an assumption that the business has reached a "steady state" or, in other words, that it no longer should be taken as likely to realise opportunities for abnormal growth.

386. Since it represents the capitalised value of the long-term growth prospects of the business, measured by its cash flows after the end of the forecast period, terminal value usually accounts for a large proportion of the overall DCF valuation.

387. Mr Bezant describes (and I took both experts to agree) the key factors affecting a terminal value calculation as being the level of, and relationship between:

(1) the assumed growth rate applying after 2021 (that is, after the explicit forecast period), which is known as the *"Terminal growth rate";* and

(2) the appropriate discount factor, usually taken to be the business's WACC.

Terminal Growth Rate: the differences between the experts

388. In HP's Deal Model in the Represented Position, HP forecast Autonomy's free cash flows to grow at 8.5% per annum in 2021, and then assumed a terminal growth rate of 4% per annum from 2022 into perpetuity. The Deal Model described that rate as being for *"hyper-growth sectors"*.

389. HP's adoption of 4% was within the ranges considered by its financial advisors in their respective DCF valuation analyses. Thus:

(1) Perella Weinberg forecast free cash flows to be growing at 11% per annum in 2016, and assumed terminal growth rates of between 3% and 4% per annum from 2017 onwards.

(2) BarCap forecast free cash flows to grow at 8% per annum in 2021, and assumed terminal growth rates of between 3% and 5% per annum from 2022 onwards.

390. In his reports for the Main Trial, Mr Bezant considered that a long-term assumption of between 3% and 4% was reasonable in the 'True Position'. He based this on his view that the software industry and parts (at least) of Autonomy's business had not yet reached maturity or "steady state" by 2021, and the long-term growth assumption should, therefore, be a blend between (a) a further period of growth above the long-term growth rate and (b) thereafter, long-term growth of between 2% and 3% per annum into perpetuity.[77]

391. However, in his sixth report, prepared specifically for the Quantum Hearing, Mr Bezant expressed his opinion that a valuer of Autonomy, informed by the RTP, would likely have used a terminal growth assumption of 3.5%, which of course is lower than the 4% which HP used in the Deal Model.

392. He relied particularly on the following for that downgrade to 3.5% (which is the same percentage that he selected in his first report, which did not take into account the $1 billion increase in his estimated valuation having regard to my findings in respect of the Excluded Transactions):

(1) the lower historical revenues and revenue growth rates in the RTP compared to the Represented Position;

(2) the reversal of the forecasted relative growth rates of IDOL Product and IDOL Cloud, and the weighting of Autonomy's business less to the *"hyper-growth sectors"* (as to which, whereas HP forecast that by 2021, IDOL Cloud and IDOL OEM would represent 63.3% of total revenues, Mr Giles, in his third report, projected IDOL OEM to be negligible (or in other words, not growing at all) and the IDOL Cloud proportion to be smaller (36.1%) than HP had projected (45.7%)); and

(3) the implication (on Mr Bezant's assessment) that "*Autonomy's technology was less attractive and not as widely adopted as had appeared in the Represented Position".* In that context, Mr Bezant emphasised especially the effect that, on the basis of my conclusion in my Main Judgment that the transactions listed in Schedule 8 of the RRAPoC were misclassified and should be treated, not as OEM transactions, but as IDOL Product transactions, Autonomy had no substantial OEM business. He considers that this implies that Autonomy's technology was not as successful or as widely adopted in the market as Represented.

393. Mr Giles did not accept this reduction. He does not consider the reduction in the growth rate from 4% per annum to 3.5% per annum for the period after 2021 to be justified. He considers that the same growth rate of 4% should be adopted in the RTP as HP adopted in the Deal Model. In large part this reflects his view about Autonomy's historic and forecast growth, and his view that in the RTP Autonomy is just as much to be treated as being in the *"hyper-growth sector"* as it was in the Represented Position.

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[77] He further explained his thought process in that context on the basis that a terminal growth rate of 3.5% can be understood as having the same effect in valuation terms (assuming a WACC of 10%) as assuming, say, 5% growth for 4 to 5 more years, followed thereafter by 3.0% growth in perpetuity.

394. In Mr Giles's opinion:

(1) even if its overall revenues were lower, Mr Bezant is wrong to suppose that Autonomy's historical growth was lower in economic terms: the stripping out of hardware sales in the RTP did reduce overall revenues compared to the Represented Position, but did not alter its cash generating capacity, nor did it reduce revenues or diminish prospects in Autonomy's software business. Indeed, on Mr Giles's approach (as elaborated in this judgment), *"Autonomy was growing more quickly on the year-on-year basis in the Restated Position in each of the four quarters to 30 June 2011"*; and

(2) in any event, (a) size is not an indicator of growth, and there is no reason why Autonomy would grow less quickly in the future on the basis of its smaller size; (b) in Mr Giles's view, *"in an economic sense, Autonomy was not a smaller business"* ; and (c) Autonomy's technology is no less attractive in the RTP: it was considered world-beating and perceived by HP to be *"almost magical"* and moreover, *"free cash flows generated from the sales of Autonomy technology, not the revenue recognised thereon, are the best indicator of its attractiveness to customers…because free cash flows are the excess customers are prepared to pay for that technology over and above the cost to Autonomy of creating and distributing that technology"* and, in fact, *"In the Restated Position, the apparent cash flows generated by the software business are in fact higher than originally presented not decreased and therefore, the technology would appear more, not less, attractive."*

(3) With particular regard to the position in relation to what was represented to be the low-cost, high gross margin IDOL OEM business, which the Claimants had taken as the litmus test of the success and market penetration of Autonomy's technology and which in the RTP is much smaller than was represented, Mr Giles's answer is that *"Although Autonomy had an arguably less attractive mix of revenue than in the Reported Position (on account of the significantly smaller OEM business), the growth in IDOL Product and the IDOL Cloud multi-year hosting deals was outstanding."*

(4) More generally, Mr Giles reiterated his central theme that in the RTP Autonomy's organic growth was higher, and improving; its gross margins were higher, and it required less capital expenditure to generate profits (and therefore higher cash flows), all telling in favour of maintaining the terminal growth rate figure to be adopted as no lower than 4%.

395. In rejecting Mr Bezant's reduction of his terminal growth rate from 4% to 3.5% Mr Giles makes the following points in addition to his more general position that Mr Bezant's outlook and his choice of a reduced terminal growth rate is infected by his unduly pessimistic assessment of Autonomy's growth rates, both historical and forecast:

(1) The long term growth rate (for ten years or more) is generally one that is chosen by reference to the sector or the economy as a whole. In this case, in the Represented Position, HP applied a sector growth rate, and chose a nominal rate of 4% for what it called *"hyper growth sectors"*.

(2) This was and remains a conservative rate in circumstances where the markets in which Autonomy operated were expected to grow rapidly for the foreseeable future, and the estimates for the economy as a whole, measured by reference to long-term US GDP real growth, was 2.7% or 4.7% in actual money terms if inflation was expected to be just 2% per annum.

(3) As Mr Bezant accepted at the Main Trial, there is no reason why the accounting allegations should change HP's assessment of the sector growth rates nor any suggestion that the expectation of market growth would alter.

(4) HP's belief in the Represented Position was that Autonomy was not yet a mature company and would not be so by the end of the forecast period: it would still have the potential for growth in line with the sector.

(5) There is no reason why, in the RTP, HP would expect Autonomy, with its market-leading technology, suddenly to underperform the sector.

396. Mr Giles refers also to the correlation between terminal growth rates and (a) long-term inflation rates and (b) GDP growth, and suggests that by reference to those figures, which connote nominal growth of between 4% and 5%, a terminal growth rate of between 4% and 5% was indicated. He goes on to suggest that Mr Bezant's own logic would be to calculate terminal growth rate as a composite made up of (a) growth of 2% above long-term growth for a period of 4 to 5 years and (b) nominal long-term growth of 4.5%, resulting, after taking into account and adding a forecast for inflation, in a composite rate calculated by Mr Giles as (in aggregate) 4.9%.

397. Nevertheless, consistently with his overall approach of seeking to re-model HP's Deal Model to reflect the RTP, Mr Giles abides by the rate of 4.0% as the figure adopted by HP, which he considers realistic but conservative, and which he adopts in calculating terminal value in the RTP.

The discount rate: WACC

398. A discount factor must be chosen to calculate the present capitalised value of future cash flows. As explained by Mr Bezant in his first report, in conventional finance theory, the appropriate discount rate to apply to expected future cash flows in calculating their present value is a company's WACC. He defined this as:

> *"the opportunity cost of capital (that is, the expected rate of return on equivalent investment alternatives in the capital market), measured as the average rate of return required by equity and debt investors in that market, weighted by the typical proportion of equity to debt."* [78]

[78] In his witness statement for the Main Trial, Mr Sarin described WACC as:

> *"the return that investors in a company (in this case Autonomy) expect on their investments having regard to the capital structure (e.g. equity and debt) and risk. As typically there are both equity and debt investors in a company, the calculation generally results in an average of the returns that equity and debt respectively investors would expect, weighted by the amount of equity versus debt that one would normally expect in such a business. For example, using a 10% WACC as a discount rate*

399. WACC is usually deployed in 0.5 or 1.0 percentage increments. The lower the discount rate, the higher the valuation. Investment analysts, and HP's and Autonomy's financial advisors at the time, had used a WACC of between 8.5% and 11.5%. However, HP had settled on the mid-point of around 10% and used it in its Deal Model in the Represented Position.

400. Mr Bezant adopted the same 10% rate in all his reports, having regard to (a) contemporaneous investment analysts' views (which varied between 8.5% and 11.5%, indicating a broad consensus view of 10%), (b) Autonomy's December 2010 annual report indicating a figure of 12.8% and (c) a formula commonly used based on the Capital Asset Pricing Model ("CAPM"). It is to be noted as to (c), however, that Mr Bezant's own calculation of Autonomy's WACC based on the CAPM was in fact lower at 7.5%. He explained, in his first report, that:

> "*concerns* [in 2011] *about the slowing macroeconomic outlook of several major economies and the Euro area sovereign debt crisis contributed to a significant fall in global equity prices and an increase in the implied market risk premium (MRP). Taking these factors into account…*[and]*…adopting higher estimates of MRP in use at the Valuation Date would increase my estimate of Autonomy's WACC to around 10%."*

401. Although in his reports for the Quantum Hearing, Mr Bezant's own calculations based on MRP resulted (as in his earlier reports) in a calculation of Autonomy's WACC as 7.5%, he again adopted the 10% as HP had used in the Deal Model and as he had adopted in his reports for the Main Trial, considering that to be unaffected by the Excluded Transactions.

402. Mr Bezant also presented sensitivity analyses based on discount rates of 9% and 11% in line with HP's own sensitivity analyses in the Deal Model.

403. In one of his few references to differences between Mr Bezant's "Revised Price scenario" and his "Actual Value scenario", Mr Giles suggested that in the latter context (Mr Bezant's "objective" analysis) Mr Bezant might more logically have adopted a lower discount rate of 7.5%. However, Mr Giles appears to accept that for the purpose of establishing the revised bid price in the FSMA Counterfactual it is logical, on the basis of his view of his task as being to consider how HP would have constructed its Deal Model in the RTP, to adopt the same discount rate as HP, that is to say, 10%.

404. That said, like Mr Bezant, Mr Giles included sensitivity analyses to show what would be the effect of the adoption of discount rates of 7.5% (at one extreme) and 11.5% (at the other). He summarised the effect on his Restated Deal Model of the different sensitivities also examined by Mr Bezant as follows:

    (1) Applying a rate of 11.5% would result in a standalone value of $7,953 million with additional synergy value (see below) of $6,290 million (and thus $14,243 million in total);

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means that $100 of free cash flow projected for a business for next year is worth only $90.91 this year, and $100 the following year has a present value of only $82.64."

(2) Applying a rate of 7.5% would result in a standalone value of $18,093 million with an additional synergy value of $10,224 million (and thus $28,337 million in total).

Experts' respective conclusions as to Terminal Value in the RTP

405. As may by now be obvious, the assessment of the terminal value is driven by two factors:

(1) the level of cashflows for the final forecasted year (in this case, 2021); and

(2) the combination of the WACC or discount factor and the terminal growth rate.

406. Equally obviously, but also equally obviously important, if 2021 revenues are understated, that has a very serious effect on terminal value. The greater difference between the experts in the calculation of terminal value was not the difference between them as to the choice of WACC/discount factor and terminal growth rate, but the figure to which these are mechanically to be applied.

407. Thus, the difference in value terms between the experts according to their choice of discount factor/WACC and terminal growth rate, as applied to their other figures, is calculated by Mr Bezant to be some $317 million, and by Mr Giles to be some $471 million.[79]

408. Either figure is substantial; but even more significant is the difference between them as the aggregate or composite effect of the application of these factors on the experts' different cashflow projections, and the proportion which the fall in terminal value, on Mr Bezant's approach and projections, bears relative to the fall in standalone value which he asserts.

409. This was illustrated in Dr Lynch's closing submissions for the Quantum Hearing as follows:

(1) On Mr Bezant's approach (on the RCC basis), Autonomy's standalone value reduces from $9,502 million to $5,834 million: a fall of $3,668 million.

(2) On Mr Bezant's approach, Autonomy's terminal value falls from $5,985 million in the Deal Model to his calculation of $3,345 million, and thus a fall of $2,640 million.

(3) That fall of $2,640 million in Mr Bezant's assessment of Terminal Value is 72% of the overall fall in DCF value as so calculated.

410. Mr Bezant provided an analysis in diagrammatic form of his DCF valuations in the Transaction Scenario based on the different permutations of the terminal growth rate and WACC assumptions that he had identified, showing an upper-end DCF equity valuation (based on the RUS) resulting from the mathematical combination of a discount

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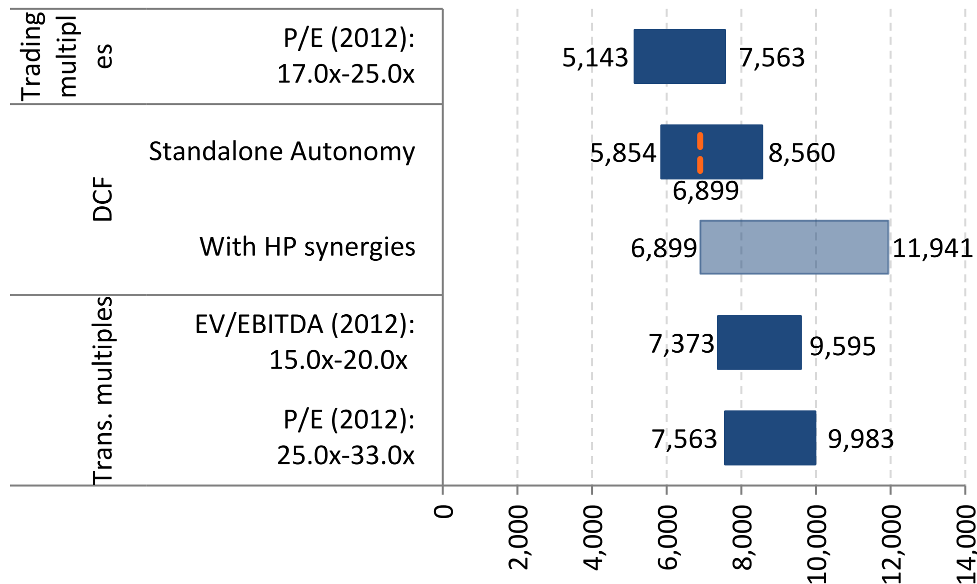
[79] Mr Giles has noted that the precise amount of the impact depends on the sequence in which changes are made, $525 million being the maximum. Mr Bezant estimated the impact on his figures on the RCC basis as considerably less: about $296 million.

rate of 9% and a terminal growth rate of 4% per annum of $8,560 million. However, he cautioned that he does not regard the upper end of the DCF range to be *"meaningful"*. His lower end estimate, applying a combination of a discount rate of 11% and a terminal growth rate of 3% per annum, is $5,854 million. His *"central estimate"* of DCF Actual Value, based on a WACC/discount rate of 10% and a terminal growth rate of 3.5% per annum, is $6,899 million. His presentation showing these parameters is set out below:



411. On Mr Giles's approach, adopting a 4% terminal growth rate and 10% WACC results in his standalone DCF enterprise valuation of $10,146 million (which, as explained, would be up to $525 million less when adopting a terminal growth rate of 3.5%) and a synergy value (as before) of $7,692 million. Account should also be taken of my decision in respect of the BoA adjustment: see paragraph [221(1)] above.

Terminal Growth Rate: my assessment

412. In the Represented Position, Autonomy's "sales mix", that is to say, the revenue streams together comprised in Core IDOL, was especially attractive. HP's categorisation of Autonomy as a *"hyper-growth"* entity was probably also influenced by this. IDOL OEM, in particular, was perceived generally to be an especially valuable revenue stream, both enabling and demonstrating the prospect of rapid dissemination of IDOL technology at high margins using host hardware and geometric growth (in paragraph [3135] of my Main Judgment I referred to it as a *"super-spreader"*). Notwithstanding Mr Giles's emphasis on the success of IDOL Product and on the growth in the market for *"big data"*, it seems to me that in the RTP, HP would not have considered the mix quite as enticing, not least because, according to the findings I made in my Main Judgment, Autonomy's IDOL OEM business, properly so-called, was barely measurable.

413. However, this less attractive "mix", marginally deteriorated IDOL Cloud growth to the end of 2021, and the lack of any material IDOL OEM business, must be set against the strong growth exhibited by IDOL Product, the strength of IDOL Cloud cash flows in

the final forecasted year (2021) and the still strong longer-term prospects of IDOL Cloud in terms of its future market share in a fast-developing and still immature market.

414. I am not persuaded that the balance of these factors requires or justifies the reduction of the Terminal Growth rate to 3.5% as urged by the Claimants. Mr Bezant's adoption of that figure reflects what I regard as his under-estimation of the performance and prospects of IDOL Cloud and IRM cloud, his adoption in consequence of over-pessimistic growth rates up to 2021 and an over-aggressive interpolation rate. More generally, I do not agree with Mr Bezant's position that Autonomy's cashflows, having grown (in 2011 and 2012) largely in line with the Deal Model, would have so radically and precipitately tailed off between 2012 and 2021. In my view, HP and its advisers would still have considered Autonomy to be, by virtue especially of their perception of its *"almost magical"* technology, a business already well established in Cloud infrastructure provision, well placed to take advantage of the move to the Cloud, and likely also to benefit from anticipated exceptional growth in *"big data"* and machine learning. The terminal growth rate HP would have adopted in the RTP would have reflected this.

415. As in other contexts, the assessment of how HP would have approached afresh the assessment of terminal growth rate in the RTP requires an intensely subjective set of assumptions. Most basically, I consider that, in the RTP as in the Represented Position, HP would have forecast continuing growth: Autonomy would not have been forecast to have fully matured by 2021. HP would also have taken the same rates of GDP growth and inflation; and in the RTP, as in the Represented Position, HP would have been fairly bullish in this regard, and adopted a sector-based growth rate (see paragraph [395(1)] above) in excess of the rate of real GDP. HP would have continued to have regard to the views of its advisers (Perella Weinberg and BarCap). As to that, there might have been some reduction in the (also bullish) ranges suggested by Perella Weinberg and BarCap (see paragraph [389] above) in the Represented Position; but that HP would nevertheless have remained inclined towards the higher ranges they put forward. Put shortly, I think it reasonable to consider that HP would have adopted as its central estimate a terminal growth rate of either a slightly reduced 3.75% or 4% (reflecting its bullish overall approach and the 'confirmatory' nature of the exercise as described in footnote 91 under paragraph [461] below). Further, any softening in its assessment would have been attenuated, since I consider that it would also have adopted a range of terminal growth rates of between 3% and 5% for the purposes of its sensitivity analysis (as it did in the Deal Model), and the difference between 3.75% and 4% would not have affected its overall outlook in gauging what bid price it would be prepared to agree.

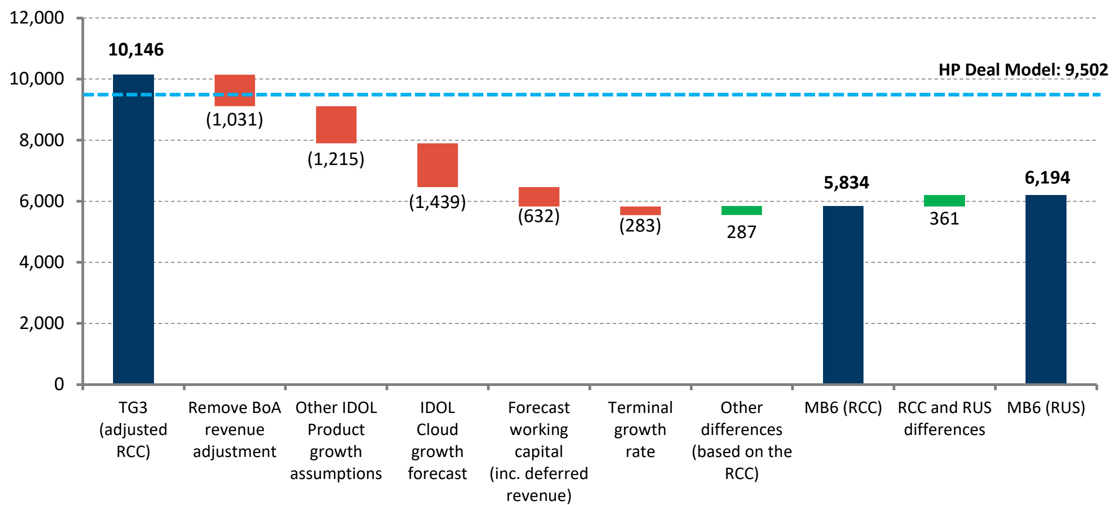
416. As to the appropriate discount rate or WACC, there is little dispute; but for the avoidance of doubt, it seems to me more likely than not, and I find, that HP would have adopted WACC at 10% for its central estimate, but with some regard to the range of sensitivities in determining what ultimately was the most it was prepared to offer. My assessment is that HP would have veered towards the lower end of the range, having regard to the MRP and its own assessment of synergy value.

Graphic illustration of the Experts' overall assessment of Autonomy's stand-alone value in the RTP

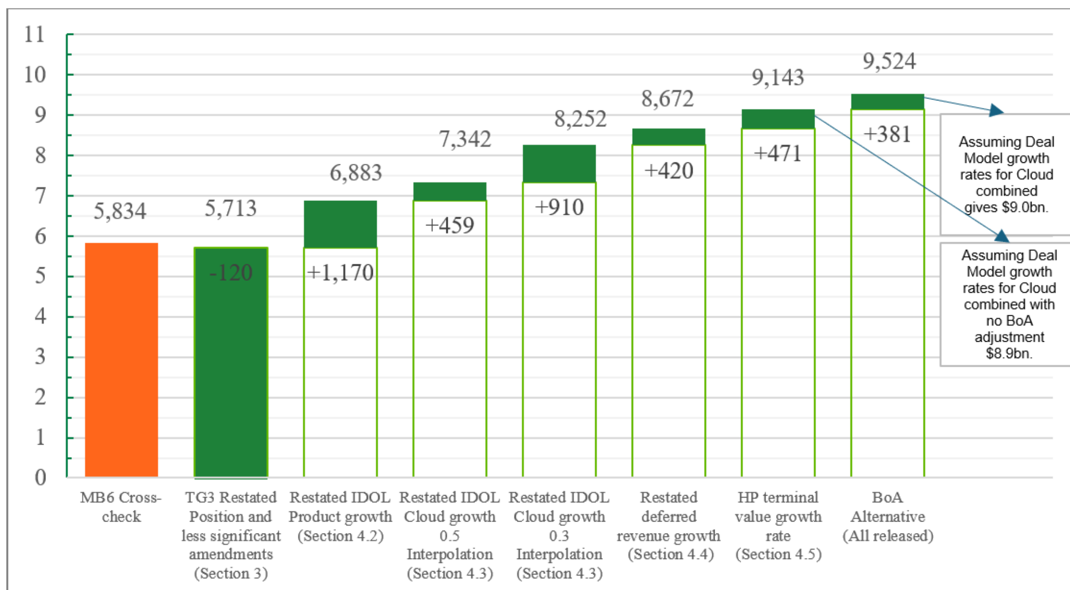
417. To illustrate in graphic form the differences between them, Mr Bezant and Mr Giles each provided a graph showing the effect of the disputed issues on their respective DCF valuations of Autonomy in the RTP. These graphs were each referred to as a 'bridge'.

418. Mr Bezant's graph showing this 'bridge' was included in his seventh report (as figure 2-1) and was reproduced in the Claimants' written opening submissions for the Quantum Hearing. I set it out below:

Mr Bezant's reconciliation between Mr Giles's and his own DCF-based valuations of Autonomy (enterprise value, USD millions)



419. The Defendants provided a graph entitled a *'Bridge from Mr Bezant's MB6 cross check standalone value to TG3 with alternative BoA correction'*. This is an amended version of Mr Giles's original 'bridge' graph, the amendments showing the varying effects of (a) excluding any BoA adjustment and (b) treating all IDOL Cloud together (as in each case I have determined is correct). I have already set this out under paragraph [319] above, but I set it out again to assist a comparison of the two experts' final figures, and how they have arrived at them:



420. It was common ground between the parties that (a) the sequencing of the items in the various boxes in the graphs impacts on the value attributed to each item, which is of particular relevance because (b) the graphs proceed in different orders, as each starts with the other's DCF so that (c) in each case, the 'bridge' can only be a rough guide. However, the parties and their experts were agreed that each 'bridge' does provide the best overall guide in graphic terms.

421. I turn to address below how Mr Bezant and Mr Giles cross-checked their respective DCF valuations in the RTP.

(15) The two experts' use of trading multiples and transaction multiples

422. It may be remembered that at a much earlier stage in this judgment (see paragraph [84] *et seq*) I explained that Mr Bezant had put forward not one, but two, DCF standalone valuations: one, on an avowedly *"objective"* basis such as a market analyst might have constructed, and which he presented as showing the "Actual Value" of Autonomy and as offering the basis for his assessment of Autonomy's market capitalisation; and the other, on what he called a *"subjective"* basis intended to mirror as best as possible how HP would have altered its Deal Model to take in to account the position of Autonomy in the RTP and to establish how HP would have perceived its DCF value and (with its advisers) assessed what "Revised Price" it might rationally pay to achieve an agreed bid in the RTP. I also explained that Mr Bezant provided, in each context, sensitivity analyses and two multiples analyses (one on a trading multiples basis and the other on a transaction multiples basis).[80]

423. Mr Bezant thus analyses trading and transaction multiples in two contexts, (a) *"the No-Transaction Scenario"*, in which his aim is to assess the value of Autonomy in the hands of HP for which it must give credit in a claim in such a scenario, for which purpose he analyses (i) the trading multiples of 21 listed software companies, and (ii) the transaction multiples implied by eight transactions which he considers comparable and which he treats separately and regards as different; and (b) *"the Transaction Scenario"*, in which his aim is to assess what bid price would have been agreed in that scenario, for which purpose (on what he calls his *"subjective approach",* seeking to adapt to the RTP HP's approach in the Represented Position) he analyses the multiples analyses and comparators considered by HP and Autonomy and the process followed by their respective financial advisors, and in particular BarCap.

424. Mr Giles also has undertaken analyses based on trading multiples and transaction multiples as a cross-check of his assessment of Autonomy's standalone value in the RTP. However, he does not distinguish between "Actual Value" and "Revised Price" in this context either, in light of his general position that *"the Actual Value cannot be less than HP's own valuation (as HP would not be a 'willing seller' at anything less than the value in its own hands"*). Further, and consistently with that position, Mr Giles rejects Mr Bezant's approach in selecting different comparators according to whether he is considering "the No-Transaction scenario" or "the Transaction scenario"; he

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[80] A *'trading multiples valuation'* is based on the ratios of company value to earnings implied by the observed prices of small parcels of shares in publicly traded companies selected as being sufficiently comparable to Autonomy. A *'transaction multiples valuation'* is based on the ratios of company value to earnings implied by the prices at which controlling interests (as opposed to small parcels of shares) are acquired in companies selected as being sufficiently comparable to Autonomy. Both methods were also used by BarCap and Perella Weinberg in advising HP and by Qatalyst in advising Autonomy prior to the Acquisition.

"would expect the advisor to any buyer would adopt a similar set of comparators" and states that his approach should be taken to *"apply to either the Transaction or the No-Transaction scenario*."

425. The difference between the experts as to whether for the purpose of trading and transactions multiples analyses there is a distinction to be drawn between the two *"scenarios"* has complicated a comparison of the two experts' approaches and conclusions. It seems to me, however, that in light of my determination that the Acquisition would have proceeded so that this is a "Transaction" case, I should focus on a comparison of their approaches in what Mr Bezant called *"the Transaction scenario"*. Such a comparison is the ambit and purpose of this section of this judgment. I shall deal later with the experts' different use of such analyses in assessing what Autonomy's market capitalisation would have been in the RTP, and after that, in opining as to "Revised Price".

