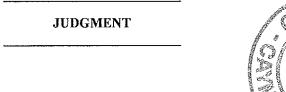
IN THE GRAND COURT OF THE CAYMAN ISLANDS FINANCIAL SERVICES DIVISION

CAUSE NO FSD 14 OF 2016 (NSJ)

IN THE MATTER OF THE COMPANIES LAW (2013 REVISION) AND IN THE MATTER OF SHANDA GAMES LIMITED



IN OPEN COURT

Appearances:

Mr. Nigel Meeson QC and Mr. Erik Bodden of Conyers Dill & Pearman for Shanda Games.

Mr. Robert Levy QC and Mac Imrie, James Eldridge and Gemma Freeman of Maples & Calder for the Dissenting Shareholders.

Before:

The Hon. Justice Segal.

Heard:

7, 8, 9, 10, 11, 12, 16 and 17 November 2016

Draft Ruling Circulated:

20 March 2017

Judgment Delivered to Parties and Counsel only:

25 April 2017

Release for Publication:

25 April 2017

HEADNOTE

Section 238 Companies Law (2013 Revision) - determination of fair value of the shares of shareholders dissenting from a statutory merger - whether a minority discount is to be applied - the approach to be adopted by the Court in determining fair value – the resolution of various disputes relating to the valuation of the Company and the dissenters' shares.



Introduction and outline of my decision on fair value

- This is my judgment on the petition (the **Petition**) presented on 4 February 2016 by Shanda Games Limited (**Shanda**) pursuant to section 238 of the Companies Law (2013 Revision) (the **Companies Law**).
- 2. Section 238 applies where there has been a merger or consolidation of Cayman companies pursuant to Part XVI of the Companies Law and members of a constituent company dissent from the merger or consolidation. Section 238(1) of the Companies Law provides that a dissenting member is entitled to payment of the fair value of his shares. Section 238(9) requires that the constituent company, following compliance by the dissenting member with the procedural requirements of section 238 and in the event that agreement cannot be reached on the fair price to be paid for the dissenting member's shares, file a petition with the Court seeking a determination of the fair value of the shares of the dissenting member. Section 238 (11) requires the Court, at the hearing of the petition, to determine the fair value of the dissenting member's shares and a fair rate of interest, if any, to be paid by the company upon the amount determined to be the fair value.
- 3. The Petition was presented pursuant to section 238(9) of the Companies Law. The dissenting shareholders in this case are (1) Blackwell Partners LLC-Series A (Blackwell) (2) Crown Managed Accounts SPC (Crown) and (3) Maso Capital Investments Limited (Maso) (together the Dissenting Shareholders). At all material times Blackwell was the registered owner of 3,446,358 Class A ordinary shares, Crown was the registered owner of 2,078,940 Class A ordinary shares and Maso was the registered owner of 3,296,764 Class A ordinary shares.
- 4. I would summarise my conclusions as follows:
 - (a). after the cross-examination of the experts and in closing submissions, Shanda, as I explain in paragraph 72 below, confirmed that it was prepared to accept the opinion of the Dissenting Shareholders' expert save in relation to nine issues (which were, unsurprisingly, the issues with the greatest impact on the valuation of Shanda).

- (b). my decision on these nine points (adopting the shorthand I have used in paragraphs 71 and 72 to describe these issues) can be summarised as follows:
 - (i). the minority discount point: I hold that there is no minority discount to be applied in a fair value determination under section 238 (see paragraph 93 below).
 - (ii) game revenue intensity: I hold that the valuation of Shanda should be based on and use Mr Inglis' corrections and estimates (see paragraph 113 below).



- (iii). depreciation: I hold that the Court should use Mr Inglis' forecasts and figures for depreciation and amortisation (see paragraph 118 below).
- (iv). Mir II mobile revenues: I hold that the Court should use Mr Inglis' projections and figures for Mir II mobile revenues (see paragraph 126 below).
- (v). two or three stage growth model: I hold that the Court should use a three stage model (see paragraph 136 below) and that the transitional period should be five years (see paragraph 140 below).
- (vi) the estimate of beta to be used in calculating Shanda's DCF: I hold that the estimate of beta should be 1.39 (see paragraph 160 below).
- (vii). the equity size or small stock premium: I hold that the Court should use Professor Jarrell's small stock premium of 1.71% (see paragraph 175 below).
- (viii). the treatment of restricted stock, restricted stock units and employee share options (together "securities"): I determine the applicable principle but decide that since I have not been referred to or had submissions on the relevant terms and conditions governing these securities I am unable to make a final determination on how the principle is to be applied in the present proceedings. As regards the principle, I hold that if the employees and holders of the stock or units had rights to subscribe for

and to the issue of shares in Shanda which were exercisable as at the Valuation Date without reference to or reliance on the merger (so that such rights were not conditional or dependent on the merger) then the Dissenting Shareholders' interest in Shanda was always subject to the issue of further shares and at risk of being diluted by shares issued to the holders and employees - and therefore the stock held or issued under these securities should be included in Shanda's equity for the purpose of calculating the Dissenting Shareholders' proportionate interest (see paragraph 179(d) below).



- (ix). whether transaction costs paid by Shanda prior to the Valuation Date should be added back to and included in the valuation of Shanda: I hold that they should not be added back (see paragraph 186 below).
- (c). I have not, using the decisions I have made, (re) calculated the valuation for Shanda (including the revised cost of equity estimate) but will leave this to the parties. I assume that this will not result in any difficulties but if it does I shall quickly determine any disputes and resolve any disagreements.
- (d). I do not, in this judgment, deal with the interest issue. Since this point had not been the subject of detailed written submissions and had not been addressed by counsel during the hearing I gave the parties the opportunity to file further submissions and evidence after the hearing, which the parties have done. I will deliver a further judgment shortly on this issue.
- (e). I would add that I have in this judgment quoted extensively from the written submission of counsel, the reports of the two experts and their cross-examinations. This does make a long judgment even lengthier and to that extent is a disadvantage. But this case has involved a large number of points with a very wide range of arguments and disputes on factual and legal issues. So it seemed to me to be necessary, in order to do justice to the detailed and carefully crafted submissions as well as the extensive and extended elaboration of the experts' opinions on a range of difficult points, to set out without paraphrasing, redaction or reformulation the written submissions and reports that I have received. In this context I should like to thank both counsel for the very helpful manner in which they presented the case and the clarity of their submissions, particularly on the difficult and more arcane questions of statistics which have arisen.

The merger transaction and the giving of the notices required by section 238

- The Petition arises in connection with a merger (the Merger) between Shanda and Capitalcorp Limited (Capitalcorp), an exempted limited company under the laws of the Cayman Islands. The Merger was completed on 18 November 2015 (the Effective Date). The Merger involved a Chinese take private transaction led by the principal shareholders and management of Shanda.
- 6. Pursuant to the Merger, Shanda and Capitalcorp merged with Shanda as the surviving company. Shanda became a wholly owned subsidiary of Capitalhold Limited (the **Parent**), a Cayman Islands company. The Parent is now beneficially owned by a consortium of parties some of whom were the majority shareholders in Shanda before the Merger.

The Merger was agreed and documented initially in a merger agreement dated 3 April 2015 but the merger agreement was amended and restated on 23 September 2015. Under the terms of the merger agreement as amended each of Shanda's (i) ordinary shares and (ii) American depository shares (ADSs) (each representing two Class A ordinary shares) issued and outstanding immediately prior to the effective time of the Merger were to be cancelled in exchange for the right to receive US\$3.55 per share (amounting to US\$7.10 per ADS) in cash.

- 8. On the Effective Date, the Merger was approved by Shanda's shareholders at an extraordinary general meeting. 99.3% of those who voted at the EGM voted to authorise the Merger and in favour of the resolution to approve the merger agreement.
- 9. Prior to the EGM, on 17 November 2015, the Dissenting Shareholders had given written notice of objection to the Merger pursuant to section 238(2) of the Companies Law. On 7 December 2015, within the time period prescribed and as required by section 238(4), Shanda gave written notice of the authorisation of the Merger to each of the Dissenting Shareholders. On 29 December 2015, the Dissenting Shareholders each gave written notice to Shanda of its decision to dissent pursuant to section 238(5) (whereupon they each ceased to have any of the rights of a member except the right to be paid the fair value of their shares). Thereafter, on 4 January 2016, Shanda made a written offer to each of the Dissenting Shareholders as required by and pursuant to section 238(8) of the



Companies Law, to purchase their shares at a price of US\$3.55 per share (amounting to US\$7.10 per ADS).

10. However, since Shanda and the Dissenting Shareholders were unable to agree a price for the Dissenting Shareholders' shares within the period prescribed by section 238(8) of the Companies Law, on 4 February 2016 Shanda issued the Petition as required by section 238(9)(a) of the Companies Law and filed a verified list containing the names and addresses of all members who had filed a notice under section 238(5) of the Companies Law and with whom agreement concerning the fair value of their shares had not been reached.

he background to the merger - Shanda's business, corporate history and structure

Shanda is an online game developer, operator and publisher and was incorporated in the Cayman Islands on 12 June 2008. Shanda is one of China's largest video game companies. It offers a diverse portfolio of popular massively multiplayer online games (MMO) and mobile games primarily in China, as well as in overseas markets.