Use of a trading multiples valuation to cross-check Autonomy's DCF value in the RTP

426. A trading multiples valuation primarily depends on the proper categorisation of the subject company to determine the cohort of comparable companies.

427. In the Represented Position, HP and its advisers had categorised Autonomy, for the purpose of their own trading multiples analyses, as a high growth or ultra-high growth enterprise software company with a significant SaaS business. In this context:

(1) Perella Weinberg had based their analysis on EBITDA and P/E multiples of their selection of 14 potentially comparable companies based on expected CY 2011 and CY 2012 performance, which they divided into two groups, one group being comprised of six *"US infrastructure software"* companies[81] and the other group being comprised of eight *"High-Growth SaaS"* companies[82]. Perella Weinberg adopted on that basis trading multiple ranges of an EBITDA multiple of 19.0x to 24.0x for CY 2011 and 16.0x to 22.0x for CY 2012, and a P/E multiple range of 28.0x to 38.0x for CY 2011 and 25.0x to 33.0x for CY 2012.

(2) Qatalyst had based their analysis on P/E multiples of 11 potentially comparable companies based on expected CY 2011 and CY 2012 financial performance, which they divided into three groups, one group comprising two *"Selected Data Management"* companies[83], another group comprising four *"Selected High-Growth Software"* companies[84], and the third group comprising five *"Selected Enterprise Software"* companies[85]. Qatalyst concluded on a CY 2012 P/E multiple valuation of 20x to 30x for Autonomy in the Represented Position.

(3) BarCap had based their analysis on EBITDA multiples and P/E multiples for CY 2011 and CY 2012, adjusted to take account of a full year contribution from the IRM assets which Autonomy had acquired, and had selected 11 potentially comparable companies which it had identified and selected as being *"infrastructure software companies of scale (generally north of $1 bn)"* in the

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[81] namely, VMWare, Citrix, Informatica, Tacoma, Qlik Technologies and MicroStrategy.
[82] namely, Salesforce, Red Hat, Ariba, Netsuite, Concur, SuccessFactors, RightNow and Taleo.
[83] namely, Informatica and Tibco
[84] namely, VMWare, Salesforce, Citrix and Red Hat
[85] namely, Microsoft, Oracle, SAP AG, Adobe and BMC

"broader information management ecosystem" which *"are leaders in their categories…have comparable high growth…or margins… [or] are similarly European infrastructure software vendors."* Since both experts focused especially on BarCap's selected comparable companies, I set them out below, sorted (for reasons explained later) from the company with the highest growth (Qlik Technologies) to the lowest.

BarCap comparator companies (trading multiples)[86]

	Revenue growth p.a. (2010/2012)	EV/EBITDA (2012)
Qlik Technologies	33.3%	34.5x
VMware	25.5%	21.6x
Informatica	18.6%	18.1x
MicroStrategy	18.3%	17.3x
CommVault	17.7%	20.3x
Red Hat	17.3%	16.3x
TIBCO Software	14.9%	13.1x
Citrix Systems	14.8%	11.9x
Teradata	13.0%	12.5x
Open Text	5.9%	8.8x
Software AG	4.2%	7.1x

Source: Appendix B.3

428. In his sixth report, Mr Bezant assesses how, in his view, the financial advisers to HP and Autonomy (Perella Weinberg, BarCap and Qatalyst) would have recalibrated their approach in the RTP. He proceeds on the basis that they would, in the RTP, have:

(1) considered Autonomy as a smaller sized, lower margin business, with lower medium and longer-term growth prospects;

(2) placed greater weight on companies with lower growth prospects;

(3) placed less (if any) weight on the SaaS companies and comparable companies with higher growth prospects that they identified; and

(4) concluded on a lower valuation multiple range.

429. On that basis, Mr Bezant considers that (a) in the RTP, Perella Weinberg would not have relied on the high-growth SaaS companies it identified in the Represented Position[87] when arriving at an appropriate valuation range, (b) the most comparable companies would be "middle growth" infrastructure software/data management companies, and (c) although BarCap would have continued to consider the same set of 11 companies as comparable to Autonomy in its analysis in the RTP, it would have given preponderance to those in the "middle growth" range like Informatica, Citrix, TIBCO Software and Teradata and marginalised higher growth companies like Red Hat, MicroStrategy, VMWare and Qlik Technologies, resulting in an adjustment to the upper

[86] N.B. (1) Excludes companies where data was not available. (2) BarCap explicitly carried out its analysis without removing the IRM transactions.

[87] namely, Salesforce, Concur, Ariba, RightNow, Taleo and Red Hat, based on which Perella Weinberg concluded a range of (i) EV/EBITDA multiple for CY 2012 of 16.0x to 22.0x and (ii) P/E multiples for CY 2012 of 25.0x to 33.0x.

bound of its range down from 27.0x in the Represented Position to around 25.0x CY 2012 EPS in the RTP.

430. In essence, Mr Bezant excludes the valuation ranges adopted by Perella Weinberg and Qatalyst, but adopts a modified version of BarCap's approach. He then applies a CY 2012 P/E multiple in the range of 17.0x to 25.0x, resulting in a suggested Revised Price range (on an equity value basis) of $5,143 million to $7,563 million. (By way of comparison, and to show that the difference is not material, I note that by reference to the 21 comparator companies he selected for his assessment of "Actual Value" in a *"No-Transaction scenario"* Mr Bezant assessed an equity value range of between $5,339 million and $6,909 million by reference to P/E for CY 2012 and $5,595 million to $6,928 million by reference to EV/EBITDA for 2012.)

431. As might be expected in light of their different views of Autonomy's potential in the RTP, Mr Giles objects to Mr Bezant's recharacterization of Autonomy in the RTP, and he considers both Mr Bezant's selection of comparators and the figures he derives from their assessment to be flawed. Mr Giles considers that, whether tested by reference to Mr Bezant's selection of comparators in determining Autonomy's "objective" Actual Value in the RTP (see (a) in paragraph [423] above), or by reference to the comparators selected by the parties' advisers in the Represented Position (see (b) in paragraph [423] above), Mr Bezant has adopted a skewed approach and reached an unsustainable conclusion.

432. In addition to criticising both Mr Bezant's disregard of *"High-Growth"* companies (based on his pessimistic assessment of future growth rates) and his extrapolation from his own selection of companies a range of EV/EBITDA and P/E multiples which Mr Giles rejects as *"not representative"*, Mr Giles put forward three different approaches.

433. First, in his third report, he has adopted what he considers to be *"a more analytical approach"* and which he calls (and apparently is well known as) a *"best fit"* approach. Mr Giles assured me that this *"best fit"* approach, is *"one of the most basic techniques in forecasting and valuation"*. However, I have not found it altogether easy to digest and explain[88], even with the graphs and tables which Mr Giles provided. I found Mr Bezant's explanation of Mr Giles's approach more helpful, at least to some degree. This was as follows:

> *"This approach assumes, in effect, that there is a statistical relationship between companies' short-term forecast growth prospects and valuation multiples. Mr Giles estimates a line of "best fit" for this relationship based on the observed forecast growth rates and trading multiples for his selection of comparable companies. This is equivalent to performing a linear regression analysis. He then estimates the*

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[88] He explained (in his fourth report) that this is also called the *"least square method"*. He described the method as follows:

> *"The least square method produces a line whereby, overall, the distances between the line (in this case green line) and the observations (in this case red triangles) are minimised. The overall measure of the "fit" of the line is the sum of the vertical distances between each red observation and the corresponding position on the green line squared. These distances are effectively "errors" as they show the extent of the deviation from the line. Accordingly, the applicable measure of reliability is known as the "Sum of the Squared Errors" or "SSE"."*

"Best Fit multiple" implied by the line of best fit and Mr Giles's and my respective short-term forecasts of Autonomy's growth in the RTP."

434. Adopting this approach, as I understand it, Mr Giles considered that the *"best-fit"* approach, when applied across the range of seven companies that Mr Bezant identified as potentially comparable in assessing "Actual Value" on a trading multiples basis, suggested a range of between $5,200 million to $12,500 million on EV/EBITDA multiples and $5,800 million to $15,700 million using the P/E approach. This is obviously a very broad range.

435. My admittedly imperfect understanding of the *"best fit"* method, especially in its application "across the range", has (thankfully) been somewhat marginalised because in the end, Mr Giles acknowledged that this was *"too wide a range to be useful as a primary valuation methodology"*, and he appeared to consider it less reliable than his second method.

436. This second method put forward by Mr Giles is based on taking the average multiples of the seven *"High-Growth"* companies selected by Mr Bezant: three in the *"Infrastructure software/data management sector"* (namely, Qlik, Commvault and Informatica, with EV/EBITDA multiples ranging from 13.9x to 23.9x) and four in the *"high-growth SaaS sector"* (namely, Concur, Salesforce, Ariba and Red Hat, with EV/EBITDA ranging from 12.1x to 28.9x). Using Mr Bezant's RCC 2012 projections results in a range of between c.$8.2 billion and c.$9.1 billion. Applying Mr Giles's own 2012 projections results in a range in estimated enterprise values of between $9.5 billion and $10.5 billion. Mr Giles notes that this compares to a 'best-fit' range on the basis of the same comparator companies of $9.4 billion to $10.4 billion. He set out the product of both methods (based on his 2012 projections in US$ millions) in tabular form as follows:

Autonomy valuation multiples analysis, based on Mr Giles's (TG3) 2012 projection ($ millions)[89]

EV/EBITDA multiples			P/E multiples		
TG3 projected EBITDA 2012	504		TG3 projected PAT 2012	338	
Multiple range	12.1	28.9	Multiple range	22.1	55.6
Implied enterprise value	**6,093**	**14,554**	Implied enterprise value	**6,763**	**18,084**
Best fit multiple	18.7		Best fit multiple	33.0	
Implied enterprise value	**9,439**		Implied enterprise value	**10,441**	
Average multiple	18.9		Average multiple	33.2	
Implied enterprise value	**9,518**		Implied enterprise value	**10,514**	

Source: Appendix B.3

437. The third method put forward by Mr Giles, which he suggested had the advantage of reflecting the information that HP considered in 2011, was to carry out trading multiple analyses by reference to the comparators identified and used by BarCap (though there is no evidence to suggest that BarCap itself adopted a "best-fit" method) and, indeed, by the board of HP in 2011 when determining whether and at what price to proceed in the Represented Position. These are shown in the table of BarCap's selected comparators set out under paragraph [427(3)] above, which (as previously explained) is

89 For the P/E approach, the multiple is applied to arrive at an equity value. Net debt of $705 million is then deducted to arrive at the enterprise value.

sorted from the company with the highest growth to the lowest, thereby showing the association between higher growth rates and higher multiples (and *vice versa*).

438. This approach suggested what Mr Giles described as *"a statistically valid range from $8.5 billion to $14.1 billion"*, according to whether his EBITDA figure or Mr Bezant's EBITDA figure was adopted. He accepted that this was *"too wide to be useful as a primary valuation methodology"*.

439. In his third report, Mr Giles called on Mr Bezant to review his valuations in light of this. Mr Bezant, in his seventh report, took up this invitation and addressed Mr Giles's evidence; but he declined to change his position. Instead, he depicted Mr Giles's approach as itself flawed: (a) because none of HP and its financial advisors had performed a *"best fit"* relationship analysis, nor, for that matter a valuation based on the average of multiples implied by their chosen comparator companies, and Mr Giles had not engaged properly with the approach actually taken by the financial advisers at the time of the Acquisition; and (b) because Mr Giles had wrongly included revenues enhanced on the basis of his (erroneous) approach to the BoA transaction and his inclusion of IRM assets and revenues acquired by Autonomy in 2012.

440. Mr Bezant provides in his seventh report a further analysis, in each case on the basis of (a) stripping out the BoA transaction and IRM revenues and (b) retaining the 21 comparator companies, rather than limiting the cohort to the seven higher growth companies selected by Mr Giles on the basis of his "best fit" analysis. He summarised the results in tabular form as set out below:

Mr Bezant's Summary of trading multiples-based valuations in the Transaction Scenario (USD million)

	My analysis in MB6	Mr Giles's "*best fit*" analysis (not adjusted for IRM)	"*Best fit*" analysis (adjusted for IRM)	
Revenues per:	**MB6 (RUS)**	**TG3 (adjusted RCC)**	**TG3 (corrected RCC[1])**	**MB6 (RCC)**
EV/EBITDA:				
CY 2012 EBITDA[2]	N.A.	504	466	432
EV/EBITDA	N.A.	18.9x	17.2x	11.3x
Enterprise value	N.A.	**9,518**	**8,029**	**4,861**
P/E:				
CY 2012 PAT[3]	303	N.A.	N.A.	N.A.
P/E	17.0x – 25.0x	N.A.	N.A.	N.A.
Enterprise value[4]	**4,437 – 6,857**	N.A.	N.A.	N.A.

Note: (1) Excluding Mr Giles's BoA adjustment. (2) CY 2012 EBITDA in the Represented Position was USD 575 million (see Table 9-2). (3) CY 2012 PAT in the Represented Position was USD 391 million (see Table 9-2). (4) Enterprise value implied by the: (i) equity value calculated using the P/E multiple; and (ii) Autonomy's net cash balance of USD 705 million.

441. His conclusion is that the use of a *"best fit"* analysis was inappropriate, given that it does not reflect the approach taken by HP and its advisors, but if used and corrected to strip out any additional revenue such as claimed by the Defendants by reference to the BoA transactions and any effect from the IRM assets acquired, it would (a) on the basis of Mr Giles's forecasts (but excluding any BoA adjustment) imply a valuation in the order of $1.5 billion lower than HP's valuation and (b) on the basis of Mr Bezant's own RCC forecasts, imply a valuation in the order of $4.6 billion lower than HP's valuation.

Mr Bezant's assessment is that the range between his valuation on this basis and Mr Giles's valuation would be $4,861 million (Mr Bezant) and $8,029 million (Mr Giles).

442. Mr Giles stood by his approach in his fourth report; but he adds that, even accepting Mr Bezant's figures and excluding the $9.9 million disputed BoA revenues altogether, the enterprise value would be $8,029 million, which (he stated) *"entirely invalidates his [Mr Bezant's] DCF valuations…"* and, when added to synergy values taken from Mr Bezant's adjusted Deal Model of $6,713 million, the sum exceeds by some margin the price HP paid for Autonomy of $11.1 billion.

443. The impression I was ultimately left with was that the trading multiples approaches adopted by the experts, in all their versions, did not disturb, but nor did they reliably confirm, or demonstrate which is preferable of, the experts' respective DCF valuations. I elaborate on this in conjunction with my assessment below of the experts' use of Transaction multiples as a further cross-check, to which I turn next.

The Experts' use of Transaction multiples analyses

444. A further means of cross-checking Autonomy's DCF value in the RTP adopted by both experts was to analyse multiples derived from market acquisitions of controlling interests in comparable companies: that is to say, a 'Transaction multiples analysis'. This requires an assessment of the ratios of company value to earnings implied by the prices paid to acquire controlling interests in companies considered to be sufficiently comparable.

445. As in the context of his trading multiple valuations, Mr Bezant provided two analyses, with a different cohort of comparable transactions, one for his assessment of Actual Value in the 'No-Transaction scenario' and one for his assessment of Revised Price in the 'Transaction scenario'. Mr Giles, again consistently with his approach in relation to trading multiples, provided a single analysis, based on the comparator companies and transactions chosen by BarCap in the Represented Position. For the same reasons as I expressed in paragraph [425] above, I shall focus predominantly on the analyses undertaken by both experts in assessing transaction multiples to cross-check their respective conclusions pursuant to their DCF analyses of the Revised Price.

446. For the purpose of his transaction multiples valuation in assessing the Revised Price in the 'Transaction scenario', Mr Bezant regarded his task as being to consider the effect of the RTP on the multiples analyses performed in the Represented Position by HP's and Autonomy's advisors shortly before the Offer was announced. In that regard:

(1) Perella Weinberg (a) focused on the business intelligence/analytics segment of the software industry, (b) took P/E multiples to be a function of expected growth prospects of a business, (c) characterised Autonomy as a high growth, high quality asset given its mix of business and transition to a SaaS model; (d) applied a premium rating; (e) by reference to these criteria highlighted five transactions (all involving public targets with values greater than $1 billion) as *"the most relevant in guiding the valuation of [Autonomy]"* and as the *"Most Relevant*

Transactions"; and (f) by reference to those transactions adopted multiples ranges of 15.0x to 20.0x EV/NTM EBITDA[90] and 30.0x to 40.0x NTM P/E.

(2) BarCap (a) focused on *"selected software transactions"* with a deal value greater than $1 billion (b) considered EV/Revenue, EV/EBITDA and P/E multiples but based its overall comparable multiples valuations on P/E multiples and forward revenue forecasts equivalent to NTM forecasts; (c) by reference to those transactions, adopted multiples ranges of 25x to 33x NTM P/E.

(3) Qatalyst (a) identified 34 *"Strategic Software Transactions"* with a deal value greater than $1 billion, from which it highlighted 11 as the *"Most Relevant Transactions"*; and (b) concluded on a Next Twelve Month ("NTM") P/E multiple range of 24.0x to 30.0x.

447. Since neither BarCap nor Qatalyst reached a conclusion on an EBITDA multiples based valuation for Autonomy, Mr Bezant has based his EBITDA multiple range on Perella Weinberg's EBITDA multiples range (and thus CY2012 EBITDA multiple of 15.0x to 20.0x).

448. All three advisors adopted P/E multiples ranges, the spread being between 24.0x to 40.0x. Mr Bezant made his assessment on the basis of the range adopted by BarCap of 25.0x to 33.0x. He then applies these ranges to the figures he has taken for Autonomy in the RTP, and, on a transaction multiples basis, he has assessed Revised Price (on an equity value basis) in the range of between $7,373 million to $9,595 million on the basis of CY 2012 EBITDA multiples and of between $7,563 million and $9,983 million on the basis of CY 2012 P/E multiples. He sets out his calculations in tabular form as follows:

		CY 2012 EBITDA multiples	**CY 2012 P/E multiples**
Autonomy's True EBITDA / PAT	[A]	445	303
Multiple applied	[B]	15.0x – 20.0x	25.0x – 33.0x
Enterprise value	**[C] = [A] * [B]**	**6,668 – 8,890**	**N/A**
Net cash	[D]	705	N/A
Value of the Interests	**[E] = [C] + [D]**	**7,373 – 9,595**	**7,563 – 9,983**

449. I note that these figures do not differ greatly from Mr Bezant's assessment of Actual Value on the different transaction multiples approach he adopted in that context. On that approach, Mr Bezant was able to identify only eight comparable transactions for the period between January 2007 and 3 October 2011 which fit his criteria. With the caveat that, in the absence of more accurate and complete evidence of multiples with similar growth prospects to Autonomy, it is difficult to select an appropriate range, he adopts a rounded range of multiples drawn from across the identified growth band. He thus adopts a CY 2012 EBITDA multiple range of 25.0x to 33.0x, and a CY 2012 P/E multiple range of 15.0x to 20.0x, resulting in a range of equity values of between $7,373 million and $9,595 million on the basis of EBITDA multiples and $7,851 million to $9,422 million using P/E multiples.

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90 Next Twelve Months.

450. Before turning to Mr Giles's transaction multiples assessment, I note also that Mr Bezant gives relatively low weight to the transaction multiples approach. He considers it *"to be the least informative valuation approach given the available information, and the fact that the transaction multiples likely reflect payments for synergies specific to those transactions, unlike the standalone DCF value."* His reservations might also be set in the context of his acknowledgement that his transaction multiples-based assessment of the Actual Value of Autonomy in the RTP resulted in considerably higher values than his other (preferred) methods.

451. Mr Giles's approach to a transaction multiples cross-check of DCF value was to adopt the comparators that BarCap had selected for its transaction multiples assessment, as set out in the table below, again sorted from the companies with the highest growth (for example, EMC's purchase of Data Domain and HP's purchase of ArcSight) to the lowest, and again thereby showing a strong association between higher growth rates and higher multiples and *vice-versa.*

BarCap comparator companies (transaction multiples)

Purchaser	Target company	Revenue Growth (FTM / LTM)	EV / EBITDA (FTM multiple)
EMC Corp.	Data Domain, Inc.	32.0%	33.30x
Hewlett-Packard Co.	ArcSight, Inc.	20.0%	37.10x
EMC Corp.	RSA Security, Inc.	20.0%	30.30x
SAP AG	Business Objects SA	16.0%	17.90x
Verint Systems, Inc.	Witness Systems, Inc.	15.0%	15.60x
Oracle Corp.	Hyperion Solutions Corp.	13.0%	13.90x
Symantec Corp.	Altiris, Inc.	12.0%	19.00x
IBM	Internet Security Systems, Inc.	12.0%	13.40x
Adobe Systems, Inc.	Omniture, Inc.	11.0%	18.90x
IBM	Cognos	10.0%	18.80x
Intel Corp.	McAfee, Inc.	9.0%	9.20x
Oracle Corp.	BEA Systems, Inc.	8.0%	18.40x
IBM	FileNet Corp.	6.0%	15.90x
SAP AG	Sybase, Inc.	5.0%	12.60x
IBM	SPSS, Inc.	-6.0%	11.00x

Source: Appendix B.3 NB (1) Excludes companies where data was not available. (2) BarCap explicitly carried out its analysis without removing the IRM transactions.

452. Mr Giles set out a graph plotting the EV/EBITDA multiples against revenue growth applied to BarCap's comparator transactions. He also set out his assessment in tabular form, as follows:

Mr Giles's valuation multiples analysis ($ millions) – EV/EBITDA multiple using BarCap transaction comparators

MB6: EBITDA (Cross-check)			TG3: EBITDA)		
MB6 projected EBITDA 2012	432		TG3 projected EBITDA 2012	504	
Barcap transaction multiple range	9.2	37.1	Barcap transaction multiple range	9.2	37.1
Implied enterprise value	**3,970**	**16,010**	Implied enterprise value	**4,633**	**18,683**
Best fit multiple	26.3		Best fit multiple	35.5	
Implied enterprise value	**11,345**		Implied enterprise value	**17,900**	

Source: Appendix B.3

453. Noting that a transaction multiples approach, being based on the acquisition of the share capital of comparable companies and not on the trading of minority shares, inevitably captures some synergy value, he recognised that his DCF valuation of Autonomy including synergies of $17,400 million was at very much the top end of an EBITDA valuation using his projections of $17,900 million. However, in his opinion, *"Although this is not a primary valuation methodology it does validate the conclusion that using* [a] *DCF approach the total values including synergies is $17.4 billion."* Thus, Mr Giles also seeks to draw some support for his synergy valuations from his transaction multiples, as providing *"an indication of the price that an acquiror would pay for Autonomy's business including synergies (as these multiples are based on the acquisition of comparable companies, not on the trading of minority shares)."*

454. It is important to note, however, that Mr Giles's approach was based upon including the BoA transaction figure as well as the IRM figure, as Mr Bezant noted in his seventh report. In Mr Giles's fourth report, and although he continued to support that inclusion, Mr Giles therefore tested Mr Bezant's approach on the basis of removing the BoA transaction, retaining the IRM revenues and adopting (for illustration purposes only) Mr Giles's EBITDA figure (excluding Mr Giles's BoA adjustment, as estimated by Mr Bezant). Mr Giles's re-calculated overall value (including synergies) on that basis was $15,348 million, implying a considerable reduction in stand-alone value.

My assessment of the Experts' trading and transaction multiples analyses

455. It was predictable that in this, as in other contexts, there would be an enormous disparity in the two experts' assessments of the results of what Mr Giles called "sense-checking" their DCF figures by these two methods of multiples analyses. In both methods, the critical, indeed ultimately determining, factor is the characterisation of the subject company's growth potential and EV/EBITDA, and by reference to these, the identification and selection of appropriate comparator companies. However, in this context as in others, the differences were exacerbated by the tendency of each of them to adopt an inflexible adversarial position, and to choose comparators (in both contexts) with a view to confirmation of their approach rather than a test of it. This undermined my confidence in both.

456. Further, the reality is that trading and transaction multiples analyses depend on the assessments made of Autonomy's growth rate and growth potential, the choice of comparator companies and the selection of most reliable results from the cohort chosen on that basis. Since the relevant growth rates and growth potential assessments of each expert are culled from their DCF valuations, multiples valuations seem to me to offer little more than broad confirmation that a DCF valuation is not materially out of line with the assumptions on which it is based, as tested by actual values in comparator companies and comparable transactions selected to reflect as nearly as possible the same assumptions and the fundamental parameters established by the DCF valuation (in particular, in terms of growth and EBITDA).

457. There is, in other words, considerable circularity in the so-called "sense check". It is not surprising that at the end of their long exegeses, both experts retreated into asserting the primacy of their DCF valuations: neither expert considers either trading or transaction multiples to be a primary valuation methodology, although each expert considers that the results of his assessments of trading and transaction multiples support his stand-alone DCF valuations.

458. In broad terms, the exercises have not undermined my confidence in my attempt at a DCF standalone valuation. Indeed, I have felt fortified in my view that Mr Bezant has materially underestimated Autonomy's value, even if Mr Giles has gone too far the other way. I turn to my own DCF assessment.

(16) My overall assessment of Autonomy's stand-alone DCF value in the RTP

459. The assessment of standalone value by a DCF valuation is by no means a science, and it is certainly not definitive. Key elements of a DCF methodology are very hard to predict; and more than half the valuation depends on the chosen Terminal Growth Rate to measure what happens after the forecast period in perpetuity, which in reality is unpredictable. Its sensitivity to assumptions and the subjectivity of those assumptions is apparent from the gap between the parties in this case.

460. Where, as in this case, the exercise is based on hypothesis and the construction of a counterfactual with its own inherently subjective facets, assessment of stand-alone value in the RTP is nigh-on imponderable (and see footnote [74] above recording Duff & Phelps's conclusion to that effect). The broadest of broad brushes is required, albeit that its application is, of course, informed by the matters identified at length above.

461. I consider it is relevant in this context not only to have regard to the figures, but also to HP's generally bullish approach, as exemplified by Mr Sarin's focus on the Q2 and H1 2011 results, his expectations of substantial synergies pursuant to the acquisition of IRM cloud, and (as I see it) his tendency to optimistic growth figures for both IDOL Product[91] and IDOL Cloud. I do not consider that HP's general approach in this regard would have changed substantially in the RTP. That is so despite the virtual absence of OEM business. HP would, in my assessment, have focused on the positives and the prospect of transformational change offered by Autonomy: high rates of cash conversion, healthy gross and EBITDA margins, efficient cash generation from low Capex rates, Autonomy's dominance in its core market and unstructured information processing, and the prospect of stellar growth with world-beating technology in a rapidly expanding software market. HP was pursuing a vision of dominance of the software market, exemplified in the statement in the *"Project Tesla Discussion Materials"* prepared by Perella Weinberg for the HP board meetings on 18 August 2011:

> *"An acquisition of Tesla* [Autonomy] *enables Hawk* [HP] *to leapfrog IBM and Oracle which have invested billions of dollars on structured data analytics."*

462. In my judgment, taking all these matters in the round, and in the exercise of what in the end is a subjective judgment and the application of a broad brush (or axe), I have concluded that a reduction of between 10% and 15% in the Deal Model stand-alone valuation of $9,502 million[92] is a fair and reasonable estimate of the diminution. Further,

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[91] For example, Mr Sarin assumed a higher growth rate for H2 2011 than was reported for H1 2011; and he made IDOL Cloud growth estimates for 2013 to 2015 in excess of observed organic growth. More generally, it may be that the nature of the due diligence exercise undertaken, which Mr Sarin described as *"confirmatory due diligence"* and which took place after the agreement in principle on price and may have been tilted towards justifying it to investors and the market (and see paragraph [234] of my Main Judgment), also encouraged an optimistic approach.

[92] HP's Deal Model calculated Autonomy's standalone DCF enterprise value as $9,502 million (resulting in an equity value of $10,207 million after adding in Autonomy's net cash position, equating to about £22.30 per share). On Mr Bezant's figures there is a percentage difference of 32% between the Deal Model and his standalone valuation in the FSMA Counterfactual.

I consider that HP would have tended towards the lower percentage differential, having regard to their continuing perception of what Autonomy continued to offer in terms of transformational change, and their appreciation of the likely need to justify to their investors the indicative or 'in principle' price which, in the counterfactual as in the Represented Position, would have been negotiated before confirmatory due diligence and finalisation of the Deal Model (and see footnote 91 above).

(17) From the DCF analyses to Market Capitalisation and what Autonomy's share price would have been in the RTP

463. It is common ground that, however subjective and uncertain the task is, it is necessary for me to assess, having regard to my findings above, what would have been the range[93] of Autonomy's market capitalisation[94] and thus its share price in the RTP.

464. The centrality of this issue is that it is primarily by reference to this assessment of Autonomy's share price in the RTP (which Mr Bezant referred to as the *"Revised true share price"*) that shareholders' expectations of, and HP's willingness to pay, any premium must be calculated in order to establish what would have been the agreed bid price (the *"Revised Price"* in the RTP). However, as I have foreshadowed in paragraphs [83] to [107] above, the experts were far apart on the issue as to whether and how this share price in the RTP could be established.