- 12. Shanda's online games business was founded by Shanda Interactive Entertainment Limited (Shanda Interactive) in 2001. Shanda Interactive operated Shanda's online games business until 2008, by which time it had approximately twenty online games.
- On 1 July 2008, Shanda Interactive was reorganised in anticipation of an initial public offering (IPO) of the online games business. Pursuant to the reorganisation, Shanda Interactive transferred to Shanda, a wholly owned subsidiary created as a part of the process, substantially all of its assets and liabilities related to the online games business, and Shanda transferred to Shanda Interactive all assets and liabilities unrelated to online games.
- 14. Shanda completed an IPO of its ADSs on the Nasdaq Global Select Market (NASDAQ) on 25 September 2009 at an offering price of US\$12.50 per ADS. According to Shanda's 2014 Form 20-F filing, each ADS represented two class A ordinary shares. It was publicly listed in the US until it was taken private in November 2015.
- 15. As of 31 December 2014, Shanda had an aggregate of 537,832,318 ordinary



shares outstanding, comprising Class A and Class B shares including Class A ordinary shares represented by the ADSs. Shanda's Class A and Class B ordinary shares were not themselves publicly traded. According to Shanda's 2014 Form 20-F filing, each Class B ordinary share was convertible into one Class A ordinary share. Holders of Class A ordinary shares were entitled to one vote per share, holders of Class B ordinary shares were entitled to 10 votes per share, and holders of ADSs were entitled to two votes per ADS.

Shanda, as a company incorporated in the Cayman Islands, is viewed as a foreign or foreign-invested enterprise under the law of the People's Republic of China. It is, therefore, subject to regulations that limit foreign ownership in value-added telecommunications services, including internet content services, which make it and its Chinese subsidiaries ineligible to apply for and hold the licenses required to operate online games in China.

17. In order to comply with these regulations, Shanda operates its business in China through a number of variable interest entities (VIEs) and, in some cases, their wholly owned subsidiaries, which hold the relevant licences and approvals. Shanda controls the VIEs through contractual arrangements between its Chinese subsidiaries and the VIEs and their shareholders and, because it is considered the primary beneficiary of the VIEs and their subsidiaries, consolidates the results of their operations and assets and liabilities in its financial statements.

Negotiations and discussions leading to the Merger

- 18. Prior to the approval of the Merger on 18 November 2015, Shanda had taken various steps to explore possible reorganisations and transactions and had negotiations with and received offers from a number of interested parties. Furthermore, in this period there were various transfers of or transactions relating to Shanda's shares.
- 19. During December 2013, Mr. Tianqiao Chen (Mr. Chen) (Shanda's then chairman of the board) and Mr. Richard Wei (Shanda's then Chief Financial Officer) met with Kilometre Capital Management Cayman (Kilometre) to explore Shanda's strategic alternatives and Shanda subsequently retained Kilometre as its adviser in connection with possible sale or investment transactions.

- 20. Between 18 December 2013 and 18 January 2014, Kilometre introduced Shanda to four private equity investors, including Primavera Capital Limited (Primavera), to whom Shanda made available due diligence materials in relation to a potential going-private transaction.
- 21. On 27 January 2014, Shanda Interactive (an affiliate of Mr Chen and, as already noted, Shanda's controlling shareholder) and Primavera entered into a consortium agreement for the purpose of cooperating with a view to making a going private proposal to Shanda (the First Buyer Group). On the same day:
 - (a). Shanda SDG Investment Limited (Shanda SDG), a wholly owned subsidiary of Shanda Interactive, sold 28,959,276 Class A ordinary shares to Primavera for USD 2.7625 per share (equivalent to USD 5.5250 per ADS), subject to a term that would increase the price to the level at which Shanda was ultimately taken private if a take-private transaction occurred within one year of the sale at a higher price and Primavera was a member of the buyer group.
 - (b). the First Buyer Group submitted a preliminary non-binding proposal to Shanda's board to acquire all the shares of Shanda not already owned by the First Buyer Group for US\$3.45 per share and US\$6.90 per ADS. The proposal stated that the First Buyer Group had no intention of selling their shares to any third party investors. The First Buyer Group beneficially owned approximately 76.2% of Shanda at the time of the proposal.
 - (c). Shanda publicly announced the proposal and Shanda's stock price increased 15.0% to close at US\$6.50 per ADS.
- On 28 January 2014, Shanda's board formed a special committee (the Special Committee) comprising Mr Lijun Lin, Mr Heng Wing Chan, and Mr Yong Gui to determine, amongst other things, whether the offer was in the best interests of Shanda's shareholders and consider competing proposals or offers and other strategic alternatives (including that Shanda not enter into any transaction and, instead, remain independent).
- 23. The Special Committee subsequently retained independent legal and financial advisers. Bank of America Merrill Lynch (BAML) was the independent financial adviser. BAML was asked to provide an opinion as to whether the price offered by the First Buyer Group



was fair to the holders of Shanda's ADSs, and on 17 March 2014 Shanda made available to BAML its financial projections for that purpose (the March 2014 Projections).

- 24. On 1 April 2014, BAML requested that the First Buyer Group increase its proposed merger consideration but the First Buyer Group refused to do so.
- 25. Meanwhile, Primavera held discussions with other equity investors that were considering joining the First Buyer Group and in April and May 2014 Perfect World Co., Ltd. (Perfect World), FountainVest Partners (FountainVest), and Carlyle Asia Partners IV, L.P. (Carlyle) joined the First Buyer Group as additional equity investors.

From 9 May 2014 to 31 August 2014, BAML conducted a "market check" and contacted seven potential private equity investors and nine potential strategic investors. None of the parties contacted made proposals to acquire Shanda.

On 1 September 2014, Shanghai Buyout Fund L.P. (Shanghai Fund), Ningxia Zhongyincashmere International Group Co., Ltd. (Ningxia Ltd), and Orient Finance Holdings (Hong Kong) Limited (Orient Finance) also joined the First Buyer Group, and Perfect World, FountainVest, Carlyle, and Primavera withdrew from it.

- 28. Between 17 September and 22 September 2014, BAML negotiated with the First Buyer Group to obtain an increase in the merger consideration.
- 29. On 22 September 2014, the First Buyer Group indicated to BAML that it was prepared to increase its offer from US\$6.90 per ADS to US\$7.10 per ADS.
- 30. On 23 September 2014, BAML gave a presentation to the Special Committee regarding the fairness of the merger consideration. The Special Committee then determined that it was prepared to negotiate with the First Buyer Group based on the merger consideration of US\$3.55 per share and US\$7.10 per ADS.
- 31. Between 27 September and 19 October 2014, the Special Committee's legal advisers and the legal advisers to the First Buyer Group exchanged drafts of the merger agreement in an attempt to sign the merger agreement on 20 October 2014.
- 32. On 19 October 2014, the First Buyer Group indicated to the Special Committee

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that they were not in a position to sign the merger agreement on 20 October 2014, at which time negotiations between the Special Committee and the First Buyer Group ceased for several weeks.

- On 27 October 2014, Mr. Xiangdong Zhang resigned as Shanda's CEO and Mr.
 Yingfeng Zhang (Mr. Zhang) was appointed as the acting CEO by Shanda's board.
- 34. On 25 November 2014, Shanda Interactive agreed to sell its entire controlling interest in Shanda comprised of Class B ordinary shares to an affiliate of Ningxia Ltd. (a member of the First Buyer Group) and an entity controlled by Mr. Zhang for US\$5.13 per share (or US\$10.26 per ADS) (the Shanda SDG Sale). As a result, Ningxia Ltd and Mr. Zhang indirectly owned approximately 69% of the total voting power of Shanda's outstanding ordinary shares.

On 26 November 2014, Shanda publicly announced the completion of the Shanda SDG Sale and that, as a result, Mr. Chen, Shanda Interactive, and Shanda SDG ceased to own any shares in Shanda and Shanda Interactive was no longer part of the First Buyer Group. In addition, Shanda announced the resignation of Mr. Chen as Chairman of the board and as a board member and the appointment of Mr. Zhang as chairman of the board. The press release also stated that Mr. Zhang and Ningxia Ltd. intended to continue pursuing the proposed going private transaction.

- 36. On 5 December 2014, an entity controlled by Mr. Zhang and Ningxia Ltd. entered into a consortium agreement led by Mr. Zhang (the Second Buyer Group) and on 16 March 2015, three additional companies joined the Second Buyer Group jointly to make an offer to Shanda for a "going private" transaction.
- 37. On 19 March 2015, the Second Buyer Group made an offer to purchase all of the shares of Shanda for US\$3.45 per share and US\$6.90 per ADS. The Special Committee determined that the offer was not acceptable since it was lower than the previous offer they received of US\$3.55 per share and US\$7.10 per ADS.
- 38. On 27 March 2015, Shanda provided updated financial projections to the Special Committee (the March 2015 Projections).
- 39. On 31 March 2015, the Special Committee met with BAML and its legal counsel to discuss the proposal from the Second Buyer Group. In the meeting, BAML commented 170425 In the matter of Shanda Games Limited FSD 14 OF 2016 (NSJ) Released for Publication 25 April 2017 Page 10 of 112



that the updated revenue and net income projections were lower than the previous projections and, therefore, the revised projections would be unlikely to affect BAML's previous fairness opinion.

40. In the same meeting, the Special Committee noted that the price paid for the Company's Class B shares in the Shanda SDG Sale of US\$5.13 per share (or US\$10.26 per ADS) in November 2014 was higher than the previously proposed merger consideration of US\$7.10 per ADS. After having discussions with BAML, the Special Committee noted that the US\$5.13 per share control transaction was not comparable to the proposed US\$7.10 per ADS non-control transaction.