465. Mr Bezant and the Claimants accept, of course, that share price is volatile and driven by macroeconomic and other factors. However, they naturally emphasised that the Court's task is to establish the price, whatever the conceptual or practical difficulties of the exercise.

466. Mr Giles plainly indicated to me his reticence about making such an assessment, given his view (on which I expand later, see paragraphs [474] to [480] below) that *"the share price of a company is not driven by a specific valuation model and set of transparent assumptions."*

467. Nevertheless, Mr Shivji accepted, when I questioned this, that (in his words) *"it is a proper exercise of the expertise of valuation experts to try and come up with a share price…"*. I turn to address the position of each expert in turn before explaining my own assessment.

Mr Bezant's assessment of Autonomy's market capitalisation in the RTP

468. With an occasional nod to the fact that, for all its suggested anchor in mathematical ratios, it ultimately rests on a number of subjective assessments, Mr Bezant presents what the Claimants called a *"systematic framework"* to determine what would have been the market capitalisation of Autonomy in the RTP, and hence (though he was reluctant to give a precise figure for this, as explained later) the related price of Autonomy's shares in the market immediately prior to the Acquisition.

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93 Of course, no single share price can be fixed, since prices almost invariably move within a range: and considerable share price volatility is a feature of high growth technology companies.

94 That is to say, the total value of the company's individual outstanding shares: the share price of each share multiplied by the number of outstanding shares.

469. Mr Bezant summarised his approach in assessing the Revised True share price as based, in essence, on an analysis of the discount at which Autonomy actually traded relative to its "intrinsic value" and to a number of US-listed software businesses which he selected as comparable.

470. In more detail, for this purpose:

(1) In accordance with the process explained in paragraph [430] above and based on his classification of Autonomy in the RTP, he adopts valuation multiple ranges for Autonomy, being (i) a CY 2012 EBITDA multiple of 11.0x to 14.0x and (ii) a CY 2012 P/E multiple of 17.0x to 22.0x.

(2) On the same basis as more fully explained in his first report, he considers that Autonomy traded in the Represented Position and would have traded in the RTP at (i) a discount of between 27% and 37% to the DCF valuations implied by the Deal Model and undertaken by HP's and Autonomy's advisors; and (ii) a discount to individual US-listed companies which he takes as comparable typically well above 30%, and he takes 30% as a suitable blended discount to be applied.

(3) He takes the mid-point of the range of CY 2010 EV/EBITDA trading multiples and then discounts that multiple by 30%, resulting in a discounted multiple of 9.0x (which he explains he has rounded up from 8.75x *"given the subjectivity of the exercise"*).

(4) He then applies that discounted multiple of 9.0x to his assessment of Revised True EBITDA to estimate the "Revised True enterprise value"; and then, on the basis of a company's equity value being equal to its enterprise value less its net debt, he deducts the value of Autonomy's Convertible Bonds (which he treats for this purpose as net debt) to yield his assessment of *"Autonomy's Revised True market capitalisation on the London Stock Exchange before any offer from HP"*.

(5) He summarises these steps in tabular form as follows:

Mr Bezant's estimate of Autonomy's Revised True market capitalisation (US$ million)

	EBITDA multiples
Autonomy's EBITDA in the RTP	445
Mid-point estimate of trading multiple for Autonomy shares in the RTP	9.0x
Autonomy's Revised True enterprise value	**4,001**
Net debt	(206)
Autonomy's Revised True market capitalisation	**3,795**

(6) He takes the resultant figure of $3,795 million to be the Revised True market capitalisation of Autonomy.

(7) Lastly, and in recognition of the fact that his assessment of the Revised true market capitalisation of Autonomy excludes the value of its Convertible Bonds (see sub-paragraph (4) above), he adds back $876 million as the value of those Convertible Bonds at the time of the acquisition, to reach an assessment of Autonomy's "adjusted market capitalisation", and, for the purpose of assessing the FSMA Loss, takes the resulting figure of $4,671 million as representing *"the Actual Value of Autonomy listed on the London Stock Exchange in the RTP…".*

471. Mr Bezant did not state in his reports what his assessment of market capitalisation in the RTP (of around $4,671 million assuming conversion of the Convertible Bonds into equity)[95] would translate into in terms of counterfactual pre-bid price per share (before payment of premium). He was pressed in cross-examination to state what figure would result. When he declined, he was pressed again to state whether he agreed that it was about £10.19, but again he declined. He sought to justify this on the basis that he had given the aggregate market capitalisation value to avoid the difficulty of apportioning between the *"series of interests in Autonomy, shares, options and convertible bonds"* making up the entire package which HP was acquiring. He would go no further as regards the figure of £10 which was put to him than to say that *"it depends how you calculate it",* with the only additional explanation he offered being that some allowance had to be made for the fact that part of the aggregate counterfactual share price would go to the holders of options and convertible bonds.

472. The Defendants suggested that this reticence was because he appreciated that the result would inevitably invite scepticism as to his approach. In Dr Lynch's closing submissions, the point made was that a figure in the region of £10 compares to Autonomy's share price (which did not, of course, include any prospective bid value or premium) of £13 in April 2009, which is prior to the publication of its first set of impugned accounts. They suggested this demonstrated that his approach was *"unreal".*

473. The price resulting from the Claimants' method does seem to me to be a considerable undervaluation, and Mr Bezant's reluctance to explain fully and address sufficiently the consequences of his own valuation is another indication that it is flawed. The generally upward progress of Autonomy's share price over the course of January 2009 to January 2010, which is apparent from an analysis of Autonomy's share price from January 2009 to 3 August 2011 produced by Mr Giles, and which is set out under paragraph [497] below, seems to me to cast further doubt on Mr Bezant's approach and conclusions in this context: and see also paragraphs [494] and [495] below.

Mr Giles's assessment of Autonomy's market capitalisation in the RTP

474. Mr Giles's position (quoting his third report) is that:

> *"Unlike a DCF analysis, the share price of a company is not driven by a specific valuation model and set of transparent assumptions. The share price of Autonomy, like all publicly traded equities, is driven by a range of factors both specific to Autonomy and relevant to the general market, including:*

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[95] Excluding the value of the Convertible Bonds, and treating the bonds as debt, the figure he reaches is $3,795 million. He uses that figure in his analysis of bid premia in assessing the Revised Price and in reaching his conclusion that the figure he reaches for the Revised Price ($7,100 million) represents a 61% premium over his estimate of the *"Revised True share price"* in the RTP. His reasoning is that the relevant assessment is of the share price before the bid and before conversion of the Convertible Bonds into equity.

a. *Current expectations of Autonomy's financial performance;*

b. *Information about historical financial performance;*

c. *Changes in interest rates, foreign exchange rates, etc.;*

d. *Market commentary about Autonomy, the software industry, or the economy, amongst many other factors."*

475. In their written closing submissions, the Defendants submitted that the:

> *"reality is that accurately calculating Autonomy's share price in the counterfactual world on a particular date is an impossible task. The share price is likely to have been volatile, as it was in the actual world, driven by a multitude of factors, including macroeconomic and other long term and short term considerations, all of which might lead to a divergence between a share price and a company's true long term value. As Mr Giles explained, a proper analysis of the share price would require an event study,[96] something which had not been prepared for this court."*

476. The influence of these factors, and the unlikelihood of there being any ascertainable mechanistic link between share price and DCF valuation, is illustrated by the volatility of Autonomy's share price in the period leading up to the Acquisition announcement, as shown in the chart tracking Autonomy's share price from 2009 to the Acquisition announcement and also showing the FTSE 100 in the same period, as set out under paragraph [497] below.

477. However, Mr Giles was reticent about providing any mechanistic guide to the assessment of what, in the FSMA Counterfactual, Autonomy's share price would have been if I do not accept his (and the Defendants') primary position that there would have been little change. He acknowledged that this places the Court in a very difficult position and expressed sympathy in that regard, but he declined to give any expert opinion, given what he stated in his third report to be the impossibility of knowing which of such a wide range of factors that investors make in buying and selling shares, would, in the FSMA Counterfactual, have affected Autonomy's share price, and to what degree.

478. The most Mr Giles felt able to offer me, in addition to the points he emphasised as summarised in paragraph [97] above, was that I should try to establish a reasonable price from an assessment of the *"abundance of information in the form of equity analyst commentary that can tell us what issues were important to people that followed Autonomy"*. He pointed out and cautioned that, of course, equity analysis and the actual share price are a *"step removed"*: such analysts give opinions as to value but do not (typically) buy and sell the stock and do not set the price. Furthermore, he could only offer me his "*impression"* of what analysts focused on in the Reported Position and considered that in the RTP it *"is impossible to know exactly what metrics would have been reported",* though in his view there is little reason to suppose their focus would materially have changed.

[96] See paragraphs [105] and [106] above.

479. With those caveats, he stated his *"impression"* to be that:

(1) Analysts focused particularly on revenue and organic growth, but also cash conversion: and in the RTP this was significantly higher than in the Reported Position, and impacted by the substantial growth in deferred revenue, so that cash conversion would have looked substantially better in the RTP.

(2) Analysts frequently referred to deferred income and deferred revenue, and he considers it likely that in the RTP this would have been even more closely followed as deferred revenues continued to grow.

(3) In the round, he considers that *"it is impossible to know exactly what metrics would have been reported most by equity analysts in the Restated Position, but there is little reason to think that the focus would have changed dramatically."* On that basis, the factors driving analysts' opinions in the RTP would (as in the Represented Position) have been growth, EBITDA and cash conversion (which he defines as "the amount of cash generated for a unit of EBITDA").

(4) On his analysis, those metrics would appear neutral or better in the RTP.

480. Thus, Mr Giles ultimately does not offer any quantification of, nor any system or basis for ascertaining, what would have been the share price in the RTP beyond his conclusion that:

> *"On balance, given the volatility of Autonomy's share price historically, the uncertainty about the factors affecting price, and both the positive and negative implications on value from the Accounting Adjustments, I see no reason that the why [sic] price in the Restated Position would have been materially different from Autonomy's actual share price."*

481. I turn to my own assessment.

My assessment of Autonomy's likely share price in the RTP

482. The conceptual difficulty of assessing what, in the RTP, Autonomy's share price immediately prior to the bid would have been makes some sort of mechanistic or "systematic" approach, such as Mr Bezant and the Claimants propose, initially beguiling, especially in the absence of anything else resembling an "objective" method. Some methodology based on the bedrock valuation tool actually deployed by HP (here, its Deal Model) with roots in uncontested fact (here, the discount on standalone value which the prevailing pre-bid share price implied) has initial attractions over none. The initial attraction of the methodology offered is the greater because its rejection would leave me with the sympathy of Mr Giles, but little by way of expert evidence of an alternative answer, apart from a review of the multiplicity of factors liable to affect a listed company's share price.

483. Even so, I cannot accept Mr Bezant's methodology, nor the results of its application. Put summarily, I am not persuaded that there is any link between standalone value and listed share price/market capitalisation such as can be extrapolated to apply even when accounting changes are made which affect DCF standalone value. Financial information may inform but does not determine the price of shares in the multiplicity of purchases

and sales which establish the market price. Nor, for the reasons I have sought to give, do I accept Mr Bezant's assessments of standalone value, or his forecasts of growth, or his classification of Autonomy for the purpose of selecting comparables.

484. Although a DCF valuation and a synergies valuation will guide a bidder whether or not to make a bid, and as to the parameters of an acceptable bid price,[97] and may more generally provide a useful technique for analysts in assessing the economic performance of an enterprise, there is little or no evidence of any correlation between a DCF valuation and the share price in the market, either generally or in this particular case.[98]

485. In this connection, and for the avoidance of doubt, I should also make clear that I do not accept (contrary to the Claimants' written closing submissions) that it was common ground at trial that *"a company's share price will in principle reflect its standalone value, subject to adjustments for liquidity and control."* Liquidity and control factors will be factors affecting the difference between a company's market share price and the greater amount likely to be payable to acquire all its share capital: but, as stated above, its standalone value is not likely to be a major factor in investor sentiment, save to the extent that investors are guided by analysts, who may well have regard to their own (internal) DCF valuations.

486. I accept, therefore, the submission made in Dr Lynch's written closing submissions that there is no evidence to suggest that share price moves linearly with standalone value reached by DCF valuation. Mr Bezant's approach supposes a correlation for which there is no evidence, and indeed seems to me counter-intuitive, given the range of possible DCF values, the sensitivity of DCF models to unpredictable variants such as the chosen terminal growth rate and the assessment of WACC, and the basic fact, which all parties agreed, that share price responds to a variety of outside factors, including market sentiment.

487. Put another way, I accept that there is a distinction between (a) what drives share price in the market and (b) what drove (and in the RTP would have driven) HP's calculation of how much it might be willing to pay. DCF valuations, taken with synergy projections, provide some rationale for a range of realistic and justifiable offers; but they do not provide any reliable guide to share price or market movements.

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[97] As I have found in my Main Judgment, see paragraph [4037], and as emerged from Mr Pearson's witness statement for the Main Trial, a DCF valuation such as the Deal Model provides *"in effect the lower and upper boundaries of a suitable bid price, in the form (respectively) of its figures for the standalone value of Autonomy and the valuation incorporating synergies"* but it *"could not and did not dictate the price"* (see, again, *ibid.*).

[98] It is right to acknowledge and I have taken into account that, in his third report, Mr Giles stated that *"At a headline level, the fact that in the Restated Position the standalone DCF value of Autonomy in August 2011 ought not to have been materially different…confirms that the share price of Autonomy in August 2011 would also ought not [sic] to have been materially different."* Understandably, the Claimants placed reliance on this as signifying acceptance that there is a correlation between DCF valuations and share price. However, I do not think this is quite what Mr Giles meant, as I think is clarified by his reasons for arriving at a similar result to the Deal Model set out in an earlier section (section 6) of his third report. In my view, he is going no further than to say that if his conclusions *"that the underlying activity of Autonomy is not altered by the change in accounting treatment"* so that *"…the valuations are not materially different from the Deal Model"* and *"Effectively, the same economic activity underlies both the Deal Model and the Recalibrated Deal Model"* there should be no reason to think that the share price would have been different.

488. Thus, I do not think Mr Bezant's central premise that the *"established fact"* that Autonomy's shares were traded at a *"discount from Autonomy's standalone valuation to its share price at the time of the transaction",* though true as far as it goes, provides any reliable basis, still less a reasonable formula, for assessing the counterfactual share price.

489. This is easily illustrated by the volatility of Autonomy's share price in the weeks immediately prior to the announcement of the Acquisition: as noted in my Main Judgment at paragraph [279], Autonomy's share price rose from £16.62 to £17.20 from 25 July to 27 July 2011, but had fallen back to £15.44 by 5 August 2011. (Over the same period, HP's own share price dropped by 9.9%: *ibid.*)

490. Further, as Mr Bezant acknowledges in his reports, the implied discount of Autonomy's traded market capitalisation to the Deal Model ranged between 20% and 38% over the period 1 January 2011 to 17 August 2011, though he stated that it was *"typically in the range 25% to 35%"*. Thus, although a discount may be *"established fact"*, the choice of 30% is simply based on mathematical averages, and even then leans towards the higher side.

491. Last, but by no means least, it seems to me to be both revealing and necessary to stand back and consider whether the price resulting from the Claimants' method, placing a price of £10.19 per share which Mr Bezant shrank from putting forward despite close questioning in cross-examination (see paragraph [471] above), makes reasonable sense, or whether it is counterintuitive. I do not think it does make sense; it does strike me as counter-intuitive, and it seems to me to be an obvious and considerable undervaluation.

492. That is especially so having regard to the generally upward progress of Autonomy's share price over the course of January 2009 to January 2010 which is apparent from an analysis of Autonomy's share price from January 2009 to 3 August 2011 produced by Mr Giles, which is set out under paragraph [497] below.

493. More particularly, this analysis shows that from an opening price of £9.79 on 2 January 2009, Autonomy's share price rose to £13.13 at the end of August 2009, to £15.30 on 18 September 2009, and as high as £16.35 by 30 September 2009 (albeit with falls earlier in August 2009 to less than £12, as noted in a different context of the reasons for the adoption of the hardware sales strategy in my Main Judgment at paragraphs [708] to [710]).

494. It is of note that when cross-examined at the Main Trial, Mr Bezant had not taken a mechanistic (the Claimants naturally preferred the word "systematic") approach in determining what would have been Autonomy's pre-bid share price:

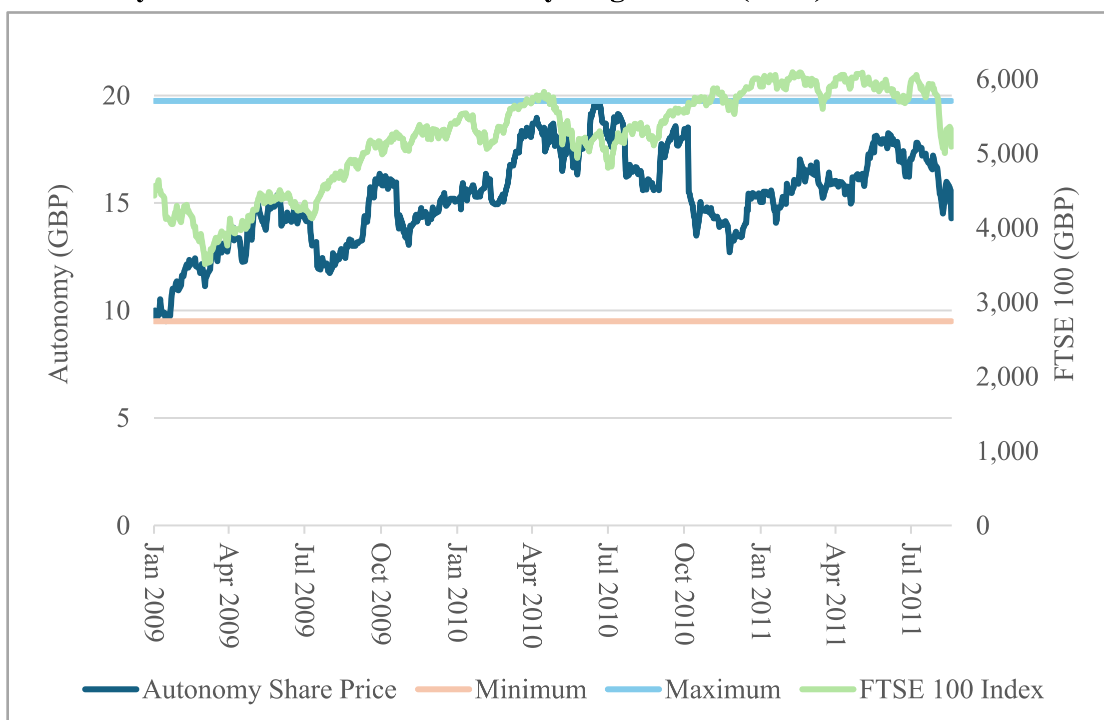
> *"…in the context of a company quoted on the Stock Exchange which has a variety of owners in effect, for whom the market value is the prevailing share price, their considerations are informed by the prevailing share price irrespective of anyone's views as to the underlying value of that business and therefore the price at which they are likely to sell or may be induced to sell is informed by the traded share price of that business."*

495. Mr Bezant's non-mechanistic approach then is much closer to Mr Giles's approach now in rejecting the notion of a linear relationship between changes in a DCF valuation and share price and pointing to the considerable volatility of Autonomy's share price and the FTSE as a whole to illustrate this.

496. Thus, in the round, I agree with Mr Giles that although a DCF valuation (with a projection for synergies) provides a framework for the bidder in assessing whether to proceed and in determining the rational parameters for a bid price, the share price of a company is not driven by a specific valuation model and assumptions, but predominantly by such factors as (i) current market expectations of Autonomy's financial performance (including likely returns by way of dividend or share buy backs); (ii) information about historical financial performance; (iii) changes in interest rates, foreign exchange rates and other similar factors affecting the relative value of the investment; and (iv) market and analysts' commentary about Autonomy, the software industry and the broader economy.

497. The variety, variability and volatility of Autonomy's share price pre-bid reflects the changing interplay of these factors. The chart below illustrates the volatility of Autonomy's share price from 2009 to the date of the announcement of the Acquisition. The blue line in the chart shows the share price, while the orange and grey lines show the minimum and maximum prices over the period and the green line shows the FTSE 100 over the same period. The maximum price was £19.75, which was 108% higher than the minimum price of £9.50 observed over the period. (In the three months before the Acquisition the price ranged from £14.29 to £18.25.) This volatility was not uncommon, especially in the 'tech company' sector; and Mr Bezant agrees that the share prices of comparable software companies were also volatile around this time: but the volatility was particularly marked and abiding in Autonomy's case.

Autonomy Share Price Jan 2009 to early August 2011(GBP)



Source: Appendix B.4

498. A report prepared in March 2011 by Goldman Sachs (which at the time was one of Autonomy's corporate brokers), entitled *'Addressing Autonomy's Issues with the Market'*, referred to statistics confirming what were described in it as *"anecdotal perceptions that Autonomy exhibits a high degree of volatility, especially around results"* and noted that *"This volatility is off-putting to potential new investors, particularly US based ones, and is arguably acting as a brake on Autonomy's stock market value."*

499. The report went on to identify *"a regular pattern of interconnected issues behind this volatility"* including (a) *"A small group of consistently negative and hostile analysts who are the only voice heard in the press"*, (b) *"Some similarly negative and vocal investors…who help reinforce negative commentary"*, (c) *"short-selling of the shares into results and immediately post announcement on the back of often spurious comments from the same negative analysts and investors"*, and (d) largely US based investors wanting to *"buy on any weakness"*. [99]

500. The fact that, as appears from that report, Autonomy's stock in the Represented Position had a 'Marmite' quality in the analyst community, loved by some and unappetising to others, is a further complicating factor in attempting to assess what Autonomy's share price would have been in the RTP. The polarity of analysts' views was illustrated by an analysis of the views as to Autonomy's prospects and "Target [share] Price" in a Qatalyst report on 10 August 2011 (barely over a week before the Acquisition announcement on 18 August 2011) showing that (for example) Goldman Sachs's Target Price was £26.50 (representing a premium of 83% to the then current price), the average was about £20 (representing a premium of about 38%), but Peel Hunt (through its analyst Mr Morland, who was at the sceptical end) suggested a Target Price of just £13 (representing a discount on the then current price of 10%). Peel Hunt's analysis, unlike those above, was pre-Q2 2011 Earnings Announcement, whereas the others were post-Q2 2011 Earnings Announcement; but the other pre-Q2 2011 values (bar one) were all above £20.

501. Also of interest is that the same Qatalyst report identified the *"Valuation Methodology"* underlying the various analysts' projections and Target Prices. Of the 20 analysts selected (which is also the number of analysts that Mr Pearson identified as regularly covering Autonomy) only six are stated to have used DCF valuations, whereas eleven used multiples-based, P/E, EV/EBITDA or (in one case) *"Blended DCF & NTM EV/EBIT"* and two (including Peel Hunt) were not associated with any methodology. Of those using DCF valuations there was a variation of between 8.8% and 11.5% in the WACC figure used and between 2% and 4% in the Terminal Growth figure used.

502. All this seems to me further to tell against Mr Bezant's mechanistic approach based on a 30% discount of his already low DCF valuation, and tends also to confirm the essentially uncertain nature of any assessment of share value in the RTP: any appearance of the appliance of science is no more than that.

[99] Unsurprisingly perhaps, Goldman Sachs then went on to prescribe solutions to change these factors which in effect recommended a *"co-ordinated effort from across an investment bank"* and nominated itself as that bank; the recommendation was not actioned, but the report is relevant nonetheless in confirming both volatility and 'headwinds' faced by Autonomy which affected its share price and which might or might not have been affected and lessened in the RTP.

503. I acknowledge that Mr Bezant's approach, and in particular, his selection of a 30% discount to his DCF calculation, was also based on (and, he considers, additionally justified by) his review of the discount at which Autonomy traded relative to a number of US-listed software businesses. He put this forward as another way of estimating what discount would be implicit in its share price *"relative to its intrinsic value"*. He accepted that this was imperfect, primarily because (as he put it in his first report) *"there is no one close comparable to Autonomy such that the overall discount observed between its market capitalisation and that of any one comparable company will not be a wholly reliable guide to the discount relating solely to differences stemming from technology stocks listed on European as opposed to U.S. stock exchanges."* He also acknowledged substantial yearly variations for all companies and variations between companies as to the size of the discount, and had to accept that *"the discount at which Autonomy traded relative to different peers also changed over time."*. However, he concluded that the result of his review supported his assessment that *"Autonomy traded at a discount to individual US-listed companies typically well above 30%"*; and that this was further support for his assessment that Autonomy's share price in the FSMA Counterfactual should likewise be discounted relative to its intrinsic/DCF value.

504. However, I am not persuaded by his approach in these contexts either, and his rejection of the higher figures suggested by the *"transaction multiples"* seems also to suggest a tendency to regard any variation from the lower figures suggested by his main DCF-based approach as an outlier.

505. Furthermore, even had I been more persuaded by Mr Bezant's approach, I would not be content with his inputs. In particular:

(1) I do not accept that on a *"trading multiples"* approach, there is sufficient reason to downgrade Autonomy in the RTP to re-classify it as operating in the "infrastructure/data management" sector with "medium" or "low high growth" (whereas in the Represented Position it was categorised as operating in somewhere between infrastructure/data management and the ultra-high growth SaaS sector and classified as higher growth or ultra-high growth). It follows that I am not persuaded by Mr Bezant's choice of comparables (being companies in the "medium growth" band) to determine trading multiples.

(2) Although I recognise the difficulty of selecting appropriate comparables for the purpose of his *"transaction multiples"* and the further difficulty he identifies of stripping out any unidentified premium values implicit in the transactions selected as comparables, I am not persuaded by Mr Bezant's resort to an *"indicative valuation range which incorporates transactions across the growth bands"* using a *"rounded range of multiples"*. This seems to me likely to squeeze out or attenuate the positive effect of selecting comparables which would have been more apt having regard to the high rates of growth I consider still likely to have typified Autonomy's overall performance in the RTP.

506. The consequence is that I am not persuaded that the multiples/comparables approach is reliable either: I have no sufficient confidence in those selected by Mr Bezant, and Mr Giles has, in this context, offered none.

507. I am left, in the end, to form my own view, having regard to the figures suggested, but ultimately applying a broad brush or wielding a broad axe. In such circumstances, a

suggestion of precision implicit in figures apparently calculated to a decimal point would be mere pretence. The best I can offer is a range.

508. I consider that:

(1) Mr Giles's suggestion that the Allegations proved, and the consequent required Adjustments, would have had no effect on investor perception and that Autonomy would have looked much the same to a buyer in the counterfactual world as it did in the actual world is not realistic.

(2) The fact that software revenues were undoubtedly substantially reduced in the RTP, once hardware sales are stripped out, must be taken into account.

(3) That said, however, it is easier to state that than to measure the consequences. The difficulty is exacerbated by two important factors. First, it is easy to speculate that the market would have been greatly affected upon the revelation of the volume of hardware sales, and to assume a considerable downward pressure on Autonomy's share price accordingly. But any surprise or disappointment factor, or market perturbation, which would in all probability have adversely affected the share price upon the revelation of such an active programme of reselling hardware (and the result that Autonomy was not the pure software seller that it was thought to be), is not to be brought into account in the FSMA Counterfactual: see paragraph [17] above.[100] Secondly, once hardware sales are simply stripped out (as is required in constructing the FSMA Counterfactual), overall revenues are plainly (and substantially) lower than in the Represented Position: but, as Mr Giles frequently emphasised, so too are Autonomy's costs. Indeed, according to Mr Giles's analysis in his third report, the cost reductions (which he estimates at about $222.4 million) exceed the revenue reduction and result in an increase in cash capacity (that is the amount of cash on hand to meet obligations) of some $29.6 million. These figures were not substantially challenged.

(4) Further, without resort to the levers used to maintain the appearance of growth (principally, as I have found, hardware sales and improper VAR transactions and contrived Reciprocal arrangements) growth would have been more volatile (and I consider, less impressive).

(5) Although Dr Lynch insisted that in terms of share price and investor sentiment *"The company was mainly valued on cash flow",* I consider (and find) that the preponderance of the evidence was that investors saw Autonomy as a revenue growth-driven stock and usually focused on Autonomy's reported revenues and profits, more than on its cash receipts. It was primarily its revenue growth which justified a (relatively) high earnings multiple (as Mr Shelley agreed in cross-examination).

[100] In this regard, it seemed to me that Mr Bezant and the Claimants never quite rid themselves of a perspective which included revelation of shock or at least disappointment, even though they rehearsed their acceptance that for the purposes of the FSMA Counterfactual, no *"negative consequences of the market knowing that Autonomy was selling hundreds of millions of dollars' worth of hardware at a loss for no apparent reason"* were to be taken into account.

(6) This was also reflected in fluctuations in its share price after failures to achieve revenue targets[101], even if (as Dr Lynch insisted) there were sometimes other contributory factors, particularly (he suggested) the occasional disappointment of a failure of an accretive acquisition which had been expected to increase EPS (Earnings per Share) and corresponding cash flow. Indeed, I am satisfied that it was this which primarily prompted management's recourse to levers to manipulate revenues, which is the essence of the case which I have found to have been proved.

(7) In the FSMA Counterfactual world, Autonomy's historical revenue mix is tilted towards IDOL Product, and it has no significant OEM business (properly so classified). As to the latter, both Mr Shelley and Mr Pearson (as well as analysts such as Credit Suisse[102]) regarded the OEM business to be the most valuable line of business, as apparently did Mr Apotheker. I think it likely that investor sentiment, and thus share price, would have reflected this. However, in his own pessimistic assessments of likely share price based on a mechanistic connection between DCF valuation and share price, Mr Bezant has seriously underestimated likely growth in IDOL Product and IDOL Cloud (and indeed Core IDOL as a whole), and has substantially left out of consideration positive aspects of Autonomy's performance in the FSMA Counterfactual which would have tended to encourage a higher share price.

(8) In particular, even if revenue and revenue growth would have been the prime focus, historic cash flows and its rates of cash conversion were also areas of research and focus. Although the Claimants countered Mr Giles's suggestion in his third report that Autonomy's cash conversion rate would have been improved in the RTP by pointing out that Mr Giles's argument that cash conversion would have improved depends on his view of growth of the deferred revenue balance, it seems to me that at the least, in the RTP Autonomy would have been regarded as an efficient convertor of sales into cash, its gross margins would have been higher and its costs and capital expenditure ("capex") would have been lower, encouraging a more positive rating.

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[101] The heightened volatility of Autonomy's share price around results is well documented (and was the subject of a paper produced by Goldman Sachs dated 11 March 2011 and entitled *"Addressing Autonomy's Issues with the Market"*). The Claimants gave the example of a share price fall of 16% on one day (6 October 2010) which coincided with Autonomy's announcement lowering revenue growth expectations for the full year to 17% compared to market expectations of around 21%. They also provided a graph to show similar share price falls after lowered revenue growth expectations, and also to show that (as Dr Lynch accepted) the share price never sustainably recovered to the level preceding that fall until after the bid announcement. Although Dr Lynch told me that the main reason was indeed the failure of an accretive acquisition, I was not persuaded by this. The repeated coincidence of reduced forecast and a fall in share price, and my view of the reasons for the various strategies for maintaining the appearance of revenue growth, have persuaded me that lowered expectations of revenue growth was the weightier factor. I note also that a Financial Times article on 6 October 2010 ascribed the fall to lowered revenue forecasts and quoted Dr Lynch as admitting that the company had seen some challenges over the summer months, with no mention of a failed acquisition; and one of Autonomy's largest institutional investors stated in feedback to the company about proposed cost cutting to enhance EPS: *"The trouble is that Autonomy is a revenue not an EPS story. If the revenue doesn't grow but the eps does, they will get MASSIVELY derated from their current multiple…"*.

[102] As an illustration, in an investment research note dated 18 March 2010, headed *"The Autonomy OEM Opportunity"*, Credit Suisse suggested that in 10 years' time the *"Long Term OEM opportunity could be worth £15.63 per share…or about £5.50 per share present value at an 11% discount rate."*

(9) Autonomy might, in the RTP, have been less of a "marmite" stock, with analysts less divided and sentiment less susceptible to negative commentary exaggerating both the effect of any reduced earnings/profit expectations, and market reaction to periodic results and short-selling.

509. As I have already confessed, none of these considerations can support anything more than what is ultimately a broad-brush assessment. It seems to me that this is one of many examples of cases where it is necessary to forego precision and apply a pragmatic view (citing, for example, *Sainsbury's Supermarkets Ltd v Visa Europe Services LLP & Ors* [2020] UKSC 24 at [217] to [219]) or *"broad axe"* (citing the recent decision of the Court of Appeal in *Royal Mail Group Limited v DAF Trucks Limited and Others* [2024] EWCA Civ 181 ("the *Royal Mail Trucks* case") at [104] to [109]). The *Royal Mail Trucks case* also confirmed that in this context (and as appears from, for example, *London & South Eastern Railway Ltd v Gutmann* [2022] EWCA Civ 1077 at [59]), the law does not require proof of quantum to be on a balance of probabilities; judges must in the end simply:

> *"use their forensic skills to do the best they can with limited material to achieve practical justice."*

510. Doing the best I can, and taking into account all the circumstances and the various approaches I have sought to describe, I consider that Autonomy's listed shares in the RTP would have traded in a lower range in 2011 than in the Represented Position, and its average market capitalisation would thus have been lower too: but not nearly as low as Mr Bezant's assessment, which over-estimates the effect of the stripping-out of hardware sales, under-estimates Autonomy's growth and piles discount upon discount.

511. The disclosure in Autonomy's published information of the volume of sales of 'pure' hardware (amounting in aggregate to some $202.7 million[103]) at a loss would inevitably have affected the market view of Autonomy. The revenue generating capacity of Autonomy's high-margin software business was by that amount reduced. Analysts would almost certainly have delved into the timing of the hardware sales, and searched for any rationale for them, and might well have discovered their use by Autonomy to "smooth" Autonomy's apparent revenues and disguise fluctuations in software sales. In any event, Autonomy's very substantial loss-making hardware sales inevitably affected Autonomy's profile, and the apparent size of its 'pure' software business.

512. However, I also consider it likely that confirmation of the cessation of that line of business and its accompanying losses would fairly soon have led to positive reassessment of the fundamental strengths of Autonomy's IDOL offering and its overall IDOL software business, and an appreciation of the impressive cashflows, high cash conversion rates and growth rates which Autonomy in its leaner state would have presented. This would have tended to increase investor appetite and thereby the share price.

513. Except in the case of the limited instances of impugned VAR sales which were not followed by any subsequent 'real' transaction, it seems to me that the use of VARs to accelerate recognition of revenue did not usually lead to any overall decrease in cash or

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[103] Compared to some $143.7 million of improper VAR transactions and $65.2 million of Reciprocal Transactions.

revenue, except as regards the costs of MAFs etc. The rationale of the VAR sales might have interested some analysts, but I am not persuaded that it would have translated, of itself, into a sustained material diminution in Autonomy's share price. Similarly, stripped of the label of impropriety for the purposes of the assessment of FSMA losses, I doubt that the volume of Reciprocals was such as to have any material sustained effect on the share price.

514. Investors and analysts might have expected Autonomy to be doing more in the way of high margin, incremental growth, OEM business. The negligible size of that business might have suggested difficulties in achieving general market recognition and put downward pressure on the share price and market sentiment; but not such as to justify a material sustained diminution.

515. The overall reality is that individual shareholders, with no control or takeover ambitions, look primarily, and ordinarily exclusively, to dividend and growth potential, and general investor sentiment (informed to an unmeasurable degree by analysts). By those metrics, for the most part, Autonomy would have presented a lean and profitable business, with strong cash flow and high cash conversion ratios in a high margin business with strong growth prospects.

516. In the Represented Position, the 90-day average trading price was £17.24 (compared to a 52-week low at the end of November 2010 of £12.71), the 30-day average was £17.12, the price at the time of the first meeting between Dr Lynch and Mr Apotheker on 12 April 2011 was £15.40 and the spot price on 8 August 2011 was £14.51.

517. Taking all the factors mentioned above, and using a broad axe or brush, I estimate a 30-day average share price for Autonomy in the RTP/FSMA Counterfactual of between £13.50 and £15.50.

(18) Expected Synergies and the effect on the bid price

518. HP's Deal Model also contained valuation analyses of the synergistic value of Autonomy to HP; and it is common ground that (at least in the "Transaction Scenario", which is the agreed premise of the FSMA Counterfactual) the potential for synergies arising on HP's acquisition of Autonomy was a significant source of prospective benefit and value for HP for which it was prepared to pay a premium.

519. That synergy value is additional to and different in nature from Autonomy's standalone value: it is the value additional to the value of the two individual businesses which HP estimates it is likely to be in a position to develop and exploit further to its acquisition of a complementary business and assets, whether in the form of increased revenues, marriage value or costs savings. In that sense, it is personal to the buyer (HP), being an expression not of intrinsic value, but of the value to the purchaser which the purchaser expects to generate and realise. It does not affect the share price, save as regard the expectation of premium which the market will expect once the prospect of a bid and the identity of the bidder (and its supposed propensity to pay a premium price) is revealed.

520. It is nonetheless a store of prospective value which HP would take into account in seeking to strike an agreed bid price, any price over and above standalone value in effect representing a sharing with or ceding to the seller of the buyer's anticipated benefits.

How much is shared by the buyer with the seller ultimately depends on their relative bargaining positions.

521. In its Deal Model, HP calculated the value of synergies as $7,735 million. On Mr Bezant's analysis, of that amount, it ultimately agreed to pay Autonomy's shareholders in aggregate some $919 million, being the difference between the price HP paid for those shares and the standalone DCF equity value of $10,207 million (that being the total of $9,502 million enterprise value plus Autonomy's net cash of $705 million). Mr Bezant calculated the proportion of synergies paid by HP to Autonomy's shareholders as some 11.9%.

522. However, what would have been the extent of those synergies in the FSMA Counterfactual is disputed. So too is what proportion of its anticipated synergies HP would have been prepared to share and the likely effect on the bid price.[104] There are thus two questions to be addressed:

(1) The first is what total value HP would, in the FSMA Counterfactual, have anticipated to result from synergies made possible by the Acquisition.

(2) The second is what share of that anticipated value it would have been prepared (and prevailed upon) to share/cede in order to achieve agreement on price.

523. Mr Bezant expressed views as to both issues; but the Defendants submitted (and I broadly agree) that the second is largely a *"factual question of how the synergy component would have fed into any counterfactual negotiation and the setting of a price for the transaction"* and, as such, is a matter of factual assessment by the Court and not a matter of valuation expertise. I deal with that second question in the section of this judgment in which I address the issue as to the pattern and product of negotiations on price in the FSMA counterfactual.

524. The importance to HP of the anticipated synergies is manifest. As recorded in my Main Judgment (see paragraph [276]) and in contemporaneous papers prepared for HP's board, the principal strategic rationale of the choice of Autonomy was described as its *"platform for unstructured + structured data analytics"* using IDOL (which was described as *"massively scalable"*), its ability to *"process all content types (e.g. Structured, Text, Audio, Video)"* and its successful transition to *"cloud product offerings and business models"* (see paragraph [276(2)] of my Main Judgment). HP identified further potential revenue synergies from *"(a) Information Management (b) Unified Analytics (c) Document Processing Solution (d) Data Security Solution and (e) Channel geo-expansion strategy"* (and see paragraph [276(6)] of my Main Judgment). HP's deal sponsors shared this view: see paragraphs [184] and [185] of my Main Judgment.

525. Further, and as appears in my Main Judgment (see page 67), Mr Apotheker told the Board of HP at the time that the business case for the Acquisition hinged on synergies; and (as also appears on the same page of my Main Judgment) in an email to Mr Lane dated 5 September 2011[105] (after the announcement of the Acquisition but before his

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[104] The question being how any incremental value expected to result to the acquirer from the combination of two businesses is to be ceded by the acquirer to the target's shareholders through the mechanism of the bid price.

[105] Mr Lane forwarded this email to Meg Whitman on 25 September 2011.

removal as CEO), which casts interesting light on HP's approach, Mr Apotheker pointedly reminded him *"of what we presented to the Board, and what the Board ultimately decided"*:

> *"…we assumed a "stand alone" CAGR for Autonomy for '12 to '16 of 12.6%...We applied a conservative view on each individual revenue stream, below Autonomy's internal assumptions, and fully in line with analysts' research. During the Strategy Board meeting as well as the subsequent Board meetings, we always presented to the Board our full business case; a case hinging more on the synergies that the combined companies can generate then on the Autonomy's stand-alone capabilities. Indeed, by layering in the synergies we achieve a CAGR of 26.6%, while maintaining the operating margin at or above 40%.*
>
> *Therefore, Autonomy makes total sense if one believes that HP can generate the synergies we build into our business plan. The quality of the synergies is high: you will remember that they exclude any drag-on revenues related to additional hardware sales and we only included a very small drag-on effect for services. All the other synergies are driven by leveraging the IDOL platform, combining it with HP IP/R&D, deeper penetration of existing markets and significant and identified upsell/cross sell opportunities….I, for one, and so does my team, firmly believe that we can achieve these synergies in the allotted time frame."*

526. Consistently with that, and although of course (and as I have held) it relied on the representation of Autonomy's standalone value as represented, and as then reflected in its standalone Deal Model, HP's due diligence exercise was focused primarily *"on validating synergies, understanding key product capabilities and retaining key executives."* The conclusion of that exercise was that *"[p]roduct capabilities and features align with synergy assumptions"*: see my Main Judgment at [274(2)].

527. Mr Bezant's approach, for the purpose of establishing the total synergy value in the RTP, is to assume that in HP's perception there was in the Represented Position and would have been in the RTP, a link between the depiction of Autonomy's historical revenues and evidence of the market penetration it had achieved and HP's assessment of the synergies and their value. He applies to the estimated synergies as calculated for the purposes of the Deal Model the same percentage reduction as the percentage reduction compared to the Deal Model which his DCF valuation in the RTP represents.

528. Then, for the purpose of his opinion as to what part of these (reduced) synergy values HP would have been prepared to cede/share, his approach is to assume that HP paid 100% of its assessed standalone value of Autonomy in the Acquisition and attributed the remainder of the purchase price to synergy value. HP's Deal Model calculated synergies of $7,735 million in addition to a standalone DCF enterprise value of $9,502 million corresponding (after taking into account Autonomy's net cash position) to $10,207 million. On this basis, the bid price implied that 11.9% of its anticipated synergies were paid over as part of the agreed bid price.

529. Mr Bezant calculated that this implied that HP ceded/shared and in effect paid to Autonomy's shareholders 11.9% of the synergy value it anticipated to result from the Acquisition by HP. The basis of his approach in this context to assessing the price that HP would have paid by way of premium is his working assumption that HP would have

been prepared to yield/pay the same proportion of a synergy value reduced rateably by reference to a reduced standalone value.

530. Mr Bezant elaborated these assumptions in his seventh report, in summary as follows:

(1) In Mr Bezant's opinion, the obvious and conventional starting point for the purchase price is the standalone value of the business, since that is the asset which is being acquired (whereas, as he put it, *"the value of any potential synergies depends on the acquiror, and its plans for combining the target business with its own"*).

(2) Although only for certain, smaller, potential synergies (at most three out of the seven identified synergies and dis-synergies set out in the Deal Model) is HP's valuation mechanically linked to the assumptions and calculations that form the cash flow forecasts in relation to standalone value, there are inevitably consequences for HP's own synergy calculation of material alterations in Autonomy's historical and future performance.

(3) That is particularly so in the context of figures from which may be implied the success of the IDOL software and technology in particular business lines, and especially IDOL Cloud and IDOL OEM (the latter of which he considers offers a litmus test of success in the market: and see below). In other words, the linkage is implicit even though mechanical links are not expressly stated. The Claimants also stressed that it was

> *"the unchallenged evidence of Messrs Sarin and Apotheker…that, in the FSMA Counterfactual, the exercise of projecting synergies and HP's hopes for those synergies would have been very different and "far less" positive.*"

(4) There is no logical reason to believe that HP would have been prepared to yield/share/pay a greater proportion of its valuation of its anticipated synergies for a smaller business than it had agreed to yield/share for the business in the Represented Position. Likewise, there is no reason why, if Autonomy's share price were lower than in the Represented Position, Autonomy's shareholders would have expected a higher premium.

(5) Conversely, it is logical and appropriate to consider the proportion of the potential synergy value that HP would have paid for the acquisition of Autonomy by reference to the 11.9% of the value of potential synergies HP actually paid (based on the Represented Position).

531. It will be apparent that this was the same basic methodology as in his first report. On the basis of that methodology, and in light of his conclusions as to Autonomy's substantially diminished standalone value in the RTP, Mr Bezant (a) applies the percentage reduction in the DCF enterprise value of Autonomy in the RTP (according to his calculation) to the value of the estimated synergies in the Deal Model, resulting in his calculation of the total potential value of synergies in the RTP as $5,042 million; and then (b) assumes that the same 11.9% share of synergies as were ceded/shared in the form of part of the bid price would be ceded/shared by HP in reaching an agreed bid price in the FSMA Counterfactual, resulting in his calculation being $599 million (11.9% of $5,042 million).

532. Mr Bezant suggests (in his sixth report) that this *"may well have resulted in a more cautious view on the available synergies or the proportion of those synergies that HP would have been willing to share with Autonomy through the Revised Price"*; and certainly in his opinion:

> *"…HP would not have been willing to share a higher proportion of its assessment of the value of synergies in the RTP than it actually shared on the basis of the Represented Position…"*

He continues that in his view,

> *"this analysis therefore acts as an upper bound when assessing the overall Revised Price. I calculate the standalone DCF value and a share of synergies as $7,498 million."*

533. Mr Bezant defended his approach in applying what is in effect a mechanistic proxy at each stage on the basis that he did not have sufficient information to calculate what he refers to as "True synergies" *"in a way that I would have liked"*. He considers the proxy to be *"a reasonable and conservative assumption as it reflects that, in the RTP, Autonomy was a smaller business that had achieved lower sales of its software implying that its technology was less attractive than Represented."*[106]

534. However, Mr Bezant had to accept, in cross-examination at the Quantum Hearing, that he had not studied in any depth how HP's synergy model worked or HP's *"synergy execution plan"*, nor its plans for *"Unified Analytics"* involving the combination of HP's *"customer reach"* and Autonomy's 'Big Data' analytics technology.

535. Further, he conceded that he had not considered in any depth (if at all) how the synergies part of the Deal Model was constructed, nor who within HP was involved in the synergy calculations HP had made, so that he was not clear what had prompted HP's conclusions.

536. In other words, Mr Bezant accepted that he had not considered what drove HP's modelling of synergies. He had simply assumed a linkage between Autonomy's historical performance on a standalone basis and prospective future performance of the combined entity. He had not given any consideration to whether, and if so for what reason and in what way, HP's view of the synergies it could derive from the combination of the two businesses and the use of its IDOL (and other) technology would have changed.

537. Likewise, he had not examined in any depth (or, perhaps, at all) how much of its anticipated synergies HP would have been prepared and persuaded to share, which requires an assessment of the negotiating process (including the effect of HP's pressing need for strategic refocus and *"transformative change"*). Instead, Mr Bezant seeks to adopt again a mechanistic approach (reducing HP's valuation of synergies pro-rata to the fall (on his assessment) of standalone value) which can only be at best a rough and ready proxy of expedience.

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[106] It is of some importance, however, that Mr Bezant made clear when cross-examined at the Quantum Hearing that he was making no comment about the technical capability of Autonomy's software or HP's understanding of its technical potential.

538. Mr Giles rejects Mr Bezant's methodology and its result as *"ad hoc"*, simplistic, and not reflective of HP's approach to valuing synergies. He considers that it results (and indeed was calculated to result) in what he describes as *"a de minimis value of synergies"*. Likewise, he dismisses Mr Bezant's approach to what part of the value of synergies HP would have agreed to cede/share as flawed and, in any event, not a matter within Mr Bezant's expertise.

539. Addressing first the issue as to the value of synergies in the RTP (which it is common ground is a matter on which expert opinion is relevant), Mr Giles thus rejects any need or justification for the adoption of a proxy. His position is that the value of synergies in the RTP may fairly be extrapolated from the approach taken to their valuation by HP in the synergies part of its Deal Model. In his opinion:

    (1) *"there is no justification for saying that the synergy value would be affected in the same way as the standalone value (i.e., by the same proportion)";*

    (2) *"Mr Bezant says there is little information on which to assess the synergy value, but this is not correct. The Deal Model itself shows how the synergy value was calculated and what components were being assessed";*

    (3) *"It is not contentious that Mr Apotheker's strategy was driven by the potential for synergies"*[107]

    (4) *"HP bought Autonomy principally due to its "almost magical" software and the ability to use the IDOL software to transform HP's business. Autonomy's IDOL software is the same in the Restated Position."*

    (5) *"In that regard, the value indicated within my Recalibrated Deal Model of $7,203 million is the best indicator of the synergy value in the Restated Position."*

540. Also, and as I noted at paragraph [4035(10)] of my Main Judgment, Mr Sarin was clear that the quantification of likely synergies relied principally on a *"thorough understanding of HP's own business…"*. Mr Giles regards this as further confirmation of the reality that the driving force of HP's synergy valuations was what HP could do with IDOL technology in the development and enhancement of its own business and business lines.

541. Thus, Mr Giles's and the Defendants' point, in a nutshell, is that in relation to the capabilities of IDOL and Autonomy's other technology to bring transformational change and huge synergies, nothing really changes in the RTP; and that a more detailed analysis of the constituent elements of the synergies assessment in HP's Deal Model confirms this.

542. The Defendants submitted that:

    (1) HP's modelling team modelled the synergies carefully and considered whether their performance was linked to Autonomy's standalone performance. The key

[107] See, for example, paragraphs [4005] and [4017] of my Main Judgment (and the email there cited).

assumptions in the synergy model were backed by a strategy and execution plan for each synergy, as well as a global execution plan.

(2) The synergy assumptions were developed through discussions between a large team involving, inter alios, Mr Hans Peter Klaey, Head of HP Software Sales, Mr Sarin, Mr Johnson, Mr Rob Binns, Ms Emily Hsiao, Mr Jerome Levadoux and Mr Thomas Bischoff.

(3) The links between synergy values and Autonomy's standalone performance were deliberately limited since HP's assessment of synergies largely turned on what HP could achieve within its own business, with HP's market reach and client base. In particular:

(a) The geographical sales expansion synergy <u>was</u> linked to the standalone performance because it related to selling Autonomy products through HP's network.

(b) The unified analytics synergy <u>did not</u> have any link to the standalone performance because it involved the development of a new product.

(c) The information management synergy was <u>not</u> affected by Autonomy's performance. HP made a specific assumption about the share of the overall market that it would obtain through the synergy. This was not affected by its calculations on Autonomy's market share.

543. The Synergy DCF valued the various components of synergy value as identified by HP, as shown in the Table which appeared in it and is now set out below:

Synergy value by component as identified by HP in the Represented Position

Synergy	Description	FY'12		FY'16	
		Revenue	OP	Revenue	OP
Information Management	• Description: Complete Information Lifecycle Management solution including Archiving, Backup / Recovery, Governance & Compliance, and Search / Discovery • Delivery: On-premise and on-demand, with on-demand comprising bulk of synergies; Augmented by existing HP IM salesforce • Value proposition: Increased efficiency through an integrated, end-to-end Information Lifecycle Management process; increased effectiveness by using Tesla's IDOL (Intelligent Data Operating Layer) to provide conceptual and contextual understanding of all content	$75	$28	$581	$224
Unified Analytics	• Description: Disrupt the BI market with Tesla's content analysis capabilities, by providing insights across structured and unstructured data in the context of industry or LoB specific apps • Delivery: Largely on-premise initially; opportunity to deliver on-demand. Sold through direct salesforce for core HP verticals, supported through HP services; Partnerships with services firms and ISVs for other verticals • Value proposition: Improved decision making in context of specific business processes (i.e. Marketing, Talent Management, Warranty management) and specialized verticals (i.e. Healthcare)	$28	($6)	$526	$162
Document Processing Solution	• <u>Description:</u> Provide process automation solutions for document-centric business processes, including capture, routing, workflow, and archiving. • <u>Delivery:</u> Delivered on-premises and on-demand. Synergies with IPG for scanning / printing capabilities. Sold through direct salesforce. Verticalized through HP and partner services • <u>Value proposition:</u> Workflow integrating structured and unstrutured data, content repositories, and analytical capabilities for document-intensive processes (i.e. Mortgage processing, Insurance claims)	$10	($7)	$192	$56
Data Security Solution	• Description: Augment HP's Security portfolio with Tesla's Semantic analysis and Discovery capabilities in order to provide context-aware security management • Delivery: As an add-on feature to current ArcSight/TippingPoint offerings; Sold by existing Security BU specialist salesforce • Value proposition: More effective Security Event Management and Data Leak Prevention through better classification of data, and better understanding of its content	$11	$3	$136	$69
Geographic Sales Expansion	• Description: Broaden reach of Tesla in EMEA and APJ. Currently, Americas account for ~ 70% of Tesla revenue	$25	$15	$118	$79
Tesla OEM Dis-synergy	• Description: Potential for minimal dis-synergies as some HP competitors discontinue OEM relationship with Tesla	($10)	($9)	($14)	($13)
Total Revenue Synergies		$140	$24	$1,538	$579

Source: Deal Model, tab 'Output'

544. On Mr Giles's analysis, the first four synergy sources in that table, which account for some 88% of the 2016 projected operating profits from synergies, were all *"clearly related to HP's own business line or a new business line, not the existing Autonomy business."* For example (and see the table above) *"Information Management"* is based on a new information lifecycle solution using Autonomy's IDOL technology. The *"Unified Analytics"* synergy was a proposition to release accretive benefit by selling Autonomy's content analysis "through [HP's] direct salesforce for core HP verticals". These were not affected by accounting adjustments, nor by any findings in my Main Judgment. Mr Giles rejects as baseless and fundamentally flawed Mr Bezant's suggestion that synergy value would be affected in the same way and in the same proportion as the standalone value.

545. Insofar as he accepts that within the Deal Model there are some links to the synergy value calculations from the standalone value assumptions and calculations, and that (as he put it in his third report), *"Due to these links, as Autonomy's revenues decrease there are moderate decreases in synergies and dis-synergies (and vice versa)"*, he considers that *"leaving the functionality of HP's synergy value calculations unchanged and just observing the changes that flow through to the synergy calculations from changes to the standalone value projections"*, any fall in synergy value would have been minimal.

546. Mr Giles's recalculation of synergies in the counterfactual world, using HP's own modelling of synergies in its Deal Model ("the Synergy DCF"), shows very little difference when compared with the $7,735 million put to HP's board on 18 August 2011. It seems to me that Mr Giles's view can be summarised as being that the value of the "transformational opportunity" to use IDOL software and technology to transform HP's business was, for by far the greater part, not substantially affected by the accounting differences between Autonomy as Represented and Autonomy in the RTP.

547. Further, it was submitted for Dr Lynch that the $7,753 million in synergies included in the final version of the Deal Model represented a conservative assessment, and that HP's executive team had recognised that the synergies might be worth very much more. As also recorded in my Main Judgment, a valuation produced by the Strategy and Corporate Development ("SCD") group in July 2011 valued synergies at $27,835 million, and a further valuation by the SCD went as high as $30 billion (so that total DCF value was $46.589 billion). Mr Apotheker twice confirmed in cross-examination that the SCD never came up with any numbers which he considered unreasonable, though I have accepted that the latter valuation was never shown to the board: see paragraph [201] of my Main Judgment.

548. The Claimants' answer to this thesis based on there being no mechanical links in the Synergy DCF spreadsheets, and the Defendants' reply, can be summarised as follows:

(1) They relied on what they described as Mr Apotheker's unchallenged evidence that if HP had pursued the acquisition with knowledge of Autonomy's actual financial performance unaffected by the fraud, "*the synergies that HP might have hoped to realize from acquiring such an Autonomy would have been far less than those projected by HP in the belief that it was purchasing a high-growth company that enjoyed robust acceptance in an expanding market for its software products*." The Defendants dismissed this as no more than generic statements of Mr Apotheker's and Mr Sarin's views on the nature of Autonomy's business which did not suggest that any of the core assumptions in the synergy

model would have been different, still less so much as indicate what they are said to be.

(2) They also relied on Mr Bezant's retort to the suggestion put to him in cross-examination at the Quantum Hearing that if the technology were unchanged in the counterfactual world, so would HP's estimate of synergy value. This was simple but direct:

> "*your view of the potential synergies from using the technology in other applications is informed by the evidence and history that you have of how the technology has been used to date and how successfully it has been used to date and how attractive the market finds it and how much people are willing to pay and whether there has been a steady growth in demand and a steady growth in revenues*".

The Defendants emphasised that the Synergy DCF made quite clear that the links between synergy values and Autonomy's standalone performance were deliberately limited since HP's assessment of synergies largely turned on what HP could achieve within its own business, with HP's market reach and client base.

(3) They instanced what they called *"the disastrous performance of OEM"* as illustrative and *"highly significant"* on the basis that OEM purportedly reflected the success of IDOL embedded within the software of other software companies; synergies were similarly expected to be derived from the integration of IDOL with HP's products. The virtual elimination of this category of revenue in the RTP casts doubt on whether the synergies HP hoped for, based on the Represented Position, could really be achieved.