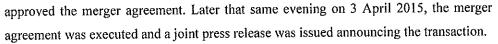
Also on 31 March 2015, the Special Committee communicated to the Second Buyer Group that the merger consideration should be increased to US\$3.55 per share and US\$7.10 per ADS, otherwise the merger would need to be separately approved by the other shareholders who were not connected with the Second Buyer Group.

- 42. On 1 April 2015, the Second Buyer Group revised its offer to US\$3.50 per share and US\$7.00 per ADS, subject to the merger agreement being signed by 3 April 2015 and indicated that this would be the highest price they would be willing to pay.
- 43. On 2 April 2015, the Special Committee determined that it would not recommend the proposed merger transaction without separate approval from the unaffiliated holders.

The Merger transaction

- 44. On 3 April 2015, the Second Buyer Group increased its offer to US\$3.55 per share and US\$7.10 per ADS, provided that the merger agreement would not be subject to separate approval by the unaffiliated holders. On that same day, BAML rendered an oral opinion to the Special Committee that the proposed merger consideration was fair from a financial point of view. Later that same day, the Special Committee unanimously determined that the merger consideration was fair and in the best interests of Shanda and the unaffiliated holders, and recommended that the board authorize and approve the merger agreement.
- 45. Shortly thereafter, the board unanimously determined that the proposed merger was in the best interests of Shanda and the unaffiliated holders, and authorized and





46.

On 25 June 2015, Mr Miaotong Wang, Mr Heng Shao and Mr Ji Wang (the **Li-Funds Persons**) indirectly acquired three companies that in turn indirectly owned the three most recently added members to the Second Buyer Group, which members collectively owned 230,990,798 Class A Company shares, at an imputed purchase price of US\$4.44 per Shanda share (or US\$8.88 per ADS) (the **Li-Funds Purchase**).

- 47. On 2 July 2015, the Special Committee requested additional information from the Second Buyer Group concerning the premium paid in the Li-Funds Purchase for the Class A shares.
- 48. On 21 July 2015, the Special Committee instructed BAML to confirm whether the Second Buyer Group was willing to increase its offer above US\$7.10 per ADS. Later that day, the Second Buyer Group confirmed that they were not prepared to increase the merger consideration.
- 49. On 26 August 2015, the Special Committee met with the board and discussed the fairness of the merger consideration of US\$7.10 per ADS in light of the Li-Funds Purchase, and the board unanimously agreed that the merger agreement was in the best interest of Shanda and the unaffiliated holders.
- 50. On 13 October 2015, Shanda filed its proxy statement (the **Proxy Statement**) in connection with the proposed merger. As of 13 October 2015, the Second Buyer Group beneficially owned 75.6% of Shanda's shares and had 90.7% of the total voting power of the outstanding ordinary shares.
- 51. Shanda's extraordinary general meeting convened to approve the Merger was held on 18 November 2015. At that meeting 99.3% of the Shanda shares that voted did so in favour of the proposal to authorize and approve the merger agreement. On 18 November 2015, the transaction was completed.

Large block transactions

52. In addition to the offers to purchase and transactions relating to Shanda's shares I have already mentioned and the daily trading of Shanda's ADSs on NASDAQ, there also were 170425 in the matter of Shanda Games Limited FSD 14 OF 2016 (NSJ) – Released for Publication 25 April 2017 Page 12 of 112

large block transactions in the shares of Shanda between various parties within both the First Buyer Group and the Second Buyer Group as shown in the table below:

PRIOR BLOCK TRANSACTIONS IN SHANDA'S SHARES (per share amounts in US\$)

5 /	Buyer/Seller	Shares	Price per share		Price ADS	per
Chen Buyer Group:						
27 January 2014	Primavera/	28,959,276 Class	A \$2.	7625*	\$	\$5.53
18 April 2014	Shanda Interactive Perfect World/ Shanda Interactive	30,326,005 Class	A \$3.:	2975*	\$6.60	
31 August 2014	Orient Finance/ Shanda Interactive	123,552,669 Clas	s A \$3.	45*	\$6.9	90
1 September 2014	Shanghai Fund/ Shanda Interactive,	107,438,129 Clas	s A \$3.	45*	\$6.9	00
1 September 2014	Primavera, and Perfect Ningxia Ltd./ Shanda Interactive	World 80,577,828 Class	A \$3.	45*	\$6.9	0
Zhang Buyer Group:						
25 November 2014	Zhang affiliate/ Shanda Interactive	48,759,187 Class	В \$5.	13 \$	10.26	
25 November 2014	Ningxia Ltd. affiliate/ Shanda Interactive	48,759,187 Class	В \$5.	13 \$	10.26	
25 June 2015	Li-Funds Purchase	230,990,798 Clas	s A \$4.	44 \$8	3.88	

The directions for evidence, discovery and experts

- 53. On 4 February 2016, at the same time as the Petition was issued, Shanda issued a summons for directions seeking orders as to the manner in which evidence was to be given; directions as to discovery and inspection of documents and directions giving permission to adduce expert evidence and for the service of expert reports (and a meeting of the experts). The issuing of such a summons for directions, while not provided for in the Grand Court Rules (GCR), has become standard practice and a necessary procedural step in section 238 petitions (the updating of the GCR to provide for such a summons would be helpful and may already be under consideration).
- 54. Discussions took place between Shanda and the Dissenting Shareholders as to the appropriate directions and a form of consent order was agreed and subsequently issued

by the Court on 22 March 2016 (the **Directions Order**). The terms of the Directions Order can be summarised as follows:

- (a). that the Dissenting Shareholders be joined as respondents.
- (b). that Shanda open an electronic data room by 4pm on 11 March 2016 (the "Data Room").
- (c). that the Data Room should be accessible to each party, their attorneys, consultants and experts upon the giving of appropriate undertakings as to confidentiality, which were to be agreed on or before 11 March 2016.
- (d). between 11 March and 24 March 2016, Shanda was required to upload to the Data Room all communications (whether by email or otherwise) and documents and other materials within Shanda's possession, custody or power, which were:
 - (i). previously provided to or obtained from BAML or its affiliates (the "FA") in relation to the fair value opinions, including those passing between the FA and: (i) the independent directors of Shanda prior to the Merger in relation to the merger process; or (ii) Shanda's other directors, management, employees, counsel and/or advisors; and/or (iii) the bidding consortium for the purposes of compiling the fair value opinions; and/or
 - (ii) previously provided to or obtained from Shanda's financiers for the purposes of securing finance for the merger transaction (including but not limited to all management forecasts provided to the same); and/or
 - (iii). previously provided to or obtained from the bidding consortium or former members thereof or passing between such persons for the purposes of undertaking due diligence on Shanda (including but not limited to all management forecasts provided to the same); and/or
 - (iv). previously disclosed by Shanda to the Dissenting Shareholders.
- (e). Shanda was required, on or before 4pm on 8 April 2016, to upload into the Data Room all other documents relevant to a determination of the fair value of Shanda as a going concern as at 18 November 2015 (the "Valuation Date").
- (f). Where documents uploaded to the Data Room were not written in English, but Shanda had English translations available, the translation was to be uploaded together with the document in question and cross-referenced or indexed.
- (g). Shanda and the Dissenting Shareholders were given leave to instruct one expert witness each in the field of valuation in order to opine on the fair value of Shanda as a going concern as at the Valuation Date and the experts were to be appointed by no later than 11 March 2016.
- (h). Shanda was to upload into the Data Room (or if uploading of particular data is impossible, Shanda was in any event to provide to the Dissenters and their valuers) any additional documents, materials, communications(whether by email or otherwise) or information identified or requested by either expert as being necessary for the purpose of preparing their opinion within 14 days after receipt of the request, unless otherwise agreed or directed by the Court. It was made clear that, for the avoidance of doubt, if the experts so request, this may include documents, materials or information produced after the Valuation Date, and such requests may be made from 24 March 2016.



- (i). Shanda was required to procure that appropriate members of its management team be available to meet with the experts in person or by telephone upon request, such meetings to be scheduled at a mutually convenient location and time for the purpose of providing information and answering questions in relation to the fair value of the Shanda as at the Valuation Date. Such meetings or telephone calls had to take place within 14 days of a request by either expert and were to be held jointly unless the experts agreed otherwise. If agreement could not be reached as to the location, time, or format of the meeting or call, or the attendees, either party was given liberty to apply to the Court for directions on 4 days' notice to the other party.
- (j). each valuation expert was required to prepare a report as to their opinion on the fair value of Shanda as a going concern as at the Valuation Date, and by process of calculation the fair value of the shares of the Dissenting Shareholders as at the Valuation Date.
- (k). the experts' evidence was to be prepared in accordance with the Rules for Expert Witnesses in the Financial Services Division Guide, provided that:
 - (i). the reports were to be exchanged simultaneously on or before 4pm on 10 June 2016.
 - (ii). the experts were to meet within 21 days of exchanging their reports, in person, by telephone conference call or video link or howsoever they decided for the purpose of narrowing the issues in dispute and were required following such meeting to prepare a joint report listing those issues on which they agree and those issues which they do not agree within 14 days of the meeting.
 - (iii). supplemental reports limited to those issues on which they did not agree were to be exchanged within 21 days of the meeting.
- (1). the trial date was to be fixed with a provisional estimate of 5 days not before 19 September 2016.
- 55. It can be seen that these agreed directions established a process that was designed to ensure that all the documents and information held by Shanda and relevant to the fair value determination were disclosed via the electronic data room including the documents and forecasts prepared in connection with the Merger and provided to the Special Committee and its advisers as well as to the First and Second Buyer Groups. The identification and selection of such material was necessarily the responsibility of Shanda since it had such material in its possession, custody or power (although because in particular of the filing of the Proxy Statement there was some material in the public domain). The Directions Order also provided that all additional documents or information needed and requested by the parties' experts would also be made available within fourteen days of receipt of a request and easily accessible to them via the data room (or sent to them directly if uploading to the data room was impossible). By this means it was envisaged that Shanda would make full disclosure of all relevant documents and information on a timely basis (although the Directions Order did not refer to the discovery procedures and obligations in GCR O.24 and there was at this stage no