(4) Mr Giles pointed out that the deterioration in the OEM business was a matter of re-characterisation: revenues remained the same and *"the elimination of the OEM revenue category…is counteracted by the increased significance of the IDOL Cloud and Product categories, which are markedly more successful in the Restated Position, thus driving future growth."*

(5) In addition to some of the smaller sources of synergies (such as most obviously, *"Geographic Sales Expansion"*) plainly being linked to the standalone valuation, the Claimants contended that *"it is a non sequitur to infer from the absence of a mechanical link that there is no intellectual link."* They suggested that the Synergy DCF must have based on standalone market shares its assessment of a synergistic "step up" to Autonomy's and HP's respective standalone market shares in relation to the largest synergy source, *"Information Management" (*Autonomy's being much larger). As Mr Giles accepted, that "step up" is judgemental. It is also inherently related to the standalone market shares, which are calculated and set out in detail. It would have been a barren exercise to perform that calculation, if the standalone market shares were irrelevant to the size of the judgemental "step up".

Mr Giles insists that the information management synergy was not affected by Autonomy's performance.[108] HP made a specific assumption about the share of the overall market that it would obtain through the synergy. This was not affected by its calculations on Autonomy's market share.

My assessment in relation to the dispute in respect of the value of synergies in the RTP

549. I can summarise my own assessment of this part of the dispute as to how in the FSMA Counterfactual HP would have valued synergies as follows:

(1) I share Mr Giles's view that Mr Bezant's mechanistic approach in reducing the value to be attributed to synergies expected from the Acquisition rateably by reference to his assessment of the reduction of the standalone value in the RTP (compared to the Represented Position) is too simplistic. I agree that it is based on the incorrect assumption or premise that the historic performance of Autonomy can be mathematically translated into a valuation of HP's expectations of enhanced growth in its own business lines, and that diminution in one can be taken by way of proxy as diminution to the same extent of the other; that it takes no sufficient account of the different natures of synergy value and standalone value; and that it has no sufficient regard to HP's actual approach in its Deal Model. In my judgment, and in agreement with Mr Giles and the Defendants on this point, the approach of Mr Bezant and the Claimants to the determination of synergy value in the RTP is flawed.

(2) The result of this flawed approach is that Mr Bezant values the synergies only by reference to the standalone valuation, and does not analyse the rationale of the Deal Model to establish how HP saw and valued the synergies themselves.

(3) What is really to be assessed and valued is the transformational opportunity which the acquisition of IDOL technology represented to a business (as was HP) in the doldrums which at the time of the Acquisition undoubtedly had concluded (by Mr Apotheker and at least the majority of its Board of Directors) that it needed as a matter of urgency to (in the words of Mr Apotheker in his witness statement for the Main Trial):

> *"evolve the Enterprise Business from low-margin products and services to become a full services and solutions partner for businesses, providing the essential/strategic parts of the technology "stack". (The "stack" comprises the hardware, software, and network layers that stand between the basic infrastructure of data creation, storage and distribution and the end user of information.) One element of this change to the Enterprise Business, I suggested, would be to expand HP's software offering, making it a more prominent part of the HP technology stack and transforming it into the linkage that would add value to all elements of the HP business.*
>
> ...

[108] Mr Bezant's statement in his seventh report that: "*revenues forecast for the largest category of synergies, labelled "Information Management", are based (in part) on Autonomy's revenues in 2009 for its "Archiving" and "eDiscovery" services*" is inaccurate. The synergy revenues forecast are not affected by Autonomy's revenues in 2009 for Archiving and eDiscovery services. Nor are they affected by its share of those markets; Mr Bezant accepted this.

> *…the strategy that HP was pursuing at the time was focused on moving away from low-margin hardware sales and towards higher-margin, higher-growth software and added-service sales that were higher in the technology "stack"."*

(4) Mr Apotheker added that a further perceived benefit, which it appears HP also considered would enhance its own business and thus represented synergy value, was that (again in the words of Mr Apotheker):

> *"Autonomy, alongside Vertica and HP's Nonstop SQL database technology, would provide HP with a 'disruptive data stack' – i.e. that the technologies could, together, displace established operators in this market."*

(5) That said, and in addition to the smaller reductions acknowledged by Mr Giles, I consider that Mr Giles underestimates the likely effect of (a) the fact that Autonomy had a growing dependence on third party hardware sales to maintain revenues and demonstrate its market success, and (b) the virtual "elimination" of the IDOL OEM line of business. I accept (as I accepted in my Main Judgment) that these were matters of importance to Mr Apotheker and his board at the time of the Acquisition, as is (for example) evident from an initial analysis of Autonomy undertaken by HP which placed emphasis on the fact that IDOL appeared to be *"the de facto standard among OEMs"* (and see paragraph [155(1)] of my Main Judgment in this regard). They were matters that could, perhaps would, have impacted its view in valuing the propensity of Autonomy's technology to provide HP with established market share and standing in the software 'space' and to provide 'disruptive' value.

(6) In that connection, however, and again in substantial agreement with the Defendants, I do not consider Mr Apotheker's "evidence" at the end of his witness statement that if HP had pursued the acquisition with knowledge of Autonomy's actual financial performance unaffected by the fraud, *"the synergies that HP might have hoped to realise…would have been far less"* as being much more than generalised speculation honed to round off the Claimants' case. Mr Apotheker explained in cross-examination at the Main Trial what his thought process was; and I have set out and fully accepted in my Main Judgment his evidence that *"there is a sequence here that is very important. It had to be a sound asset…the acquisition was based on the intrinsic value, stand-alone value of Autonomy plus the synergies…the actual value of the company was the foundation."* But I have also accepted his evidence that (as he emphasised to Mr Lane in his email of 5 September 2011 which I have quoted previously) it was HP's own generation of synergies by *"leveraging the IDOL platform, combining it with HP IP/R&D, deeper penetration of existing markets and significant and identified upsell/cross sell opportunities"* which offered a *"unique"* prospect of the real "transformational change" which he considered HP desperately and urgently needed (see paragraphs [201] and [4016] to [4017] of my Main Judgment). He had no detailed knowledge to bring substance to the very general assertion on which the Claimants seek to rely; cross-examination would have been a waste of time.

(7) I consider also (though this is a matter which more directly goes to my assessment of the hypothetical negotiation which I must envisage for the purpose of the FSMA Counterfactual (as to which, see below)) that the mix of the business and the absence of the litmus test of OEM appeal which Mr Apotheker valued may have tempered his enthusiasm.

(8) But that too would have been counter-balanced by HP's urgent need and Autonomy's continuing suitability, and the exceptional potential it offered for HP to establish a leading position in the software sector.

(9) Further, whilst I agree that the Deal Model should be taken as the guide to what the nature of the synergies that HP expected was, I do not think that the differences should be exacerbated by reference to what might be called a "disappointment factor" by reason of lesser historical performance. As Mr Giles noted in the context of assessing what share price should be assumed, but of relevance in this context also, *"It is important to note that in the [FSMA] counterfactual scenario we are not assuming that earnings or growth expectations were missed or missed by a greater margin than in the Reported Position…"* HP would have taken Autonomy in the RTP as it found it, and it would not have discounted what it saw by reference to the Represented Position. What it would have seen would have been a company with an *'almost magical'* product and growing prospects which offered a unique opportunity of synergistic combination.

(10) Any assessment requires in this context (as in relation to the whole quantum issue) a *"broad axe"*. While I do consider that something more than a minimal diminution (see paragraph [545] above) would be appropriate, I do not consider that HP's assessment of synergies values in a revised synergies DCF valuation would have differed in such a way as materially to affect its view of the transformational benefits of the Acquisition, especially given the far higher estimates by the SCD referred to above (see, for example, paragraph [547] above).

(19) Experts' approach in assessing what would have been the agreed bid price in the FSMA Counterfactual and whether this was within their remit

550. The final stage in relation to the FSMA claim before calculating the loss is to estimate the *"Revised Price"*. Mr Bezant accurately describes this as the price that *"Bidco would have paid had it acquired Autonomy with knowledge of the RTP."*

551. This posits an assessment of the likely result of a negotiation between the parties in the FSMA Counterfactual culminating in an agreed bid price (the Revised Price). This is the most subjective and impressionistic stage of all of the overall exercise; but, though the least precise and scientific, it is the most important, since ultimately commercial value is what a particular purchaser is prepared to pay for the particular assets in the applicable circumstances.

552. To my mind this requires a highly subjective, to the extent of being in many aspects largely impressionistic, assessment of:

(1) what HP's mindset would have been in determining the parameters of the price it would expect and ultimately be willing to pay;

(2) what would have been the mindset of (a) Dr Lynch (as the principal person who negotiated the deal on behalf of himself and the other prospective vendor shareholders) and (b) those other shareholders themselves; and

(3) what, having regard to the above, the dynamics and result of the negotiation would have been.

553. Before addressing these matters in turn, I must address a preliminary question raised by the Defendants as to whether any of this is a matter properly within the expertise of either Mr Bezant or Mr Giles.

554. The Defendants submitted that it is not, *"because it primarily involves an evaluation of...factual components"* (as Mr Shivji put it in his oral opening submissions at the Quantum Hearing). Mr Shivji elaborated this as follows:

> *"Now, we accept that in some cases it will be within the proper remit of an expert to consider the price of something. So, for example, if you had a competition case and you were looking at whether a producer had acted in a monopolistic way or in a cartel, you might well say, well, the expert can properly look at what the price would have been in the market if this behaviour hadn't happened. But we say this case is quite different from that. We are not looking at a multitude of transactions where there is statistical analysis as to how market participants would have behaved. We are looking at a single transaction that was highly complex where your Lordship is steeped in actually how it played out. So we say your Lordship ought not to listen to Mr Bezant and his views on that and, indeed, he ought not to have offered his opinion on that."*

555. Mr Patton did not strenuously argue against this. He accepted that:

> *"*[t]*he question of what is the premium over the share price, that is a matter for your Lordship ultimately. Mr Bezant has put forward ways in which one might calculate it, hopefully in an attempt to assist your Lordship, but it is for your Lordship to decide…"*

556. I agree that the assessment of the likely mindset of the parties and the likely factual course and content of negotiations towards an agreed bid price in the FSMA Counterfactual is not a matter for expert evidence; it is a matter for the court. That said, the views of the experts as to relevant factors or possible proxies are useful in my conduct of that exercise, provided (as I confirm is so) I attach no additional weight to them by reason of them being expressed in the context of what is put forward as expert evidence. I turn to discuss first the approach of the two experts, and then my assessment of the negotiating strengths and the likely pattern of negotiations in the RTP.

Mr Bezant's approach

557. Mr Bezant's approach in assessing what would have been negotiated as the bid price in the RTP is, in effect, to offer a proxy for the negotiating process in the form of a calculation of the premium over Autonomy's share price in the RTP by reference to

HP's approach in the Represented Position, and in particular, what he presents as *"the same bid premia reference points considered by HP and its advisers during the price negotiations"* (in the Represented Position).

558. The essential components of this proxy are (a) Mr Bezant's assessment of Autonomy's aggregate market capitalisation in the RTP, (b) his assessment of the synergy value of Autonomy in the RTP (c) his calculation of the percentage of that synergy value that HP would have agreed to pay by way of premium over Autonomy's pre-bid share price as being (d) the same percentage of Autonomy's synergy value as calculated by HP in the Represented Position as HP was in fact prepared to cede and pay in the Represented Position, subject to (e) a cross-check against (and reduction in the light of) other bid premia paid in a variety of transactions and (f) a further cross-check in the form of a comparison against HP's forecast of IRR in the Represented Position.

559. As to these components:

(1) Mr Bezant's assessment of Autonomy's market capitalisation as at 17 August 2011 (when the offer was approved and using the then prevailing exchange rate) is $3,795 million, to which should be added the value of Convertible Bonds, resulting in a total of $4,671 million.

(2) He takes the potential synergy value in the RTP to be $5,042 million, calculated by reducing what HP assessed to be the synergy value in the Represented Position by the same proportion as the proportionate reduction which he considers HP would have made in the RTP to its to its assessment of Autonomy's DCF standalone enterprise value in the Represented Position: that is to say, a reduction of approximately 35%, from $9,502 million in the Represented Position to $6,194 million, a reduction of $3,308 million. (The relevant figures on an equity value basis being a reduction from $10,207 million to $6,899 million, a percentage difference of approximately 32%.)

(3) He calculates the percentage of the value of the synergies which HP paid in the Represented Position to be 11.9%, and

(4) on the basis of the same percentage calculates the maximum amount that HP would have agreed to pay in respect of synergies to be $599 million (11.9% of $5,042 million), implying, when that figure is added to Mr Bezant's standalone DCF value of approximately $6,900 million, an aggregate Revised Price of (at most) $7,500 million, equating to a bid premium of 61% over his assessment of Autonomy's share price in the RTP.

(5) He then compares that bid premium to other bid premia to which (in the Represented Position) HP and its advisors had regard. He has regard to what he calls *"comparative premia"*, being (a) the median premium in all UK transactions with an acquisition price greater than $1 billion which he states to be 23.1%; (b) the median premium in global technology transactions with an acquisition price greater than $1 billion, which he estimates as 31.5%; (c) 80th percentile premia paid for technology companies in UK and US transactions worth over $1 billion, which he estimates as 44.9%; and lastly (d) the actual premium paid by HP over Autonomy's share price in the Acquisition. He notes in particular that the premium of 61% to 65% would materially exceed the

approximately 45% which represents the 80th percentile of bid premia for global technology transactions.

(6) He also compares the IRR implicit in the actual Acquisition price of 15.2%; and concludes that a bid price of $7,766 million in the RTP would imply approximately the same percentage.

560. Mr Bezant finally makes a more general assessment of Autonomy in the RTP, highlighting factors including Autonomy's smaller size in terms of its software business, its less attractive revenue mix, and in that regard particularly the virtual absence of OEM business (which Autonomy had described in the Represented Position as providing *"valuable annuity streams"*) and overall, the smaller proportion of Autonomy's historical software revenues derived from IDOL Cloud and IDOL OEM business combined. He concluded in the round that Autonomy would have been a less attractive business in the RTP so that he would

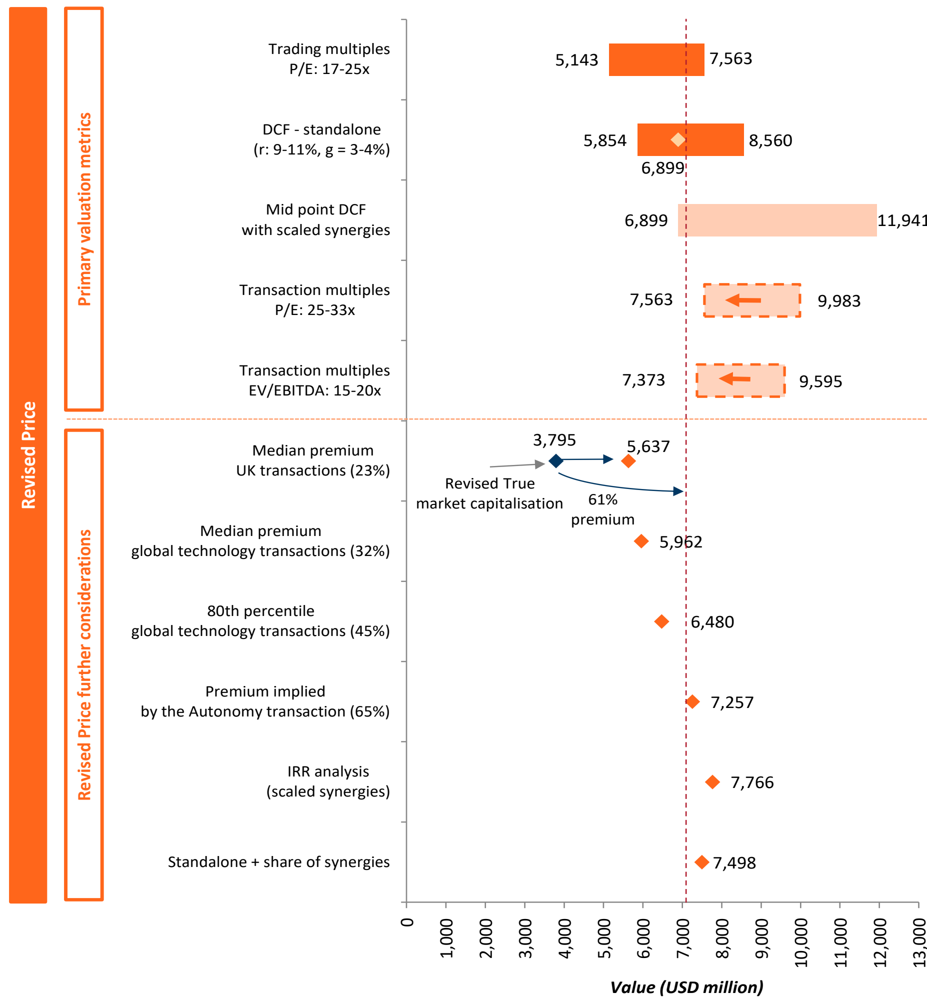
> *"therefore: (i) expect HP to reduce the proportion of synergy value that it was willing to share with the sellers; and (ii) not expect HP to share a higher proportion of its assessment of the values of synergies in the RTP than it shared in the Represented Position."*

561. Mr Bezant's ultimate assessment is that the Revised Price *"taking all the above considerations into account"* and applying a discount in respect of these less attractive features, would be *"in the range above USD6,900 million and below approximately USD 7,500 million, given the difficulties of replicating the negotiations between the parties…"*

562. Within this range, he plumps for $7,100 million as the Revised Price for the purpose of calculating the loss (being the difference between the price Bidco in fact paid and the Revised Price), equating to a bid premium in percentage terms of 61% over his estimate of Autonomy's share price in the RTP. He adds that this in turn equates to around $25.09 per share based on 243.4 million ordinary shares, 4.7 million share options and a value of the Convertible Bonds of $876 million, and that this implies a price of around £15.20 per share at the US$/£ exchange rate used in HP's Deal Model. He considers that since the parties negotiated (in the Represented Position) on share prices expressed to the nearest £0.5 or £1, *"a negotiated outcome of £15.00 or 15.50 may be equally valid."*

563. In his sixth report, Mr Bezant provides a figurative analysis of the constituent elements and primary valuation metrics of his assessment of the Revised Price, also showing possible ranges. (The vertical dotted line represents his own conclusion.) This analysis is set out below:

Mr Bezant's Revised Price analysis



Note: The diamond within the range of DCF standalone value represents a discount rate of 10% and a terminal growth rate of 3.5% per annum.

Mr Giles's approach

564. Mr Giles, having seen no reason for Autonomy's share price in the RTP to have been materially different from Autonomy's actual share price (see paragraph [480] above), considers the assessment of the price premium that HP would have been persuaded to pay in the RTP to achieve an agreed bid as the product of (a) Autonomy's share price, (b) HP's valuation of Autonomy with synergies included and (c) negotiations given HP's objective of an agreed bid.

565. He suggests as to (c) that the following factors *"help explain the substantial price premium HP was willing to pay"* in the Represented Position, would likewise not materially be affected by the adjustments, and accordingly be relevant in the RTP:

(1) HP was taking 100% control, which is a factor explaining why the standalone value exceeded the pre-bid market price of Autonomy's shares;

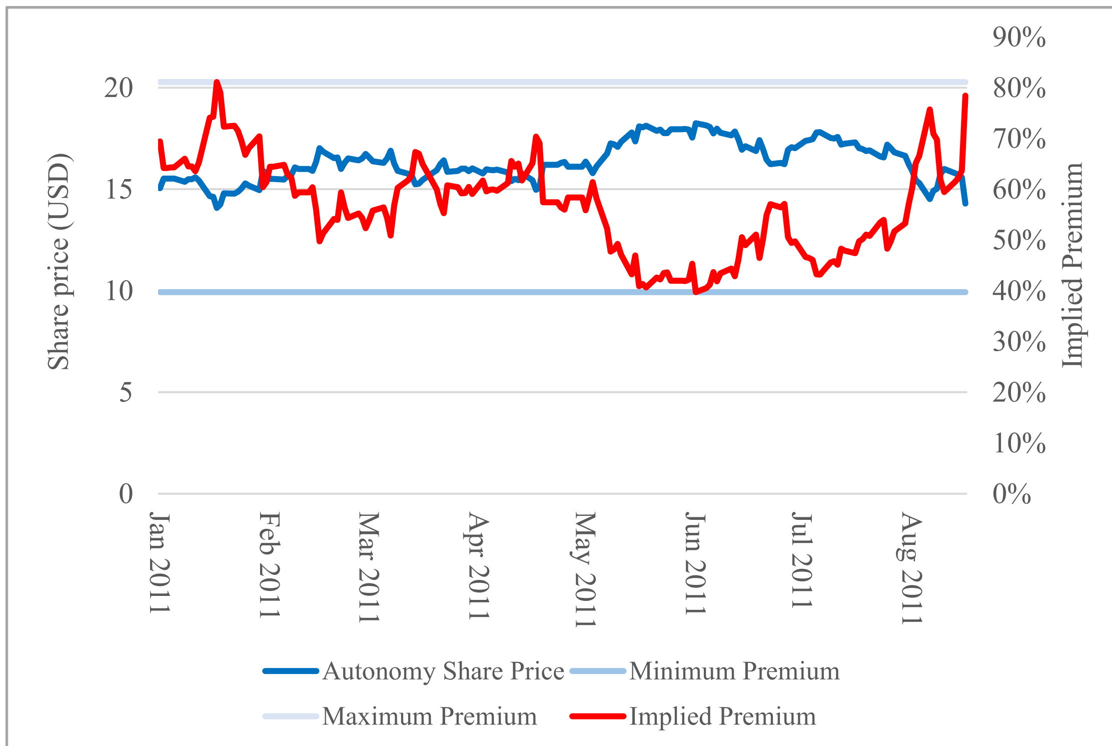
(2) HP put considerable value on the synergies it anticipated, which in effect would justify and fund a substantial premium over the share price;

(3) HP understood the sellers' price expectations; and

(4) HP was concerned about interloper risk.

566. Mr Giles also provided a chart to show (a) by the dark blue line, the volatility of Autonomy's share price in 2011, (b) by the lighter lines, the minimum and maximum premiums implied by the share prices through 2011. The chart is copied below:

Autonomy share price and implied share price premium from January to August 2011



Source: Appendix B.4

567. Mr Giles rejects Mr Bezant's suggestion that there should be taken to be a settled limit on the premium HP would have been/would be willing to pay. He makes the point that in the period after price negotiations began in July 2011, fluctuations in Autonomy's share price caused the implied premium to fluctuate in tandem (and to rise as high as 75% before falling again).[109]

568. He makes the further point that there is no fixed ratio between premium and price. HP had paid a premium of some 226% for a company called 3PAR (a manufacturer of systems and software for data storage and information management) and Mr Sarin in his witness statement for the Main Trial acknowledged that *"Companies with comparably unique offerings had historically sold for high premia"* (instancing Oracle's acquisition of BEA Systems (an enterprise software business) at a 64.6% premium over its then current market price and EMC's payment of an 87% premium for its $2.4 billion acquisition of Data Domain in 2009). Thus, the premium that HP was, and in the RTP would have been, prepared to pay was not, and should not be treated in the RTP as, a fixed variable at any point in the process, nor should the amount paid

[109] Qatalyst's analysis, in a document headed *"Project Daniel, Materials for Discussion"* dated 18 August 2011 showed that the premium implied by the actual bid price varied between 36% and 108% depending on the period over which the average share price is calculated (the high point of a premium of 108% being based on an intraday low point for the share price of £12.27).

or indeed the figure of 60% be considered to be either a fixed variable or a ceiling, given that it had not been so in any point of the negotiating process.

569. Since in his opinion, the value and share price would not be materially different in the RTP, and thus the acquisition price (and therefore the implied price premium) would also not materially have changed, Mr Giles understandably did not go on to consider what premium HP might have been persuaded to pay if its standalone value and (in particular) its share price in the RTP were to be determined to be at the much lower level that Mr Bezant considers would have applied.

570. However, it follows from Mr Giles's evidence that even in the RTP as put forward by Mr Bezant, HP's perception of the need for benefits and synergies to result from the Acquisition were such that it would have been prepared to agree a bid price with an implicit premium considerably in excess of the premium implicit in the actual bid price. How much in excess would depend upon the dynamics of and Dr Lynch's negotiating power in the negotiations. My assessment of that, and the likely result of its deployment, is at once both the most impressionistic, most subjective but also most significant, of the exercises required to determine what would have been the agreed bid price in the 'Transaction Scenario'.

(20) My assessment of (i) the nature of the exercise, (ii) the outlook of HP and of (iii) Dr Lynch, (iv) the negotiating dynamics, and (v) the likely resulting agreed bid price

(i) The nature of the exercise

571. It is important to emphasise again that although I consider that most of the key factors that guided the actual discussions in the Represented Position will likewise guide the hypothetical discussion in the RTP, the exercise is not comparative: the hypothetical process must not be infected by any notion of diminished value in comparison to the Represented Position. For the purposes of all aspects of the counterfactual analysis, the assumption is that the market was always provided with accurate accounting information, and its mindset, and also the mindset of the participants in the negotiations, is in each case to be assessed according to that position uncontaminated, and thus not discounted, by any adverse comparison with the position as stated in the Represented Position.

572. In other words, the negotiation relates to Autonomy as it would have been in the RTP, without baggage or overhang, disappointment or implicit discount, by reference to Autonomy in the Represented Position. I agree with the point made by Mr Giles in his third report at paragraph [358]:

> *"It is important to note that in the counterfactual scenario we are not assuming that earnings and growth expectations were missed or missed by a greater margin than in the Reported Position. The assumption is that the market was provided with accurate accounting information in the Restated Position."*

573. This is an important admonition; but it is not always straightforward to heed it. An example may illustrate this. In the Represented Position, Mr Apotheker and HP clearly placed value on Autonomy's OEM business, and indeed on the mix of business lines represented. Mr Bezant considers that in consequence *"Autonomy's technology was less attractive and not as widely adopted as had appeared in the Represented Position."*

That is a factor which needs to be fed in to the assessment of the RTP DCF model (and the multiples analysis). As elaborated later, the litmus test of the market penetration and market acceptance of IDOL technology and "selling point" which widescale OEM business provided would not have been available to Dr Lynch to deploy. However, in my view, the comparison stated should not be part of the process in determining how HP viewed Autonomy in the counterfactual world. All HP should be taken to see is the business mix as it was in the RTP, and the consequences in terms of growth as taken into account in the RTP DCF and RTP Deal Model; it could be taken to note that Autonomy did not, in the RTP, have much OEM business, and it might in the ordinary course have expected a company in Autonomy's position to have developed more; but it should not be taken to downgrade its enthusiasm by reference to a comparison with the Represented Position, or on the basis that it was led to expect more.

574. A further forensic difficulty is obvious: analysis, by its nature, invites and usually requires comparison, and comparison can be a source of preconception; but it is plainly appropriate to identify from the factual negotiation parameters and factors which may be relevant in the RTP.

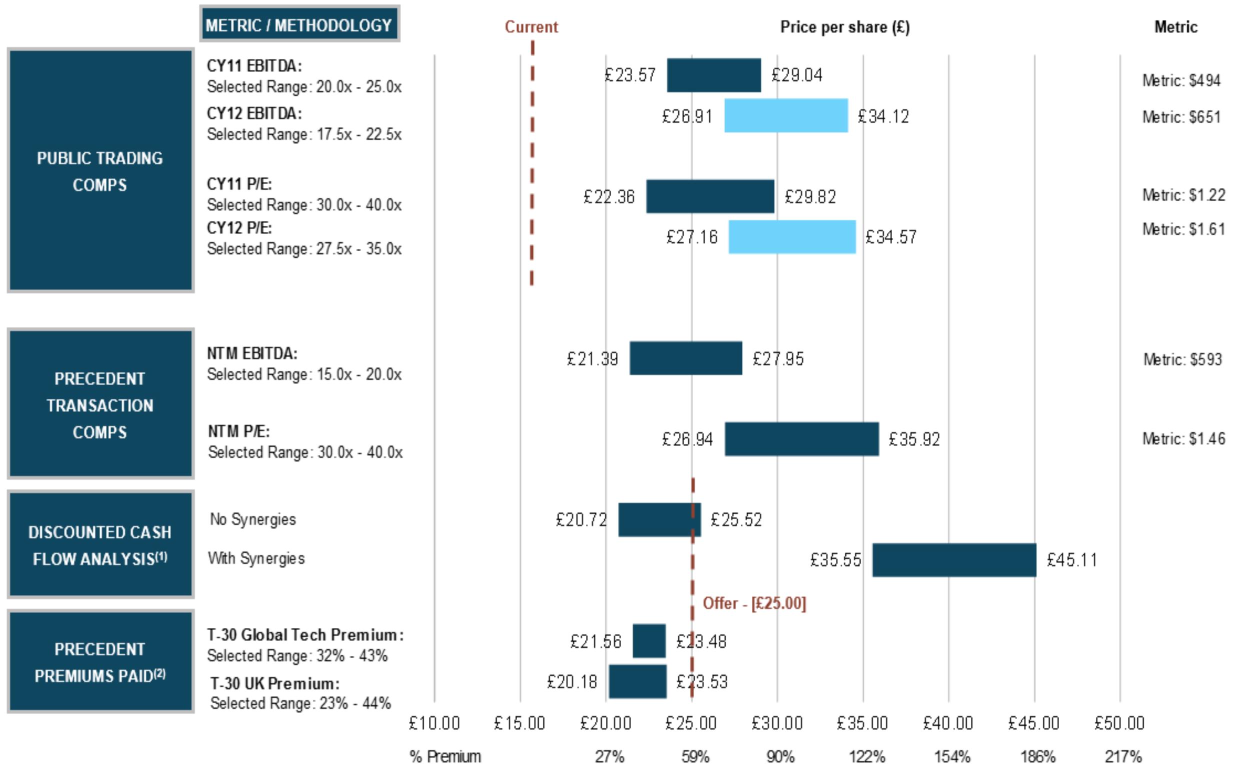
575. Thus, and as was rightly observed in Dr Lynch's written closing submissions, I identified in paragraphs [222] to [233] of my Main Judgment certain key parameters that framed HP's approach in the actual discussions which took place over the course of July and August 2011. I also sought to analyse in greater detail what were the principal factors by reference to which HP pitched its bid price and eventually concluded the Acquisition in paragraphs [4006] to [4043] of my Main Judgment. The same sort of factors (differently calibrated to reflect the RTP) would be likely to have informed HP (and Autonomy's) approach in the RTP. However, the translation of those factors into the FSMA Counterfactual is not an exercise in comparison, but in building a picture of the likely approach of, and pressures on, the parties in hypothetical negotiations. In any event, it seems to me to be a necessary and appropriate method.