consideration as to whether GCR O.24 applied to a section 238 petition, the effect of the Directions Order, made by consent, was that Shanda assumed an obligation to make disclosure in terms similar to those contained in GCR O.24, and in some respects in wider terms).

Compliance with the Court's directions and further applications by the Dissenting Shareholders

- 56. The Dissenting Shareholders were not satisfied with the steps taken by Shanda to comply with the Directions Order. As a result of the alleged non-compliance by Shanda with the Directions Order, the Dissenting Shareholders issued a summons dated 4 April 2016 seeking, among other things:
 - (a) an unless order so that Shanda be debarred from adducing evidence of fair value unless it complied with paragraph 4 of the Directions Order no later than 10 days after the date of any order made.
 - (b) a further and better list of documents from Shanda.



- (c) an order that a partner or senior attorney amenable to the jurisdiction of the Cayman Court attend in person on behalf of Shanda in the PRC (or elsewhere) to verify the integrity of and completeness of the production of documents by confirming: (i) the precise steps taken by Shanda in complying with the Directions Order; (ii) when, where and how such steps were taken, and; (iii) that the processes of searching for and identifying documents that are responsive to the Directions Order were carried out appropriately in accordance with their terms.
- (d) an order that Shanda provide a detailed log of all devices, and their exact location and custodian and the data that may be relevant to the fair value of the Dissenting Shareholders' shares.
- 57. The day before the Dissenting Shareholders' summons was listed the parties reached agreement as to the terms of a further order including orders that the Dissenting Shareholders and Shanda would jointly engage a forensic IT expert. An order in agreed form (the 19 May Order) was made at, and the Dissenting Shareholders were granted their costs of, the hearing of 19 May. The 19 May Order directed Shanda to swear an 170425 In the matter of Shanda Games Limited FSD 14 OF 2016 (NSJ) Released for Publication 25 April 2017 Page 16 of 112



affidavit explaining the search process in detail and that Alvarez and Marsal (A&M) be engaged to conduct a review of Shanda's IT systems for the purposes of ascertaining whether Shanda's position as outlined in the evidence it had filed (as to the reasons why it had apparently retained very few emails and documents including electronic documents), was correct as well as the extent to which emails or electronic documents had been deleted or destroyed. A&M was ordered to prepare and file a report by 17 June 2016. At that hearing, I noted that the application had been required as a result of "serious and substantial concerns over compliance and failure to comply with the terms of the earlier order".

- 58. Following the 19 May Order, A&M did their work and prepared their report. However, the Dissenting Shareholders remained seriously dissatisfied with the extent of compliance, and alleged serious non-compliance, with the 19 May Order (allegations which Shanda generally sought to rebut). Accordingly, on 24 June 2016, the Dissenting Shareholders filed a further summons seeking an order that by reason of Shanda's continuing and serious failure to provide discovery pursuant to the 19 May Order Shanda be debarred from calling evidence at the trial of the Petition or that Shanda carry out a further disclosure exercise. This summons was listed for the case management conference which had been scheduled for 6 July 2016 pursuant to the 19 May Order.
- 59. On the hearing of the 24 June summons I decided as follows:
 - (a). I did not consider it appropriate to make a debarring order at this stage.
 - (b). nor did I consider it appropriate to issue, or possible to craft in the circumstances an acceptable form of, an unless order.
 - (c). however, Shanda was, in my view, in breach of at least part of the orders dated Directions Order and the 19 May Order (together the **Orders**) in that Shanda had failed properly to perform its disclosure obligations in material respects and properly to explain the action it has taken, and the reasons for failing to take the action required by the Orders.
 - (d). the conditions set out in GCR O.62, r.4(11) were satisfied and it was appropriate to make orders for the payment of the Dissenting Shareholders' costs by Shanda on an indemnity basis.



(e).