(ii) HP's mindset and assessment of what price it should pay in the RTP

576. To assist HP's board in its consideration of a proposed acquisition and, in particular, as a guide for its price negotiations, valuation analyses were summarised and presented in a chart often referred to as a *"valuation football field chart"*. These charts would be updated as the bid (and any due diligence) progressed, and they included analyses of historical acquisition premia paid for UK listed companies and technology companies more generally.

577. By way of example, I set out below a valuation football field chart, which updated previous versions, which was presented to HP's Board meeting on 12 August 2011, and which led to HP's decision to pursue the acquisition of Autonomy at a price between £25.00 and £25.50 per share, which (according to Mr Bezant's first report) reflected a premium of about 59% to 62% to Autonomy's share price at the time.

HP's valuation analysis of Autonomy on 12 August 2011



578. Ms Whitman, in the course of her cross-examination, explained the compilation and use made of a valuation football field chart of this kind, as follows:

> *"…, normally the way this is done is you do a discounted cash flow you do an analysis of synergies... Then you look at what other like transactions have gone for and you get what is called a football field - American football, not British football - and you look and say, "Okay, where have other transactions landed? What price are we willing to pay? –How much– what's the discounted cash flow of the independent entity? What might the synergies be?" And you make a judgement call based on all those pieces of data about what you would be willing to pay up to and that's how that 11.7 [billion] was - how we came to that, as I recall.*
>
> …
>
> *…And when you're negotiating these deals, what you want to figure out is, okay, you're willing to give some of the synergies to the acquired company in terms of valuation, but you're also trying to make sure that you keep some of the synergies for the acquiring company. So it's always a debate about what do you think the company itself is worth and then how much of the synergies are you willing to give up to the acquired company versus keep for the acquiror?"*

579. In addition, as appears from the valuation football field charts, and as Mr Sarin explained in his witness statement, BarCap and Perella Weinberg conducted other valuation work, and in particular, multiples analyses, which formed part of their guidance to HP's Board in building an overall valuation picture.

580. In the RTP, the football field chart would have reflected the DCF valuations (both stand-alone and synergy) and something like the analyses appearing in the chart set out under paragraph [563] above.

581. Also relevant is whether there were suitable and available alternative target companies. It was part of the relevant context in the Represented Position that by July 2011, having carefully considered TIBCO[110] and before then Software AG, HP had determined (quoting from Ms Whitman's evidence in cross-examination) to *"shut down hard TIBCO and Software AG…and go ahead and do Autonomy…"*.

582. I do not consider that HP would have made a different decision in the RTP: in other words, I find that in the RTP, HP would, by July 2011, have been focusing exclusively on Autonomy as offering the best prospect for the transformational change that Mr Apotheker (and at that time, the Board of HP) had decided was necessary and urgent for HP to accomplish (and see also paragraphs [222(3)], [280] and (especially) [4057] of my Main Judgment).

583. HP recorded in its initial analysis (which I have quoted from in paragraph [155(1)] of my Main Judgment) that Autonomy offered a *"broad range of capabilities across all layers of the Enterprise Performance System stack, focused on unstructured content"*, with particular strength in 'Big Data' analytics and Information Management and an established cloud presence with good prospects of growth in that fast-growing sector. HP's perceptions of value were informed also by analysts' views, especially the views of industry analysts such as Forrester and Gartner, who considered Autonomy's offering to be very strong indeed, even ranking above (for example) Symantec and IBM. I do not consider that either the analysts' views of Autonomy's technology or HP's assessment of the strength of Autonomy's offering as described in their analyses, would be materially affected or changed in the FSMA Counterfactual.

584. In my judgment, HP would, in the RTP, have been enthusiastic and (within reason) determined to acquire Autonomy. It very much needed to make such an acquisition. As I have summarised in paragraph [4116] of my Main Judgment it was in the RTP:

> *"a successful cash-generating enterprise, audited by Deloitte, with substantial cash reserves at the close of 2010, and a world-beating software product, which had opened up for analysis the then uncharted but vast area of unstructured data (IDOL) and which Ms Whitman herself had apparently described as 'almost magical technology'".*

585. It is plain and obvious, and HP would have been well aware, that the combination of the buyer's urgent need and the uniqueness of the thing to be sold carries a premium price. Mr Sarin's evidence in this regard echoes this:

> *"Companies with comparably unique offerings had historically sold for high premia: for example, I believe Oracle's $8.7bn acquisition of BEA Systems, an enterprise software business, was concluded at a premium of 64.6% over its then current market price; EMC paid an 87% premium for its $2.4bn acquisition of Data Domain in 2009, and HP itself paid an even higher premium for 3PAR."*

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[110] See also paragraphs [150], [205(5)] [3849] and [3870(1)] of my Main Judgment.

(iii) Assessment of Dr Lynch's likely mindset

586. I have determined in my Main Judgment that sometime in October 2010, further to a disappointing trading statement followed by a 16% fall in Autonomy's share price and some fairly insistent efforts by Mr Quattrone, Dr Lynch had overcome his initial insistence that *"Autonomy was not for sale"* and had begun actively to contemplate a sale if a really healthy premium could be achieved by (in Dr Lynch's own words) *"coaxing the right buyer"* (see especially paragraphs [134] to [137] of my Main Judgment).

587. My experience of Dr Lynch in his marathon cross-examination, the other witnesses from Autonomy, and my reading of the documents, have informed my view that Dr Lynch was not motivated, either in how he managed Autonomy, or in eventually contemplating and implementing a sale, by the prospect of profit from the sale of his (and his family's) shares. IDOL and Autonomy were his creation and his pride. His driving force was his ambition for Autonomy to be, and to be perceived to be, a meteorically successful company created and led by "Britain's Bill Gates". I suspect that the devices I have found he adopted were part of this need to show continual success to a sometimes sceptical and febrile market, which was quick to mark Autonomy down if its prospects appeared to stutter. Once he had been persuaded by Mr Quattrone, in the context of a dip in the share price, that Autonomy was "in play", Dr Lynch turned his attention and established a new target of achieving a really substantial, and as he would have regarded it befitting, premium for the benefit of all Autonomy's shareholders.

588. In my view, Dr Lynch would never have contemplated agreeing a bid which did not demonstrate to the world the success of Autonomy and the extent to which it had been underestimated by the cohort of "negative" analysts, as measured by a premium which Mr Quattrone had told him might be some 70%.

589. This outlook would, in the RTP as it did in fact, put Dr Lynch in a strong negotiating position. Further, and once again[111] to place this judgment, as I did my Main Judgment, in its wider context, Dr Lynch, in his mind, and given HP's urgent need, in fact, held "all the cards".[112]

590. As an introduction to the next and final stage of my assessment of the Revised Price, I note that in due course, Dr Lynch negotiated a sale price of almost twice Autonomy's market capitalisation.[113]

(iv) Negotiating dynamics

591. Apart from the point that in the RTP, Dr Lynch's expectations of what price would represent the *"exceptional offer which accounted for the bright future of the company"* which he would be prepared to recommend (see paragraph [228(1)] of my Main

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[111] See paragraph [3135(2)] of my Main Judgment, in which my reference to OEMs as "super-spreaders" placed that judgment in the time of the Covid-19 pandemic.

[112] The phrase presently deployed by President Trump to describe the position of Russia in the context of the war in Ukraine and to place pressure on President Zelensky of Ukraine to compromise.

[113] The premium varied from 36% to 108% depending on the period over which the share price is calculated: see footnote 109 above.

Judgment) must be recalibrated in light of Autonomy's share price at the time, the same key parameters would have applied, albeit in the different circumstances of the RTP.

592. As to those circumstances (and consistently with my provisional conclusion in my Main Judgment, which is now common ground, that HP would have wished to pursue the Acquisition, though at a reduced bid price), I consider that, looking at what Autonomy had offered HP in terms of its strategic plans, as stated in paragraph [4057] of my Main Judgment, the misrepresentations, though serious, did not negate the value of Autonomy's core product (IDOL). Nor did they negate the potential for the acquisition of Autonomy's software business to provide the platform and catalyst for a transformational change in HP's focus away from its low-margin hardware business towards enterprise software and the deployment and leverage in the latter of its vast resources and market presence in the developing field of unstructured data analysis.

593. I agree that all of the factors identified by Mr Giles and summarised at paragraph [565] above as having been relevant in the actual negotiations would have been relevant in the RTP. I would highlight the following:

(1) Its own advisers (Perella Weinberg) described HP as being *"in a precarious position";* and, as recorded in paragraph [142] of my Main Judgment, Bain & Co identified multiple concerns about HP in November 2010. It is clear from HP's own documents that Mr Apotheker (and at the time, his board) considered the need for HP to move away from its traditional low margin hardware markets to higher margin software areas to be critical and urgent (see paragraph [299] of my Main Judgment), and that Autonomy represented the best means of doing this. I do not consider that HP's assessment of its urgent need and the unique suitability of Autonomy to enable it to fulfil Mr Apotheker's plan (see, for example, paragraphs [241], [280(1)] and [302] of my Main Judgment) would have been materially different in the RTP.

(2) For all Mr Apotheker's protestations about the need to be satisfied as to the accounting 'fundamentals', in my view, it was the technology and its acquisition that he was after first and foremost,[114] to enable him to achieve HP's strategic transformational change (which, after all, was what he had been hired for and was his *raison d'etre*), not revenue: provided the price did not exceed what his advisers would support, he was (within reason, of course) prepared to pay it. Mr Apotheker's determination to acquire IDOL would not substantially have been diminished: this is further confirmed by the primacy given in the due diligence process to verifying IDOL's capabilities and features: and see paragraphs [270] and [273] of my Main Judgment. A confirmatory insight into his outlook is provided by an email headed 'Private & Confidential' which Mr Apotheker sent to Perella Weinberg on 4 August 2011 in light of the fall in Autonomy's share price:

> *"Given the recent market movements, we need to focus on: 1. The optics of the deal: premium versus current price, 2. Price rationale for T* [Tesla, i.e. Autonomy] *given our current price*

[114] See paragraphs [184] and [204] to [205] of my Main Judgment.

Just to be clear: I want to go ahead with T and want to make sure that we have all the arguments to defend the transaction. In fact, I believe that it is times like these that one has to go on the offensive. Your support in building the argumentation is therefore important."

(3) The very considerable synergy values envisaged, encouraged and provided the financial back-up for such enthusiasm. I have found that in the Represented Position *"HP were not wedded to obtaining any particular proportion of the expected synergies on an acquisition"* (see paragraph [222(4)] of my Main Judgment). Again I would not expect that to have changed in the RTP. As submitted by Dr Lynch, there was latitude for HP to pay a greater proportion of its own assessment of Autonomy's combined standalone value and synergy value.

(4) Mr Apotheker and HP's board as then constituted would (as in the Represented Position) have regarded Dr Lynch's support in securing the Acquisition and thereafter in assisting in the development of the combined businesses to be a key factor. Autonomy and IDOL were Dr Lynch's brain-child. Autonomy was a start-up which had become a FTSE 100 company. Under his leadership, and on the basis of the product he had conceived, Autonomy had (according to Mr Pearson) grown its revenues by over 1,200%, its net profit by some 3,500% and its EPS by some 1,700%. Even allowing for some diminution in these figures once impugned transactions are taken into account, this success was exceptional by any standard. (See also paragraphs [36], [37] and [99] of my Main Judgment.)

(5) Further, HP had a high opinion of Dr Lynch's abilities as a technologist and manager, as Mr Apotheker confirmed in cross-examination; and HP placed value on securing his involvement in (and at that time, proposed leadership of) the newly-integrated software business. I see no reason for assuming any different outlook in the RTP. Not only would this all, in the RTP as in the Represented Position, have the qualities and success of IDOL from HP's point of view; it would also have informed the outlook and expectations of Dr Lynch, in particular, in gauging what it was reasonable to expect HP to pay to achieve his recommendation and continuing services.

(6) If anything, the interloper risk would have been all the greater in the RTP: concerns which weighed with the more sceptical analysts (for example, Mr Morland) in the Represented Position, such as what some (such as he) considered to be Autonomy's poor cash conversion, might not have arisen in the RTP, and any decrease in the share price would be more likely than not to have increased potential competition.

(7) The combination of HP's urgent need and its excitement about Autonomy as the means to address it, on the one hand, but, on the other hand, its concern to avoid a bidding war (see paragraph [222(5)] of my Main Judgment), put HP at a disadvantage, of which Dr Lynch would have been well aware (and keen to exploit).

(8) Dr Lynch and his family held 19,800,354 ordinary shares and 479,774 share options (amounting to 7.26% of the total number of shares). Mr Hussain held 9,978 ordinary shares and 389,296 share options (amounting to 0.14% of the

total number of shares). Their combined holdings were not such as to enable them to prevent compulsory acquisition; but in light of HP's decision only to proceed by way of an agreed bid, these holdings gave Dr Lynch considerable leverage, in addition to the leverage inherent in his position and incidental to HP's need to secure his recommendation. As recorded in paragraphs [193] to [194] of my Main Judgment:

> *"On 24 June 2011, BarCap gave HP advice on how to avoid a contested takeover, in a presentation headed "Project Plato – Deal Protection Considerations". This was circulated by Andy Johnson, whose covering email stressed the importance of working closely with Dr Lynch:*
>
> *"Given Michael Lynch's ~ 8.5% ownership of Atlantis; board control and critical role as the founder / visionary / CEO - absolutely important to get his buy-in. HP enters into a hard irrevocable with him whereby he pledges his shares to HP (through a call option program). He also needs to have a strong view about other buyers i.e. "not selling to anyone else"."*
>
> *The presentation itself noted the need for HP to move rapidly and offer a strong price. It recommended that "With full Target CEO backing and Target Board support Hercules should move rapidly to formalise an offer and try to avoid a leak", and again stressed that the "Support of CEO is key to securing Atlantis.""*

(9) BarCap also considered that the *"support of CEO could be key Hercules advantage"* and that the "*strong support of the CEO could determine the outcome."*

(10) Another pressure on HP (although Mr Apotheker tried rather unconvincingly to downplay it) was that the Acquisition was one of the two central facets of an overall plan for the *"strategic repositioning"* of HP which was intended to *"transform"* HP; the other part being what was known as *"Project Hermes"* which was the separation or hiving off of the "Personal Systems Group" or "PSG". The aim was to announce both together, at the time of the Earnings Announcement on 18th August 2011. Whilst Mr Apotheker told me that this was *"an aspirational objective but it wasn't cast in stone"* it seems clear that at the time the co-ordinated announcements were regarded as important to enable Mr Apotheker properly to explain *"what we are going to do about this company."* An email from Mr Peter Weinberg of Perella Weinberg to Mr Apotheker dated 7 August 2011 emphasised the importance of accompanying the announcement of the Acquisition with a *"clear strategic rationale, quarterly performance that meets expectations and any other strategic announcement",* failing which (the advice went on) *"Hawk* [HP] *stock would come under a great deal of pressure. In fact, announced alone, the stock may suffer no matter how strong and well the case is made…"*[115] He then added: *"What we can say is that Tesla* [Autonomy] *is an irreplaceable piece of the repositioning puzzle, and it needs to be accompanied by Hermes to mollify the market."* This pressure was one of the

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[115] Mr Weinberg also noted in the same email the pressure and danger inherent in the *"shift in your shareholder composition away from growth investors to value investors and activists."*

reasons for hurried due diligence; but for the present, its relevance is in further ratcheting up the urgent imperative of a quick deal.

(11) Lastly, it may be worth noticing that, on advice from Perella Weinberg, HP appreciated and accepted that the price it would have to pay would probably result in the Acquisition being greeted less than positively by its investors. Perella Weinberg's advice, which was at the time accepted by Mr Apotheker and his board, was that:

> *"Unfortunately, Tesla is not available at a price that value investors would applaud; other targets do not exist which achieve the same magnitude of strategic repositioning; activist investors, or even the long only investor group, will not wait for tangible evidence that the services business will turn around. The company has the opportunity to change significantly, through both Tesla and Hermes; and we would go as far to say that the status quo is not a practical option, even if the market reaction is anticipated to be less positive upon announcement."*

594. HP's negotiating position was, by comparison, considerably weaker. Although the very fact of a company being perceived to be in play develops a certain momentum towards its sale, it was clear that Dr Lynch was not personally in any hurry to sell. His was a substantial holding which HP needed, as also they perceived they needed his continuing engagement post-Acquisition. HP needed Autonomy and Dr Lynch much more than Dr Lynch and (at least in Dr Lynch's view) the shareholders of Autonomy needed HP.

595. Further, and as was submitted in Dr Lynch's written closing, *"it was buying Autonomy to hold it, not to trade it and had historically paid a very high level of premium"*. In such circumstances, and as Mr Apotheker explained, determining price by reference to a fixed or maximum percentage premium is *"a very short-termistic way of looking at the price to be paid."* Put another way, where the objective is acquisition of a company for synergistic growth, rather than a turn on re-sale, focus on a fixed premium is akin to the tail wagging the dog.

596. Insofar as HP held any negotiating cards, they were limited to (a) a reasonable expectation of Autonomy shareholders' support for a bid offering a clearly substantial premium; (b) Dr Lynch's recognition (whether HP knew it or not) that a 60% premium to the then share price could become difficult to resist and (c) Dr Lynch's preference for HP (stated in his evidence again, whether HP knew it or not at the time of the Acquisition) *"because of Mr Apotheker's vision"* and HP's *"big advantage of being a clean slate, not possessing any significant next-generation data-processing capabilities"* so that Dr Lynch *"believed HP could provide the firepower for Autonomy to take on competitors like Oracle"* and he looked forward to the possibilities offered.

597. In all these circumstances, the vital issue to be determined is what, in the RTP, Dr Lynch would have considered to be the target price for which he should aim, and what bid price he would have felt he would have to recommend, given shareholder sentiment and his own recognition that (as he put it in submissions) shareholders would ultimately vote with their wallets, and that it would not be right for him to use his own shareholding and HP's need to secure it and his own services as a ransom to delay or impede an agreed

deal at a plainly full and healthy premium.[116] In this context also it is important to set aside any preconceptions induced or influenced by the figures Dr Lynch chose in the Represented Position. The task is to determine what figures he would have had in his mind in the RTP. I must then gauge the likely reaction of HP, in assessing how much of any premium it would be prepared to cede/pay to achieve an agreed bid.

598. In measuring both Dr Lynch's reasonable expectations and HP's likely reaction to any proposal, I must take into account "selling points" that in the RTP would not have been available to Dr Lynch in the negotiating process. Whilst, of course, I need to have in mind that "what HP did not know was missing, it would not have missed", I consider that HP was, naturally, on the look-out for special characteristics marking out Autonomy from its competitors and making it especially valuable as a means of enabling HP to establish itself quickly and strongly in the software market.

599. In the RTP, Dr Lynch's pitch would have lacked certain important elements of proof. For example:

(1) most significantly, the proof that IDOL software had become the industry standard for analysing unstructured data, and of IDOL's broad penetration of the software market and success in terms of customer uptake and approval which a large and fast-growing low cost and high margin OEM business provided would not have been available: in the RTP, Autonomy's properly classified OEM business is small;

(2) as a further consequence, Dr Lynch would not have had available as a selling point the IDOL OEM line of business's demonstration of recurring and incrementally increasing ongoing royalty and revenue streams with low costs and high margins (though I bear in mind that Dr Lynch would have claimed some similar advantages to be inherent in 'OEM derived' business);

(3) similarly, Dr Lynch would have been able to show from the historical figures only a small shift from traditional licensing arrangements to the higher margin and 'sticky' Cloud/SaaS business, with the prospect of accelerating growth but an uncertain lead time before an *"inflection point"* when IDOL Cloud business would account for a higher proportion of sales than IDOL Product in accordance with market expectations in the software sector generally. The business mix which Dr Lynch could show might have appeared to be a little 'behind the curve' of market expectations more generally of a decisive and accelerated shift to the cloud.

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[116] Dr Lynch was characteristically realistic and pithy in this regard: in discussing with Mr Quattrone (via email) the prospects of a takeover bid and the defences to it, he said in October 2010: *"If you are saying that there are people out there today ready to offer cash of over 26 pounds we need to rethink the strategy. The London market does not value growth or understand future tech prospects (e.g. we get penalised for cloud revenues!) On that basis given there are no poison pills in the UK it would be like someone turning up and offering a Native American chief 3 rifles and some fire water in return for Dakota, in short the shareholders would not allow the deal to be stopped";* and later in the thread: *"...if it gets to 26 pounds neither myself, or any other living creature would be wise to try and stand in the way and so would not!"*

600. Further, (and as discussed above) Mr Giles has exaggerated Autonomy's growth, especially by the inclusion of BoA revenues (wrongly) and deferred revenues (precipitately), together with an over-rosy view of the growth from synergies resulting from the IRM acquisition.

601. Against this, however, Mr Bezant's depiction of Autonomy is much too gloomy, typified (as also discussed at some length above) by his dismissal of the excellent performance of IDOL Product in Q2 2011, leading Mr Patton to put it to Mr Giles that it was simply *"a lucky quarter"*. What HP would have seen in the RTP was a successful company with an excellent product, capable of exceptional success when integrated into HP. Without the drag of hardware costs (in particular) and reduced capital expenditure Autonomy could validly be presented as a lean and efficient business with impressive cash flows, *"world beating"* technology (as well as an innovative, highly capable and supportive CEO), offering HP the prospect of measurable and very significant synergies.

602. Turning to what in these circumstances Dr Lynch would have felt able to propose as his required minimum price, which is obviously a matter of judgement and not science, it seems to me that the range he would have had in mind, guided by the same advisers, would have been between £21.00 to £24.00,[117] with the hope of more (according to the appetite demonstrated by HP in the negotiating process) but also with a recognition that a price in excess of £22 would promote substantial pressure from Autonomy's other shareholders to accept it.

603. I consider that the dominant consideration driving the negotiations that would have ensued would have been HP's *"precarious position",* its plans for transformative change by the simultaneous acquisition of Autonomy and divestment of its PSG division, and the pressing and urgent need for implementing both, as its then management and its financial and corporate advisers perceived it. Having fixed on Autonomy, and determined that it was the best available fit (as it did in the Represented Position and in my view would have done in the RTP), HP would have been willing to pay at least a 60% to 75% premium, effectively sharing the value of its anticipated synergies to secure an agreed bid.

604. Any negotiation requires give and take. Dr Lynch would have had to yield something (as he did in the actual negotiations). But his position would, in my view, have been substantially the stronger one as between them, enhanced by his own considerable shareholding, as well as the value inherent in his continuing support which would have appeared to offer the best means of securing an efficient and successful integration. Further, I have little doubt, on the basis of what I saw and heard in the course of his cross-examination, that Dr Lynch was an exceptionally persuasive negotiator (as he was a witness), and he held the higher ground.

605. On the basis of the considerations outlined above, and adopting once again an admittedly broad brush or axe, I consider that equivalent counterfactual discussions to those which took place between Mr Apotheker, Mr Robison and Dr Lynch at Deauville

[117] This compares with Dr Lynch's range of £24.94 to £26.94 (when Autonomy's share price was about £17, thus implying a premium of 44% to 56% at that time) when he met Mr Apotheker and Mr Robison at Deauville on 28 July 2011.

in July 2011 (see paragraphs [3891] and [4040] of my Main Judgment) would have resulted in a range of between £22.00 and £24.50 per share.

(21) My overall assessment of the Revised Price which would have been agreed

606. In the RTP as in the Represented Position, Deauville (or some such meeting) would have set the parameters; and again as in the Represented Position, I take it that these would have tightened in response to volatility in Autonomy's share price, and possibly also a recognition on HP's part of the adverse criticism that was expected (and which HP's advisers considered inevitable).

607. This tightened range of between (say) £22 and £24.50 would have been considered by HP's board and its advisers, as I have described the actual process in the Represented Position (see paragraph [4043] of my Main Judgment).

608. Wielding the broad axe or deploying the broad brush which the authorities confirm is necessary and appropriate, I consider that the eventual result would have been an agreed bid price of £23.00.

609. Accordingly, in my judgment, the difference between the actual price paid and what Bidco would have had to pay in the FSMA Counterfactual is £697,876,753. Since the FSMA Claim relates only to 92.6% of Autonomy's share capital, the loss in relation to the FSMA Claim calculated as a Sterling amount is therefore agreed by the parties (on the basis of the findings in this judgment) to be £646,178,248.

610. The Claimants have accepted that they must give credit for a recovery of $45 million made in a settlement of a related claim against Autonomy's auditors, after deducting the costs of such claim and any tax payable in respect of the settlement sum: see paragraph [23] of my Main Judgment.

611. The resultant figure is of course a substantial amount, reflecting (in accordance with my Main Judgment) Autonomy's smaller software revenues, its less attractive revenue mix and the lack of OEM business to show its market penetration and success. However, and as also foreshadowed in my Main Judgment (see paragraph [4065]), it is much less than HP's original claim of at least $4.55 billion (the amount for which, at the instance of its HP-controlled directors, Autonomy accepted liability): see paragraph [20] of my Main Judgment. I consider that HP's claim was always substantially exaggerated: and I have concluded that there is more than a grain of truth in Dr Lynch's submission, in his written closing at the Main Trial (at paragraph [510]), that when (in November 2012) HP announced that it was writing down the value of Autonomy by $8.8 billion and attributed some $5 billion to alleged fraud, the figure was not based on detailed analysis. Rather, it was predominantly calibrated by reference to the perceived need to reduce the carrying value of some of HP's assets in order to take account of the diminution of HP's market capitalisation following a fall in HP's share price; and (to quote Dr Lynch's written closing) *"Autonomy was lined up to take a disproportionate hit."*[118]

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[118] As Ms Lesjak explained in her witness statement, the fall in the share price meant that HP needed to revalue its goodwill and intangible assets across all its business units; and she accepted when cross-examined that this involved reverse engineering the value of segments of the business to get down to the required level. Dr Lynch submitted that *"the reduction was loaded disproportionately onto certain parts of the business, notably*

612. The question which then arises is whether Bidco is entitled also to measure its loss in US dollars using the exchange rate at the time of judgment, as being its currency of account or "functional currency" in which it claims it felt the loss. I address that question, which arises not only in respect of the FSMA claim but in respect of all the various claims to be quantified, in Part D below.

PART B: Claims under common law in Deceit and Misrepresentation Claim

613. In the meantime, I turn to the Deceit and Misrepresentation Claims, which are made alongside the FSMA claim, but which are restricted to claims for loss in respect of the acquisition of the shares of Dr Lynch (and his family) and of Mr Hussain. No claim in misrepresentation or deceit is made in relation to the acquisition of the main bulk of the shares acquired from other investors.

614. Those claims are made by HP/Bidco directly: no liability on the part of the issuer (Autonomy) is asserted, and there is no need of a 'dog-leg' claim (as to which see paragraphs [434] and [545] of my Main Judgment).

615. The claims thus confined to the shares acquired from the Defendants are based on misrepresentations made by the Defendants in the course of meetings with HP or in written representations provided to HP in the run-up to the bid for Autonomy.

616. In my Main Judgment, I found that the claims in misrepresentation and deceit had been established: see paragraph [3993] of my Main Judgment. The question now solely relates to quantum. The amount claimed is in aggregate (before interest) approximately $420 million.

617. In this Part B of this Judgment I consider:

    (1) Whether, and if so why, a different counterfactual exercise is appropriate in the context of the personal claims against the Defendants in deceit/misrepresentation;

    (2) If so, how the two exercises (i) differ and (ii) are to be reconciled in determining the overall loss;

    (3) If the *prima facie* measure of loss in a 'No-Transaction' case, being the acquisition price paid less the value of the asset acquired is applicable, what value is to be attributed to the shares acquired, by HP for which credit must be given against; and, in particular, whether the value of the synergies which HP anticipated to flow from the Acquisition is to be taken into account in the assessment of that value.

(1) The counterfactual in a claim in deceit/misrepresentation

618. As explained in paragraphs [4066] to [4076] of my Main Judgment, in the common law deceit/Misrepresentation Claims against the Defendants for losses in respect of the Acquisition at an overvalue of the shares they respectively held, the Claimants seek to rely on counterfactual analyses fundamentally different from the counterfactual which

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Autonomy…HP was keen to avoid its Software division (other than Autonomy) being impaired…." See also paragraphs [384] to [414] (and especially paragraphs [409] to [414]) of my Main Judgment.

has been agreed to be applicable in the context of the FSMA claims, leading to their calculation of a considerably increased loss in respect of their acquisition of the shares to which the Misrepresentation Claims apply (the shares held by Dr Lynch and his family interests and by Mr Hussain, together amounting to 7.4% of the total number of shares in Autonomy).

619. The essential feature of this different counterfactual is that, according to the Claimants in their written opening submissions for the Quantum Hearing, at some unspecified time *"during the negotiation of the potential acquisition…HP would have discovered the truth"*.[119]

620. The Claimants maintain that HP would almost inevitably have concluded from this revelation that (to quote Mr Apotheker's witness statement):

> *"Autonomy's management was engaged in a systematic effort to portray Autonomy's business as stronger, better managed, more vibrant and more successful than was truly the case…"*;

such that:

> *"If, as seems most likely, the explanation I heard was not satisfactory, I have no doubt that I would have recommended to HP's Board that it should abandon the deal…"*

621. The Claimants re-emphasised at the Quantum Hearing the points they had made at the Main Trial in this context. They stressed (in particular) that it is *"wildly implausible"* to posit HP having any other reaction to the revelation of the inflation of profits and other impugned accounting treatments, however blandly explained, than to dismiss any question of innocent oversight or error and conclude that the accounting treatment must have been entered into for fraudulent purposes. They added that it had never been put to Mr Apotheker, or to any other of the Claimants' witnesses, that he would have not reached that conclusion if, for example, Autonomy had simply and blandly informed him (as the Defendants had suggested might have been the approach) that it *"had learned that the accounting ought to be different"*; but they submitted that it is inconceivable that Mr Apotheker (or any of the others) would have accepted that.

622. On that basis, the Claimants submitted, "*the logic of the Misrepresentation Counterfactual is inexorable: HP would have discovered the fraud and would not have bought Autonomy."* Although they had not originally pleaded this (the 'no-transaction' plea was added later by amendment), they pressed their case that, as regards the Defendants' shares to which the claims in deceit and misrepresentation relate, this should be treated as a 'no-transaction case', even though this would give rise to an inconsistency with the "Transaction case" which (it is common ground) applies in the FSMA Counterfactual and thus to the acquisition of all the shares (and other Interests) not held by the Defendants.

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[119] A slightly more nuanced version was put forward by the Defendants (in Dr Lynch's written closing submissions for the Main Trial), that *"HP would have been provided with sufficient information about the underlying transactions for it to form its own view on the appropriate accounting treatment."*

(2) The problem of inconsistent counterfactuals

623. Thus, although I welcome the fact that it is now also common ground, consistently with the provisional view I expressed in my Main Judgment, that in the FSMA Counterfactual, HP would still have acquired Autonomy, albeit at a significantly reduced price, that has, in the context of the Misrepresentation Claims, highlighted the problem and sharpened my concerns as to any different approach in the Misrepresentation Counterfactual.

624. In paragraphs [4066] to [4076] of my Main Judgment, I adverted to this and other challenging difficulties resulting from the different approaches which on that basis would be required in the different legal claims, and invited particular assistance in their resolution. I expressed particular need for guidance in relation to my own misgivings as to whether it could possibly be a satisfactory or even tolerable result for there to be a material difference in the quantification of loss in the two parallel but distinct claims relating to the same composite transaction, according to whether the context and requisite counterfactual relates to (a) the acquisition of shares and share options from Dr Lynch and Mr Hussain or (b) the acquisition of shares from all other shareholders.

625. As to my concerns about inconsistency (see above), the Claimants submitted that:

(1) as a matter of principle, it is it not unusual for different causes of action, even concerning the same underlying wrong, to produce different measures of loss (and they gave the example of a negligent representation that induced the conclusion of a contract, which might give rise to a claim in tort but also for breach of warranty);

(2) it is not uncommon either for different causes of action to yield different measures of damages because of the policy of the law and the nature of the interest that a given cause of action protects;

(3) it would be entirely commonplace to conclude in the context of a successful claim in deceit that the purchaser would not have proceeded had it been aware of the truth; and it is a principle of recovery in such cases that loss should be measured by the difference between the price paid and the value in the hands of the purchaser of the relevant shares (in this case, the shares HP acquired from Dr Lynch (and his family interests) and Mr Hussain);

(4) further, they instanced fraudulent misrepresentation as an example of the policy against intentional wrongdoing resulting in a more generous measure of recovery than would be appropriate for a merely negligent wrongdoing.

626. When I questioned Mr Patton in the course of his oral closing submissions whether he submitted it would be wrong in law to adopt a transaction case in the context of the Misrepresentation Claims, Mr Patton answered that as regards the claim in deceit, only a finding that (as he put it in his oral reply) *"even with the revelation of fraud Mr Apotheker would have been sanguine about proceeding"* would be sufficient to avoid a 'no-transaction' case, and that would be contrary to the evidence (especially that of Mr Apotheker).

627. The Claimants referred me to a recent decision of the Court of Appeal, namely, *MDW Holdings Ltd v Norvill and others* [2022] EWCA Civ 883; [2023] 4 WLR 33 (the *"MDW Case"*). That was a case decided after my Main Judgment had been handed down which also raises issues as to how damages should be assessed for breach of warranty and deceit in the context of a share sale, and in particular whether additional damages might be recoverable in the deceit claim (which the Court of Appeal considered was the case and remitted the matter to the judge, who had not been asked to consider it).

628. They relied on it as (a) illustrating that it is neither uncommon nor objectionable for a party to pursue parallel claims with a view to showing a greater measure of loss on their preferred basis of claim, and (b) showing that in a "No-Transaction case", the value of synergies in its hands are not to be taken into account in assessing its loss. The Claimants relied in addition on passages in the judgment of Newey LJ both on *Smith New Court Securities Ltd v Citibank NA* [1997] AC 254 (*"Smith New Court"*), and in relation to the measure of damages and the hypothesis to be adopted in the alternative "Transaction case" that the purchaser *"knew the truth"* (which Newey LJ took to include *"knowledge of the previous misbehaviour"*) which may result in a *"stain discount"* that further diminishes the price.

629. In addition to the *MDW Case* and *Smith New Court*, the First Defendant cited *Dr Reddy's Laboratories (UK) Ltd and others v Warner-Lambert Co LLC and another* [2021] EWHC 2182 (Ch) (the *"Dr Reddy case"*); *Glossop Carton and Print Ltd (trading as Glossop Cartons) and others v Contact (Print & Packaging) Ltd and others* [2021] EWCA Civ 639; [2021]1 WLR 4297 (*"Glossop"*), though no specific submissions were addressed to me on that case. They also referred me to a variety of further cases (of which the latest is the *Royal Mail Trucks* case) on the principles to be applied in the assessment of damages in cartel/competition cases (which tend to be complex, admit of no scientific answer and require the application of a "broad axe" or "broad brush" (whichever vivid metaphor is preferred) as in this case).

630. The *MDW Case* does consider the issue in dispute whether, in a no-transaction case, a claimant must bring into account the value of synergies in diminution of its loss. It also addresses (a) the differences in the measure of loss according to whether a 'no-transaction/deceit' or 'transaction/breach of warranty' case is adopted, and (b) whether the claimant is permitted to make alternative claims to recover the entirety of its loss, with a view to electing, if both were established, whichever measure provided the larger quantification of loss. But that case related to a claim on the same alternative bases in respect of the entire issued share capital acquired. It did not concern or address the assertion of conflicting factual bases of claim in respect of different parcels of shares.

631. Further, the *MDW Case* concerned a claim in contract (for breach of warranty) and tort (for deceit) but not (since it was not concerned with the liability of an issuer for misleading information in its published information) any claim under FSMA.

632. Accordingly, that case did not touch upon the conceptual difficulty of supposing as regards one 'parcel' that the purchaser would have purchased at a lower price, but that as regards the other 'parcel', though having exactly the same characteristics and comprising part of the same overall transaction, the purchaser would not have proceeded at all.

633. In short, I do not consider there to be anything in that case providing guidance as to how the problem of the simultaneous assertion in relation to the same transaction of two different measures of loss predicated on diametrically opposite factual assumptions (in the one, that no disclosure of misbehaviour is made, in the other that such disclosure is to be assumed) is to be resolved.[120]

634. Indeed, in my view, none of the cases cited bear on the question whether a claimant seeking to recover loss and damage in respect of an acquisition pursuant to a takeover bid of the entire issued share capital of a company on the basis that the value of the company was fraudulently misrepresented, may split its claim so as to recover part of its loss on the basis of a counterfactual and measure of loss which is premised on the transaction having taken place, and (at one and the same time) another part of its loss on the basis of a measure of loss and counterfactual premised on the transaction having not taken place, whereby to maximise that part, and thereby the aggregate amount, of its claim.

635. I must determine, for the first time as far as the researches of Counsel have shown, how quantum is to be calculated where claims for damages in respect of the acquisition of the entire issued share capital of a target company's shares are made under FSMA (as regards some shares) and under the common law (as regards other shares).

636. This is of some broader importance. Given the very different counterfactuals applicable according to the nature of the claim, there is a real and obvious risk that in the FSMA Counterfactual (which involves no revelation of misbehaviour) it is fairly clear that the transaction would have proceeded, whereas in the Misrepresentation/Deceit Counterfactual (if it involves revelation of misbehaviour) the revelation would have soured and destroyed the deal. The issue is thus whether, and if so how, the two bases of claim may be reconciled in determining quantum.

637. In my judgment, the only realistic solution, which I accordingly adopt, is to apply a consistent counterfactual to both limbs of the claims, and to treat the agreement that as regards all but the shares of Dr Lynch and Mr Hussain, the transaction would have proceeded, as necessarily applicable in both contexts.

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[120] I would add, for comprehensiveness but only of relevance if my ultimate conclusion that a 'Transaction Counterfactual' is to be adopted in the context of the Misrepresentation Claim in this case, as in the FSMA Claim, is found to be wrong, that I do not consider that the Claimants have provided evidence, expert or otherwise, to establish that the synergy value which HP identified being so radically attenuated in the case of any other purchaser that on a hypothetical onward 'clean' sale it would not have achieved the same price as the value of Autonomy in a transaction case. In that regard, I do not consider that the Court of Appeal should be read as having determined, in the *MDW Case*, that no credit was to be permitted in a 'No-Transaction' case (at least in the context of a successful claim in deceit) for any synergy value when assessing the value of the shares in the hands of the purchaser. It is true that, in addressing an argument in that case that there was no loss because the defendant should give credit for all the synergy value, which exceeded the amount by which the actual purchase price would have been reduced, Newey LJ stated (at [85]) that he could *"see nothing in the authorities to indicate that, when assessing the damages that would be due to MDW in respect of the [Defendants'] deceit, it could be appropriate to give the [Defendants] credit for anything more than the market value of the shares they sold."* However, the *"market value"* of the shares sold would include the value of synergies available to an hypothetical purchaser: and, as I have stated above, there is no persuasive (or indeed any) evidence before me in that regard.

638. It seems to me that having sought and obtained the benefit of a statutory remedy against the issuer (albeit via a 'dog-leg' claim), which would not be available with the same advantages under the common law, and having in that context asserted or accepted as a fact that this is a 'Transaction case', the Claimants should not be permitted to salami-slice their claims and seek common law damages against the individuals on a diametrically opposite factual basis.

639. I acknowledge that the 'issuer liability' provided for in FSMA does not preclude direct claims in tort by a purchaser for the deceit of a selling shareholder which has resulted in loss. I must acknowledge also that the different counterfactual according to the nature of the claim arises in consequence of the difference between the provisions of FSMA and the ordinary principles relating to claims in deceit as to whether or not the fact of misbehaviour is to be assumed to be revealed in the course of the transaction. But neither consideration can, in my judgment, permit or justify the factually inconsistent approach which the Claimants now seek to assert. It is, to my mind, so unsatisfactory as to be unacceptable as a matter of principle that the Court should be asked to make simultaneous but inconsistent findings of fact that in the context of one claim (the FSMA Claim) the transaction would have proceeded, but in the context of the common law claim it would not have proceeded.

640. That conclusion is, in my view, further supported by the following considerations in this case:

(1) It is fanciful to suppose that the transaction would have proceeded in respect of all the shares not held by Dr Lynch and/or Mr Hussain, but not in respect of the remaining rump of a bit over 7% of the shares, leaving that in the hands of the Defendants. The purpose and premise of the transaction was the acquisition of all the shares and entire control of Autonomy.

(2) It is logical and apposite that a single purchaser of the entire issued share capital of a company in a single transaction, the purpose and premise of which is to acquire the whole, should not be heard to say that it would have proceeded with one part of the acquisition but not the other, and thereby falsify both. The notion that as regards one parcel of shares the Claimants would have had one mind-set and as regards another parcel of shares, the diametric opposite mind-set, is as objectionable as it is unrealistic.

(3) Until the enactment of section 90A FSMA, there was little or no scope for a claim of the present (FSMA) type under the common law. It is logical and apposite that in those circumstances, the price of invocation of the statutory remedy in order to secure the remedy and advantages it makes available[121]

[121] Before the enactment of section 90A, there was no statutory regime imposing civil liability for inaccurate statements in information disclosed by issuers to the market. The scheme of liability for misstatements contained in prospectuses produced by an issuer to promote subscription of its securities first set out in the Directors Liability Act 1890 and now contained in section 90 FSMA was confined to offers by the issuing company and to the recovery of monies paid to the company on a false basis. No easy route for recovery for an investor who has acquired shares in reliance on a misstatement in other information provided by the company was or is available, the hurdles being the need to show that the maker of the statement intended the specific reader to rely on it and partly because of the decision of the House of Lords in *Caparo v Dickman* [1990] 2 AC 605 which normally precludes reliance on a company's accounts. The constraints are reflected

should be that the same factual findings (or factual concessions) should apply to parallel claims in respect of the same transaction. It would be more consistent with the objective of FSMA to bind a claimant to an election as regards the whole transaction and all the shares as to whether to pursue the (easier) FSMA Claim in respect of published information or a common law claim (if available at all) in respect of collateral misrepresentations.

(4) In this case, the two wrongs (publishing false accounts and making misrepresentations accordingly or to the same effect) are so closely bound up that it is impossible to separate them coherently. If accurate information had been given in the published information, as is the premise of the counterfactual in the FSMA Claim, it is difficult to envisage any contrary representation being made such as to found a Misrepresentation Claim. The real wrong is the published information; and the counterfactual prescribed for any claims in respect of that information should be adopted also for claims in respect of the same transaction but based on collateral representations made in support of and to the same effect as that published information.

(5) It may also be that another possible answer, no more arresting than the Claimants' effort to extract further loss with respect to one parcel of shares but not the larger parcel on an inconsistent factual basis, is simply to hold the Claimants to their primary pleaded case; this was to the effect that this is to be taken to be a 'Transaction case' in both contexts, which the Defendants admitted. As indicated above, the original Particulars of Claim contained no alternative averment that but for the matters complained of, Bidco would not have acquired Autonomy: that plea was introduced by amendment shortly before trial.

641. I agree also with the evidential point made in the written closing on behalf of Dr Lynch that in this case, Mr Apotheker's evidence, entirely understandably in light of the case as originally pleaded, addresses only two alternative scenarios: one where there is a revelation of fraud, and the other where there is not. It does not address the hybrid introduced by the Claimants' chosen way of putting their case, which amounts to riding two conflicting counterfactuals. Mr Apotheker's assertion that had he known of a *"systematic effort to portray Autonomy's business as stronger, better-managed, more vibrant and more successful than was truly the case"* and in default of any innocent explanation, he would have *"recommended HP's board that it should abandon the deal"* must, if given any credence at all, refer to the entire acquisition and not be confined to the small part of it to which the 'no-transaction' counterfactual exclusively applies. Thus, although I need not and do not go as far as to say that Mr Apotheker would have shrugged his shoulders, I find that he would not have recommended against the acquisition of an outstanding (and potentially belligerent) 7% shareholding if the Acquisition was otherwise to proceed.

642. It follows that if my analysis that the Claimants should not be permitted to rely in one claim on diametrically opposite factual assertions whereby to increase their aggregate loss is subsequently held to be wrong, I consider (and see also paragraph [536(3)] of my

in the explanatory note by which section 90A was introduced in 2006, which stated that as at that time, no issuer had been found liable in damages under English law in respect of statements made in narrative reports or financial statements.

Main Judgment) that the Claimants have not discharged the burden on them to establish that HP would have forsaken its entire strategy by reference to the fraud.

(3) Measurement of loss in Misrepresentation Claims assuming a Transaction Counterfactual

643. I turn to consider the appropriate measurement of loss if, as I have determined, a Transaction Counterfactual is also appropriate in the context of the Misrepresentation Claims. The two primary points are whether in that context (a) a "stain discount" should be applied, and/or (b) a discount should be applied to the synergy value which HP expected would emerge from the acquisition.

644. Initially, I understood the Claimants to be contending that a "stain discount" would, in the context of the Misrepresentation Claims, be applicable in a "Transaction Scenario" also; and Mr Bezant assessed this as anywhere between 10% and 30%. However, it appears that this is no longer pursued; in their written closing submissions, it was stated that:

> *"If the Court decides on a Transaction Counterfactual, then losses for the misrepresentation claim will be assessed in the same way as for the FSMA claim."*

645. In any event, it would also be unsatisfactory, and to my mind unacceptable, for the Court to be required to find in this case that HP would have purchased the Defendants' shares at a different price from the shares held by the rest of Autonomy's shareholders by reference to some 'stain', reputational damage to Autonomy or other discount which might otherwise be applied in a deceit claim.

646. Similarly, on the basis of a coherent and consistent counterfactual based on a 'transaction case', the same calculation of synergy value should be applied in the Misrepresentation Claim as in the FSMA Claim.

647. In short, in the context of the Misrepresentation Claims and in a 'transaction counterfactual', the only logical and consistent finding, and my conclusion and judgment, is that Dr Lynch and Mr Hussain's aggregate 7.4% holdings of shares would have been sold at the same price as the other shares comprising 92.6% of Autonomy's share capital. The loss in respect of the Misrepresentation Claims calculated as a Sterling amount thus amounts to £51,698,505 (£50,700,320 in respect of the claim against Dr Lynch and £998,185 in respect of the claim against Mr Hussain).

PART C: Direct Loss Claims

648. As stated in paragraph [6(7)] above and elaborated in paragraphs [4077] to [4105] of my Main Judgment, direct claims have been made against each of the Defendants for breaching their duties as directors and/or employees of three companies in the Autonomy Group, namely Zantaz, Autonomy Inc (the 4th Claimant) and ASL (the 3rd Claimant). The claims for breach of duty owed to Zantaz are brought by Autonomy Inc, as legal assignee of all Zantaz's claims.

649. There was a dispute whether Dr Lynch had any directorial role in any of the three companies concerned. As explained in paragraph [4082] of my Main Judgment, I have found that:

(1) Both Defendants owed duties as *de jure* directors to Autonomy Inc;

(2) Mr Hussain was *de jure* a director of ASL and Zantaz;

(3) Dr Lynch was not *de jure* or *de facto* a director of Zantaz, but he was a *de facto* or shadow director of ASL.

650. Thus, claims in respect of breach of duty owed to Zantaz in respect of three hosting arrangements to which Zantaz was a party can only be pursued against Mr Hussain, and not Dr Lynch. In relation to a fourth impugned hosting contract, to which Zantaz was an original party (with MetLife), I have found there to be no loss and thus no claim: and see paragraph [4085] of my Main Judgment.

651. I have also held that the only proper claimant for any of these direct claims is (a) the company to which either of the Defendants owed and breached their duty or (b) the valid legal assignee of such a claim. More particularly, I have determined that the existence of transfer pricing arrangements from one subsidiary to another within the Autonomy group does not of itself give a right to the transferee to sue for losses: see as to these conclusions paragraph [4083] of my Main Judgment. It follows that the Claimants can only recover damages or equitable compensation for losses which it can show were sustained by the relevant Claimants as original parties to the impugned transactions. They cannot recover for losses alleged to have been sustained by ASL pursuant to transfer pricing arrangements.

652. All these various claims are described in my Main Judgment. I have found that:

(1) Mr Hussain is liable to Autonomy Inc for the claim for the losses sustained by Zantaz in respect of three hosting contracts to which it was party: see paragraph [4085] of my Main Judgment;

(2) Dr Lynch and Mr Hussain are jointly and severally liable to Autonomy Inc for its losses sustained as a party to improper hardware transactions;

(3) Dr Lynch and Mr Hussain are also jointly and severally liable in respect of payments of MAFs by the company concerned, except that insofar as any such payments were made by Zantaz, the claim lies only against Mr Hussain: see paragraphs [4094] to [4096] of my Main Judgment;

(4) Both Defendants are also jointly and severally liable for the losses sustained by ASL and Autonomy Inc in respect of Reciprocal transactions for which I have determined there was no proper commercial purpose, and Mr Hussain (only) is liable for like losses suffered by Zantaz: see paragraphs [4099] to [4105] of my Main Judgment.

653. It is the precise scope and quantum of these claims which now needs to be determined: see paragraph [4105] of my Main Judgment.[122]

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[122] In written closing submissions for the Quantum Hearing, Dr Lynch suggested that the Claimants accepted that, in calculating the FSMA Loss, credit will need to be given for any compensation in respect of transaction-based losses. [See RRAPOC §202.4 and 204] However, in his oral closing submissions, Mr Patton clarified

654. In this regard, Mr Hussain has adopted the arguments of Dr Lynch in relation to the three categories of losses where their duties and positions are aligned (that is to say, (i) hardware sales, (ii) MAFs and (iii) Reciprocal transactions and Reciprocal VAR transactions). A further skeleton argument was submitted on his behalf on the single area (relating to the four Hosting transactions more particularly described in Table 12D of Schedule 12 to the Particulars of Claim) where there is no such alignment because I have found only Mr Hussain to have owed a relevant duty and to have breached it. As elaborated later, Mr Hussain's position is that the Claimants have failed to show any loss caused by the Table 12D transactions.

655. I turn to address in turn the categories of loss for which I have held both Defendants to be liable.

Direct Claims relating to pure hardware sales

656. Under this head of claim, the Claimants claim the total sum of $21,283,486. This consists of:

(1) $5,309,580 claimed for losses on sales of laptops, desktop computers and accessories on sales invoices for amounts of $1m or more;

(2) $5,868,060 claimed for losses on sales of laptops, desktop computers and accessories on sales invoices for amounts below $1m;

(3) $7,062,269 claimed in respect of transactions in Q3 2009 for losses on sales invoices for amounts of $1m or more;

(4) $2,793,577 claimed in respect of Transactions in Q3 2009 for losses on sales invoices for amounts below $1m; and

(5) $250,000 in respect of bonuses paid in relation to the EMC hardware transactions.

657. In their written opening submissions the Defendants contended that (a) the Claimants have adopted a flawed approach to the calculation of losses on sales of laptops, desk computers and accessories with an individual value of less than $1 million and have overstated their claim; and (b) further and in any event, the Claimants should give credit for savings which Dr Lynch maintained had been directly enabled by these sales which substantially exceed these losses. The Claimants' response is that their calculations have been verified by Mr Bezant, whose evidence went unchallenged.

658. However, in his oral closing submissions on behalf of Dr Lynch, Mr Shivji told me that the point summarised in (a) in the preceding paragraph was no longer being pursued.

that this is not so: the Claimants contended at the Main Trial and continue to contend now that no credit should be given because the claims are by different parties. Further submissions will be required in this regard. The Claimants do, however, accept that insofar as the Court finds (notwithstanding the arguments above) that the Claimants have suffered any losses that are recoverable from the Defendants other than the direct losses, credit will need to be given for the $45 million recovered from Deloitte pursuant to a Settlement Agreement between certain of the Claimants and Deloitte dated 27 April 2016.

659. As to (b) in paragraph [657] above, Dr Lynch's written opening submissions pointed out that I had recorded in footnote [142] (on page 238 of my Main Judgment) that Dr Lynch had given unchallenged evidence that Autonomy had achieved savings of some $10 million on hardware purchases because of discounts for volume. On behalf of the Claimants Mr Patton responded in his oral closing submissions that this point was not pleaded, nor was it referred to either in Dr Lynch's witness statements or in the written closing submissions on his behalf at the Main Trial. No evidence in chief had been advanced in respect of the point, nor had any disclosure been given by the Defendants relevant to the point from which it might be tested. Mr Patton took me to the transcript on Day 41 of the Main Trial in which the reference to $10 million savings was made by Dr Lynch and suggested this was a *"throwaway reference…in [an] extremely long answer which was directed to a completely different point"*. He invited me to reject the point on that basis.

660. On reflection, and having re-read and listened again to the transcript, I accept that it would not be realistic to allow a claim for a $10 million credit on the basis of an answer which was subsidiary and incidental to the substantive points made, and which in the context in which it was stated was not a point which it would be fair or reasonable to take to be established simply because it was not specifically challenged. Accordingly, I reject the Defendants' point (b) in paragraph [657] above also.

Direct Claim in respect of bonuses paid in relation to hardware transactions

661. The Claimants seek recovery of $250,000 paid as bonuses to Mr Sullivan in respect of the hardware transactions. This is in accordance with and pursuant to my finding in paragraph [4091] of my Main Judgment.

662. However, that payment is recorded in Zantaz's books in 2009 and that entity is the proper claimant. The Claimants have dropped their claim that Dr Lynch was a shadow director of Zantaz and it follows that Zantaz can have no claim against Dr Lynch in respect of the bonuses. Mr Hussain, on the other hand, has not disputed the claim, whether as to quantum or otherwise.

Direct Claims in relation to Reciprocal transactions

663. I concluded in my Main Judgment that the premise of the claims made in respect of the impugned Reciprocal transactions at Table 12B of Schedule 12 was made out but that the identity of the particular defendant against whom individual claims could be made depended on which subsidiary entered the impugned transaction in question: see paragraphs [4100] to [4101] of my Main Judgment.

664. The losses calculated for these claims are quantified as the excess of the total cash paid by Autonomy group companies for the purchase side of the transactions over the total cash received by Autonomy group companies from the sale side of the transactions. As to which of the group companies can recover the loss, and as to which of the Defendants the claims can be brought against:

    (1) ASL has a claim against both Defendants in the sum of $2,980,444;

    (2) Autonomy Inc has a claim against both Defendants in the sum of $14,469,910;

(3) On behalf of Zantaz, Autonomy Inc as its legal assignee has a claim only against Mr Hussain in the sum of $3,215,000.

665. Those claims are established in such amounts against those Defendants.

Direct Claims in respect of VAR transactions involving a MAF

666. In paragraphs [4094] and [4095] of my Main Judgment, I found that the premises of the claims in respect of VAR transactions where a MAF was paid were established, save that it was "*not altogether easy or even possible*" to discern the extent to which ASL or Autonomy Inc was the original payer, rather than "*a party to which a cost was subsequently transferred under transfer pricing arrangements*" (at §4095). I concluded that to the extent that ASL or Autonomy Inc was the original payer in respect of a particular VAR transaction under this heading, a claim would lie against both Defendants. Claims advanced on behalf of other entities, such as Verity Inc. cannot be established in these proceedings; and indeed the Claimants have accepted this, stating at Note 6 to Schedule 12, Table 12C that "*Losses in respect of which Verity Inc is held to be the proper claimant are not pursued in these proceedings*".

667. Accordingly, only those sums sought in respect of MAFs paid to VARs by ASL and Autonomy Inc (being $4,577,066 and $3,273,480 respectively) are recoverable from Dr Lynch. Mr Hussain is liable for the sum of $947,000 in respect of Zantaz's claims under this head which were assigned to Autonomy Inc.

Direct Claims in respect of Hosting transactions

668. As noted previously, there are no remaining claims against Dr Lynch under this head: as he was not a director or employee of Zantaz, claims by Zantaz cannot be brought against him; and I have held that Autonomy Inc suffered no recoverable loss in respect of the only other claim.

669. The claims against Mr Hussain under this head relate to transactions detailed in Table 12D of the Amended Particulars of Claim and, in particular, the revision or restructuring of an existing hybrid hosting deal on terms that the customers (namely, Morgan Stanley, Deutsche Bank and MetLife) paid a fee for a software licence in return for obtaining a reduction in the charging rate for storage fees. That reduction was alleged (by the Claimants) to be greater in value than the licence fee. Its advantage for Autonomy was an immediate injection of cash and accelerated revenue receipt. I concluded in my Main Judgment that for reasons there set out at some length, the licence fee was in reality a contrivance, and the driving force of the hybrid hosting structure was, despite some possible benefits, the imperative of accelerated revenue recognition, even at a substantial net cost and loss: and see, for example, paragraphs [3635], [3658] to [3659], [3687], and [3720] to [3723] of my Main Judgment.

670. The claims are for equitable compensation and in essence come down to claims for loss of profits quantified by the Claimants with the assistance of Mr Bezant in the sum of approximately $25 million (more exactly $24,835,156 as calculated by Mr Bezant).

671. The Claimants' approach to quantification, and Mr Bezant's calculations, are based on four factual assumptions about the counterfactual required to be constructed for the purpose of these claims, these being as follows:

(1) for three of the four transactions, the customer would have extended the original hybrid hosting deal beyond its terms ("Assumption 1");

(2) if the Table 12 D transactions had not taken place, the customers would have continued to pay the original storage rates ("Assumption 2");

(3) the customers would have stored the same volumes of data without the restructures as they did post-restructuring ("Assumption 3");

(4) the data usage for the period post February 2015 can be measured using average actual data ingestion for the period December 2014 to February 2015 ("Assumption 4").

672. Based on those assumptions, which extend in time for some years after the Acquisition, the Claimants' approach is then mathematically to compare the actual revenues from the relevant Schedule 12D transactions with the revenues that would have been received from the original hybrid deals (before their revision or reconstruction) in a counterfactual context as thus constructed.

673. In effect, Mr Bezant's only instruction in relation to these transactions was to double-check the Claimants' mathematics. Neither he nor any other expert was instructed to test the validity of the assumptions. Indeed, the Claimants did not call any evidence of any kind in support of the assumptions underlying their mathematical calculation.

674. Mr Hussain does not accept the validity of any of those assumptions. His counsel, Mr Paul Casey, provided a skeleton argument powerfully refuting them, and submitting that the Claimants had failed to prove any loss. He helpfully elaborated on the salient points in his clear oral submissions at the end of the Quantum Hearing (his only oral contribution at this stage in the proceedings). I shall summarise these submissions below, by reference to the assumptions set out above.

Claimants' Assumptions 1 and 2 as summarised in paragraph [671] above

675. On behalf of Mr Hussain, Mr Casey submits that the Claimants have not produced any evidence in support of Assumption 1 or Assumption 2; that both those Assumptions are fundamentally at odds with undisputed evidence about the dynamics of the hosting market; that there is no basis either for an Assumption (Assumption 3) that customers would have stored the same amount of data at prices which were no longer competitive or acceptable; and that Assumption 4, that data usage for the period post-February 2015 can be measured using average actual data ingestion for the period December 2014 to February 2015, *"appears to be arbitrary and therefore potentially unreliable."*

676. First, it was common ground, and indeed the evidence of witnesses for the Claimants (more particularly, Mr Wang, Mr Goodfellow and Mr Egan), that storage charges/hosting fees were falling precipitously over the Relevant Period. As recorded in paragraph [3543(1)] of my Main Judgment, this was largely due to the falling costs to the hosting industry of storing data: see also paragraph [3311] of my Main Judgment.

677. Secondly, a number of witnesses gave undisputed evidence about the behaviour of both the customers and of Autonomy in relation to price. Thus:

(1) In paragraph [3543(1)] of my Main Judgment, I recorded Dr Lynch's undisputed evidence that the consequences of the falling cost to the hosting industry of storing data over the Relevant Period was that customers were, inevitably, prompted to expect, and often demand, savings.

(2) In paragraph 30 of his witness statement, Mr Sullivan, who as CEO of Zantaz was responsible for the hosting business, said this:

> *"Customers did, though, sometimes threaten to switch to a new provider for new data, often by issuing RFPs in an effort to get lower prices from Zantaz/Autonomy. Although we occasionally lost customers, these customers were generally smaller customers. We could afford to lose smaller customers because they did not significantly affect our revenues. We had to be careful with larger customers and, where data centre costs had fallen, we passed some of our cost savings to them to make sure we did not lose them. The relationship was sticky, but retention was not guaranteed and concessions on rates were often offered."*

(3) Both Mr Egan and Mr Goodfellow confirmed in cross-examination that general storage rates and the costs of associated services were falling quickly, that customers were well aware of this, and were quite prepared to threaten to leave Zantaz/Autonomy's hosting business if not offered reduced rates.

678. Thirdly, the evidence at trial also established (unsurprisingly) that Autonomy's reaction to this market dynamic was, where necessary, to offer cost savings.

679. It was submitted for Mr Hussain that:

> *"… far from proving Assumptions one and two on the balance of probabilities, the least likely possibility in the counterfactual scenario is the one for which the Claimants contend, namely, that the price structure of the customers' hosting deals would have been static. Given the commercial dynamics, it is more likely that the revenue figures would have been materially no different if the customers had not entered into the Table 12D transactions."*

680. Mr Hussain rejected Assumptions three and four on broadly the same basis. Both Mr Egan and Mr Goodfellow also agreed in cross-examination that price reductions sometimes incentivised customers to store more data at agreed lower rates. That is evidence contrary to Assumption 3 that customers would have stored the same amount of data as the costs of data storage reduced. Further, in such changeable circumstances, Mr Hussain contended that any assumption that data usage for the period post-February 2015 can be measured using average actual data ingestion for the period December 2014 to February 2015 appears to be contrary to trend, arbitrary and unreliable.

681. In the round, Mr Hussain submitted that the Claimants' calculations of loss are based on a series of assumptions which are contradicted by the evidence of their own witnesses. As Mr Casey emphasised at the beginning of his brief oral closing submissions, the Claimants did not call any factual evidence to establish the quantum of their loss, nor any expert evidence from Mr Bezant, whose (to quote Mr Casey) *"only instruction in relation to these transactions was to double-check the Claimants' mathematics."* Mr Casey invited me to reject all the Claimants' assumptions, and, since

(as he put it) *"the Claimants' case on the Schedule 12D transactions is only as sound as their assumptions"*, no reliable evidence had been adduced to show that the overall revenue figures would have been materially different if the customers had not entered into the Table 12D transactions, the Claimants had failed to prove any material loss in that regard.

682. The Claimants sought to answer all this with the submission that the Defendants' arguments were themselves based on a false premise that existing hybrid hosting customers had no financial constraints against moving to another supplier.

683. The Claimants emphasised the point already made above that in the case of the four transactions concerned the customers were already parties to an existing hybrid hosting deal and had paid a licence fee. The Claimants maintain that existing hybrid model hosting customers were, in practical terms, already "locked in" to continuing to use Autonomy, first, because of the cost and difficulty of moving from one storage provider to another, and second, because they had, in effect, paid upfront for storage services when they paid for the software licence under their hybrid hosting contract.

684. In their written closing submissions for the Main Trial, the Claimants had drawn attention to (a) Mr Sullivan's evidence in his witness statement that once an initial hybrid deal was in place, *"Customer retention was virtually guaranteed"* and (b) Ms Gustafsson's evidence in her witness statement that such a deal *"de-risked the contract, reducing the chance [of] the customer walking away…"* and had *"the value of locking in customers, generating revenues over the longer term as customers' amount of data under storage increased, and de-risking these revenues by asking them to commit"*. Further, in cross-examination, Ms Gustafsson appeared to accept that it was reasonable to assume that the customer would have continued to pay the rates applicable under the agreement had there been no restructuring.

685. The Claimants also relied then (as they rely now) on Autonomy's own internal modelling of the effect of the hybrid hosting arrangements. Autonomy's own modelling was based on assumptions that (a) there would not be likely to be any material effect on the propensity of customers to increase their data storage need and (b) if there was no re-structuring the customer would have continued to pay the rates applicable under the original hosting agreement, rather than seeking to negotiate new and lower prices. Both Dr Lynch and Ms Gustafsson accepted that it was unlikely that Autonomy would have made assumptions in its own models which those responsible thought unreasonable or unrealistic.

686. On the basis of their Assumptions, the Claimants claimed as their loss in respect of the Schedule D transactions the sum of $24,835,156. That was the mathematical result of applying their Assumptions. They did not dispute that they had not advanced any other evidence.

My assessment of the Assumptions on which the Claimants base their Schedule 12 D claims

687. I turn to my own assessment of the validity of the Assumptions and these arguments.

688. In my judgment, it is plain (and indeed implicit in my finding of impropriety) that the hybrid hosting/licence fee model and any subsequent revisions or restructuring of existing hybrid hosting contracts is likely to have occasioned loss over the longer term

to Autonomy. Mr Sullivan put the point clearly in his witness statement for the Main Trial:

> *"Conceptually, I prefer the recurring revenue structure provided by the SaaS model. SaaS is a subscription model which is safer and more predictable over the longer term. The licence model is a shorter term approach which, although it generates significant additional revenue in the present, leads to reductions in longer term revenue and, thus, to a reduction in the total revenue which would be earned on those customers' accounts over the lifetime of the relationship for providing what was, in reality, the same set of services."*

689. Measuring that loss was always likely to be difficult. Against the disadvantages identified by Mr Sullivan must be weighed the possibility of a hybrid hosting customer having an enhanced propensity (in comparison to a SaaS customer) to increase their data storage requirement and a weaker position (on the same comparison) in the context of renegotiating fees because of an enhanced reluctance to move their business (what the parties tended to call 'customer stickiness').

690. It is not possible, in my view, to weigh these considerations with any degree of confidence or accuracy on the meagre evidence provided. Certainly, I do not consider that the Claimants have established the Assumptions on which they chose to rely; nor do I consider that their steady state mathematical approach is justified. However, whereas the Claimants do not seem to me to have provided the evidence necessary to support their assumptions, still less their extraordinarily precise figure for their overall loss in respect of the Schedule 12D transactions, Mr Hussain has not produced evidence to substantiate any theory that hybrid hosting customers would be more likely to increase their data storage and less likely to move their data storage business away to another provider. Intuitively I would expect that to be so in the immediate aftermath of a hybrid hosting deal: but I cannot begin to tell for how long that would be so.

691. Using the broadest of broad brushes in this unsatisfactory position, and left only with my view of the inherent probability of some loss, I assess the loss at $5 million, thereby discounting the Claimants' calculation by a little more than 75% to reflect the inherent uncertainties, whilst recognising the likelihood of some reduction in total contract value over the lifetime of the arrangements.

692. In the light of my findings in respect of the Direct Loss Claims, Dr Lynch and Mr Hussain are, subject to the question of currency considered below, jointly and severally liable to the Third Claimant in the sterling equivalent amount of $7,557,510; Dr Lynch and Mr Hussain are jointly and severally liable to the Fourth Claimant in the US Dollar amount of $38,776,876; and Mr Hussain is liable to the Fourth Claimant in the US Dollar amount of $9,412,000.

PART D: Currency of Loss

693. The Claimants originally denominated their claimed damages in sterling (which is undoubtedly the currency of the relevant expenditure since Autonomy's shares were denominated in sterling). They now (by reamendment in February 2019) seek to quantify their claims in US dollars (on the basis that US dollars are the currency in which they conduct their operations, and the measure of their loss should include any losses by reference to exchange rate fluctuations).

694. It is common ground that the relevant principles for determining whether to quantify loss in a currency other than sterling are set out in the judgment of Lord Wilberforce in *The Despina R* [1979] AC 685. As to this:

(1) The question which arises is whether the currency in question is that *"in which the expense or loss was immediately sustained"* (the "expenditure currency"), or that *"in which the loss was effectively felt or borne by the plaintiff, having regard to the currency in which he generally operates or with which he has the closest connection"* (the "plaintiff's currency") (page 696A-B).

(2) The question is determined by the normal principles governing tortious damages, applying the principles of *restitutio in integrum*[123] and the requirement that the damage sustained be reasonably foreseeable (page 697F). By way of illustration:

> *"a plaintiff, who normally conducts his business through a particular currency, and who, when other currencies are immediately involved, uses his own currency to obtain those currencies, can reasonably say that the loss he sustains is to be measured not by the immediate currencies in which the loss first emerges but by the amount of his own currency, which in the normal course of operation, he uses to obtain those currencies. This is the currency in which his loss is felt, and is the currency which it is reasonably foreseeable he will have to spend"* (page 697F-H).

(3) However, there is no

> *"hard and fast rule that in all cases where a plaintiff suffers a loss or damage in a foreign currency the right currency to take for the purpose of his claim is "the plaintiff's currency""* (page 698F).

(4) On the contrary:

> *"cases may arise in which a plaintiff will not be able to show that in the normal course of events he would use, and be expected to use, the currency, or one of several currencies, in which he normally conducts his operations (the burden being on him to show this)"* (page 698G-H)

(5) The claimant bears the burden of showing that damages fall to be assessed in some currency other than sterling:

> *"The plaintiff has to prove his loss: if he wishes to present his claim in his own currency, the burden is on him to show to the satisfaction of the tribunal that his operations are conducted in that currency and that in fact it was his currency that was used, in a normal manner, to meet the expenditure for which he claims or that his loss can only be appropriately measured in that currency."* (Page 698A)

(6) Where companies maintain accounts and operate in several currencies,

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[123] In the sense used to describe the obligation to put the claimant in the position it would have been in had no tort occurred.

"again it is for the plaintiff to satisfy the court…that the use of the particular currency was in the course of normal operations of that company and was reasonably foreseeable." (page 698B).

(7) The Claimants suggest that since this is a fraud case, considerations of foreseeability do not apply. However, the FSMA Claim does not lie in fraud, for the reasons set out at §534 of the Main Judgment.[124] The direct losses claims are claims for breach of duty, not claims in fraud.

695. The emphasis is on the *"true loss"* and its proper compensation *"in the currency best suited to achieve an appropriate and just result"* (*per* Lord Wilberforce in *The Despina R* at 703A-B) in accordance with the guiding principle of *restitutio in integrum,* even if it would be simpler to take as the relevant currency the currency of direct or immediate disbursement: see *per* Lord Russell of Killowen at 704E *ibid.*) The best suited currency is for the tribunal to determine (see 703A).

Grounds for the Claimants' claim to damages in US dollars

696. The Claimants' grounds for claiming in US dollars are as follows:

(1) As regards Autonomy's liability to Bidco (the first part of the 'dog-leg' claim) on the FSMA Claim, they assert that Bidco foreseeably bore the loss suffered on the acquisition of Autonomy in US dollars, because it "*was the corporate vehicle that HP used to purchase Autonomy; HP generally operated in US dollars at all relevant times; and the sterling sums used by Bidco to purchase the Autonomy shares in respect of which it suffered the Loss were obtained for that purpose with US dollars*."[125]

(2) As regards the Defendants' liability to Autonomy in respect of the FSMA Claim (the second part of the 'dog-leg') they assert that Autonomy foreseeably bore its loss in dollars because "*Autonomy has accepted liability to Bidco in US dollars, and is so liable for the reasons set out in paragraph 196C above, and at all material times the primary economic environment of the Autonomy group of companies was US dollars*".[126]

(3) As regards the claim under the Misrepresentation Act and in deceit, they rely on the same reasons as set out at (1) above.[127]

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[124] Main Judgment at §534, summarising Dr Lynch's submissions: "*In a claim in fraud or deceit, "the policy of the law is to transfer the whole foreseeable risk of a transaction induced by fraud to the fraudulent defendant" (Slough Estates, above). But in a claim under s. 90A / Sch 10A, there is no "fraudulent defendant" since the fraudster (i.e. the PDMR* [person discharging management responsibility]*) and the defendant (i.e. the issuer) are different persons. Unlike a successful fraudster, an issuer does not in general benefit from the PDMR's wrong in putting out misleading annual or quarterly reports because, as already discussed, these are not "selling" documents. Transferring risks to the issuer penalises the general body of its shareholders, not the individual responsible for the misleading statement. Far from seeking to transfer risk to the issuer, the policy underlying s. 90A and Sch 10A was to avoid an inappropriate transfer of risk to, and diversion of resources from, defendant companies and their shareholders, employees and creditors*."

[125] RRAPOC §196C and §207; Claimants' Written Closing at §6026(1)(b).

[126] RRAPOC §202A; Claimants' Written Closing at §6026(3).

[127] RRAPOC §207.

(4) Finally, as regards the direct losses, they say that ASL, Autonomy Inc and Zantaz were all part of the Autonomy group of companies, whose primary economic environment was, at all material times, US dollars.[128]

Grounds for the Defendants' position that the Claimants' damages should be denominated in sterling

697. The Defendants contested the Claimants' arguments in every respect. I take the following almost *verbatim* from Dr Lynch's written opening for the Quantum Hearing.

698. As to Bidco's loss in purchasing Autonomy:

(1) The purchase was of shares in pounds sterling of an English company listed on the London Stock Exchange.

(2) It is immaterial that (as the Claimants allege) HP generally operated in US dollars. HP is not the relevant entity, since it is (necessarily) Bidco which asserts the claim.

(3) Bidco was a special purpose vehicle incorporated in the Netherlands for the specific purpose of acquiring Autonomy through the purchase of its shares in pounds sterling. Bidco had no other business, and there was no other currency in which its business was normally conducted.

(4) The documents relied on by the Claimants in their written closing submissions for the Main Trial[129] do not assist them:

(a) First, they rely on a statement in HP's 2011 Annual Report that "*HP uses the U.S. dollar predominately as its functional currency."* However, that is dealing with HP: it sheds no light on the currency arrangements of Bidco. Further, directly after the statement relied on by the Claimants, the Report states that "*Certain foreign subsidiaries designate the local currency as their functional currency*".

(b) They rely on an internal HP email dated 4 October 2011 referring to the fact that HP hedged the sterling price to show that "*HP purchased the sterling funds that it used to acquire Bidco with US dollars*". Again, that exchange deals with transactions internal to HP, not Bidco. It does not show whether Bidco received the funds in any currency other than sterling, nor whether it relied on any finance other than the funds received from HP.[130]

(5) In fact, Bidco's offer to Autonomy's shareholders appears to make clear that a substantial portion of the purchase price was raised in sterling: it explains that it was to be funded "*from a combination of HP's existing cash resources held*

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[128] RRAPOC §203A; Claimants' Written Closing at §6026(5).

[129] At §6026(1)(b) and §6026(3).

[130] Even if, *arguendo,* Bidco did receive the currency in US dollars, that would not demonstrate that US dollars were the "*plaintiff's currency*" for Bidco.

outside the US and debt financing which has been arranged by Barclays Capital". The debt financing was a sterling denominated Bridge Facility of £5bn.

(6) Thus, the Defendants contend that the Claimants have not discharged their burden of showing that Bidco's operations were conducted in US dollars, or that it would be right to allow it to claim in dollars in this case.

(7) HP was in any event able to hedge 99% of its foreign exchange risk, to the extent that the acquisition was "*$690M cheaper than at deal announcement*".[131] If, despite the arguments above, the Court were to make an award in US dollars, it should do so at the rate at which HP actually acquired the pounds sterling used to fund the acquisition, in order to avoid overcompensating the Claimants.

699. Turning next to the Defendants' case as to the appropriate currency as regards their liability to Autonomy, the Defendants contend that:

(1) the Claimants' primary contention that Autonomy felt the FSMA loss in US dollars because the loss arising from Bidco's purchase of Autonomy was felt in US dollars[132] is a *non-sequitur* and in any event (for the reasons summarised above) wrong.

(2) Further, Autonomy was a UK company with a full London listing on the main market of The London Stock Exchange. Autonomy's 2010 Annual Report stated that:

> *"The company's functional currency is sterling as that is the currency of the primary economic environment in which the company operates. The group's presentational currency is dollars as that is the currency of the primary economic environment in which the group operates."*

(3) It is the position of Autonomy, not the group, that is relevant, given that the loss claimed by Autonomy is one arising out of its own liability to Bidco – not the liability of some group entity.[133] The Claimants' reference to a comment in the accounts about the "economic environment of the group" (as opposed to the company) is therefore irrelevant.[134]

(4) The currency of the primary economic environment in which Autonomy itself operated was sterling.

(5) Thus, the Claimants cannot establish that Autonomy's 'plaintiff's currency' was US dollars.

700. Finally, as to the Defendants' case in relation to the direct losses:

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[131] The result was that HP was able to purchase the required pounds sterling at an average rate of $1.554 rather than $1.6514.

[132] Claimants' Written Closing submissions for the Main Trial at §6026(3)(a).

[133] And there is no warrant for the assertion at FN4583 of the Claimants' Written Closing for the Main Trial that "*what matters is that the environment in which the business as a whole primarily generated and expended cash was (and was stated to be) dollars"*.

[134] Claimants' Written Closing submissions, §6026(3)(b).

(1) Dr Lynch accepts that the direct losses incurred by Autonomy Inc should be assessed in US dollars. Autonomy Inc was a New Jersey Company, which was Autonomy's main operating company in the USA, based in Palo Alto, California.[135]

(2) ASL's losses should be assessed in pounds sterling:

(a) ASL was incorporated in England, and was a subsidiary of Autonomy Corporation plc, which was incorporated in England.

(b) The Claimants' sole basis for arguing that its losses were suffered in US dollars is that it was part of the Autonomy Group, whose economic environment is said to be US dollars (see paragraph [696(2)] above). But it is necessary to look at ASL itself, not the group, to determine ASL's functional currency. Thus, the Claimants have not discharged the burden of showing a currency other than sterling should be used.

(c) In fact, at the relevant time ASL's accounts were stated in pounds sterling, and record that "*[a]ll turnover relates to the sale of software and originates in the United Kingdom*" (p.13). The great bulk of the tax it paid is UK corporation tax (p.15). It is clear that sterling is the appropriate currency.

(3) No claim is made against Dr Lynch in relation to the direct losses allegedly suffered by Zantaz.[136] I would add that Mr Hussain has not addressed the question as to the currency in which loss was felt by Zantaz.

My determination of the currency of loss

701. As to these competing submissions:

(1) Although HP and Bidco are distinct entities at law, the reality is plain: that Bidco was entirely funded by HP. Bidco had no operations other than as an acquisition vehicle. I consider that the two entities must be taken to have felt or borne the loss in the same currency.

(2) It may usually be that the currency in which the loss is felt or borne is the currency in which the claimant *"generally operates or with which he has the closest connection"*: and Lord Wilberforce directs that regard must be had to that in determining what he referred to as *"the plaintiff's currency"*. However, that may not always be determinative. An entity may, for example, have or raise funds in another currency which it deploys in the transaction giving rise to the loss. It seems to me, therefore, that it is necessary to identify how the Acquisition was actually funded.

(3) The evidence on that is not entirely clear. Notwithstanding the internal HP email mentioned in paragraph [698(4)(b)] above, which does suggest a programme of sterling purchases (in aggregate £5.6 billion) at what then appeared to be beneficial rates, the Acquisition Offer Document suggests that the cash

[135] Main Judgment §11.
[136] Claimants' Written Opening, §281.

consideration was at least in part to be funded by a loan of £5 billion (which was then to be refinanced with a mixture of capital markets issuances of bonds and cash *"currently held outside the US"*) and in part by *"existing cash resources"*. Neither the currency of the proposed capital markets bond issuance nor that of the cash held outside the US is made clear; and although it may be likely that the *"existing cash resources"* refer to cash held in dollars in the US, this was not stated. All this might have been clarified by witness evidence; but it was not.

(4) Those gaps (as I consider them to be) mean that there is no unequivocal answer to the question whether HP (a large company with international operations and ambitions and an obvious presence in the UK) may have chosen (separately from this acquisition) to have conducted part of its international business in sterling (with the benefit of sterling-denominated borrowing and bonds and balances held in the UK).

(5) This has given me more than a pause for thought as to whether the Claimants have discharged the burden of proving that their loss was in fact sustained in dollars because it was in that currency that they conducted their operations and in which they naturally and foreseeably felt the loss, or which *"most truly expresses [their] loss"* (to use Lord Denning MR's formulation in the Court of Appeal which Lord Wilberforce adopted in *The Despina* (at page 701A)); and see also paragraph [694(5)] above.

(6) I have ultimately concluded that the evidence, though incomplete, is just sufficient to warrant a finding on the balance of probabilities that the "plaintiff's currency" so far as this first part of the 'dog-leg' claim is concerned was US dollars. The internal HP emails which culminated in the email dated 4 October 2011 (which I have referred to in paragraphs [698(4)(b)] and [701(3)] above) do make fairly clear that for the purposes of the Acquisition, HP acquired with dollars some £5.6bn in a sequence of trades on the market. Although I remain unclear as to the relationship between this and the sterling Bridge Facility (see paragraph [698(5)] above), it does seem to me sufficient to show that US Dollars comprise the currency which most truly expresses the loss as between HP/Bidco and Autonomy.

702. In light of my conclusion that the currency that most truly expresses the loss as between HP/Bidco and Autonomy is US dollars, it seems to me to follow that the "plaintiff's currency" in the second limb of the 'dog-leg' claim is also US dollars. That is so whatever may be the "functional currency" of Autonomy (which I agree was pounds sterling), because Autonomy's exposure to Bidco/HP for which it seeks indemnity or compensation from the Defendants is to be measured in US dollars.

703. It follows that there are two stages to the currency calculation for the counterfactual transaction. The first stage is to convert into dollars the sterling amount of the bid price that Bidco would have paid in the RTP. The second stage is to determine when Bidco's claim against Autonomy should be taken to have crystallised. The calculation and time of crystallisation of the dollar liability is another issue, on which in light of their continuing disagreement, the parties wish to make further submissions. I shall defer until after that my quantification of that loss in US Dollars.

704. As to the Direct Claims/losses:

(1) It is now common ground that the direct losses incurred by Autonomy Inc should be assessed in US dollars.

(2) I agree with the Defendants that, as regards ASL's losses, ASL's functional currency was sterling, and the Claimants have not discharged the burden of showing loss in a currency other than sterling.

(3) The claims in respect of direct losses suffered by Zantaz are made only against Mr Hussain and not Dr Lynch. I have concluded that, as a US corporation, Zantaz felt any loss in US dollars.

705. It was common ground that all issues in relation to the Claimants' claim for interest should be addressed after I had ruled on questions of loss and currency. In the event that this cannot be agreed, I will hear the parties on questions of interest, and any other matters arising, at a hearing to be fixed in due course.

Postscript

706. In the course of finalising this judgment, three extraordinary events occurred.

707. First, after his extradition from the United Kingdom and a 12-week criminal trial before the Hon. Charles R. Breyer and a jury in the US Federal Court for the Northern District of California in San Francisco, California, Dr Lynch was acquitted of all the charges against him. So too was Mr Chamberlain, his co-Defendant. I cannot imagine the relief they must have felt.

708. Secondly, however, and so soon after their success, the first of two terrible accidents occurred. On 20 August 2024, Mr Chamberlain died in hospital after being hit by a car whilst out running near his home in Cambridgeshire on 17 August 2024.

709. Third, tragically and almost unbelievably, on 19 August 2024, Dr Lynch, members of his family (including his younger daughter) and guests on his yacht *"The Bayesian"* (including a lawyer from Clifford Chance, Mr Christopher Morvillo, who I believe sat in on every day of the Main Hearing), were reported missing after the yacht had capsized in a sudden and vicious storm off the coast of Sicily. Although Dr Lynch's wife survived, Dr Lynch, his younger daughter, and Mr Morvillo were found dead in the yacht a few days later.

710. No words from me will be of any comfort to his wife and family. But I wish to express my sorrow at this devastating turn of events, and my sympathy and deepest condolences, having come to know and admire Dr Lynch (notwithstanding my findings against him) over the course of a very long trial.

711. This tragedy after such success in the trial in the United States has inevitably also had an effect on these proceedings. I had indicated in July 2024 that I intended to provide a draft in September; but upon hearing what had happened, I informed the parties in August 2024 that I would not wish to circulate a judgment in the circumstances, quite apart from the logistical and procedural issues which I anticipated would inevitably arise and on which I invited clarification in due course. This was agreed by all concerned.

712. In the event, the difficulty of resolving the logistical problems, and in particular, the difficulty of providing for the representation of Dr Lynch's estate in circumstances where his appointed Executors have either renounced their appointment or declined to take any steps until the position as to the solvency or otherwise of the estate is clarified, took some time to resolve. Only in May 2025 were the arrangements ultimately finalised and recorded in a form of an Order for the Court to approve and seal.

713. As the position is of some complexity, as this is already a long judgment by any measure except that set by my Main Judgment, and as these are matters which are, though not private, primarily the domestic concern of the persons interested in the Estate, I have considered it more appropriate to provide a separate judgment in respect of those matters (for which the short reference to the record is [2025] EWHC 1171 (Ch)).

714. That has also enabled the title to these proceedings to be amended appropriately, and for this judgment on quantum to be delivered under that new title and after the formal appointment of the Administrator as representative of Dr Lynch's estate (which I determined should have immediate effect, as provided for in the sealed Order appointing him and providing for his substitution as a party pursuant to CPR Rule 19.2).