- even though I did not make an unless order, I stated that Shanda should be aware and could expect that further failures fully to discharge and perform its discovery obligations and to co-operate with the Dissenting Shareholders and A&M in ensuring that the parties' experts had sufficient documents and information to enable them to prepare their expert reports on a satisfactory basis would result in further sanctions in costs and possibly additional orders (which may involve the appointment by the court of its own expert with powers to take possession of the relevant documents and computers and exercise Shanda's rights against third parties who have relevant documents). Such further default could jeopardise the 7 November trial date and if the evidence demonstrated that the need to vacate the 7 November date and find a new trial date was the responsibility of Shanda, the wasted costs would be payable by Shanda.
- (f). since A&M would have an important role in the further document production and discovery process to ensure that the process for collecting further documentation and searching the data base of documents was properly conducted, A&M would be required to provide further reports to the Court and the parties if A&M considered that Shanda had tampered with or destroyed documents on the eight computers that had not been delivered up to A&M previously or that Shanda had failed to comply with its obligations to deliver computers, DVDs and documents and provide access to A&M. I also decided that A&M's further work would be at the expense of Shanda.
- (g). I did not consider it appropriate to make an order requiring Shanda's Cayman counsel to attend the Shanda's office in the People's Republic or to provide daily updates, as proposed in the draft order. However, I did consider that the Court had jurisdiction to make orders against Shanda's counsel and reminded them of their duties with respect to the disclosure process, including their duty of supervision. I did not rule out, depending on how the discovery exercise was in future conducted, the need for and appropriateness of an investigation into how and whether these duties had been properly discharged.
- (h). I also made a series of orders providing for and regulating the further discovery that Shanda was to provide.

60. The process for securing the documents and information needed by the parties and their experts progressed thereafter and no further applications or orders were made with respect to discovery albeit that the Dissenting Shareholders made clear at the trial of the Petition that they considered that Shanda had failed to provide the required documents and information, failed to provide adequate answers to the questions raised by the Dissenting Shareholders' expert and failed properly to retain key documents or to obtain them from former advisers and directors. In these circumstances, Mr Levy submitted that:

should the Court nevertheless find itself grappling with any outstanding factual issues, then in resolving any .. dispute the Court can and should draw all available inferences against [Shanda]. In particular, where (a) [Shanda] could or reasonably ought to have been able to answer any question or respond to any factual point but has failed to do so; and/or (b) where [Shanda] should reasonably have been expected to have had documents which would have shed light on an issue, then the Court should infer that [Shanda']s response and/or those documents would not have assisted [Shanda's] case (provided that doing so is consistent with the balance of the available evidence).

The experts' reports and evidence

- As I have explained, pursuant to the Directions Order Shanda and the Dissenting Shareholders were each to appoint a valuation expert. The experts were required to:
 - (a). prepare an initial report (as to their opinion on the fair value of Shanda as a going concern, and by process of calculation the fair value of the shares of the Dissenting Shareholders as at the Valuation Date).
 - (b). meet for the purpose of narrowing the issues in dispute.
 - (c). prepare, following such meeting, a joint report listing those issues on which they agree and those issues which they do not agree.
 - (d). exchange supplemental reports limited to those issues on which they did not agree.
- 62. Shanda appointed and Shanda's attorneys Conyers Dill & Pearman instructed Professor Gregg A Jarrell (**Professor Jarrell**). He is currently a tenured Professor of Economics and Finance at the University of Rochester's Simon Business School, where he has been a member of the faculty since 1988. He holds a Ph.D. in Business Economics from the

University of Chicago (1978), with major concentrations in Industrial Organization and Finance, as well as an MBA (1976) from the University of Chicago

- 63. The Dissenting Shareholders appointed and the Dissenters' attorneys Maples and Calder instructed William Inglis (**Mr Inglis**). He is a Senior Managing Director in the Singapore office of FTI Consulting, a global expert services firm specialising, amongst other matters, in expert witness services and litigation support. He is a Chartered Accountant and since 1989 has specialised in valuation and the quantification of loss in the context of legal disputes.
- September (being the Jarrell First Report and the Inglis First Report respectively).

 Subsequently, on 15 September Professor Jarrell and Mr Inglis (together with those working with and assisting them) had a telephone conference call, as required by the Directions Order, to discuss the areas of agreement and disagreement and then, on 3 October, issued a joint statement (the Joint Statement) identifying the matters on which the experts agreed and those on which they disagreed. Thereafter both Professor Jarrell and Mr Inglis prepared and issued on 17 October supplemental reports to the Court dealing with the areas of disagreement (being the Jarrell Supplemental Report and the Inglis Supplemental Report respectively).
- 65. Following the issue of the Joint Statement and the supplemental reports it was clear that while Professor Jarrell and Mr Inglis had reached agreement on a number of important matters there was still a substantial disagreement on a number of key issues and, in particular, on their conclusions as to the fair value of Shanda's equity as the Valuation Date.
- 66. In both of his reports Professor Jarrell concluded that the fair value of Shanda's equity as of the Valuation Date was US\$9.56 per ADS. It will be recalled that the price payable pursuant to the Merger was US\$7.10 per ADS. Mr Inglis took a fundamentally different view. In the Inglis First Report he had concluded that the fair value of Shanda's equity as of 18 November 2016 was US\$27.03 per ADS. In the Inglis Supplemental Report he amended his valuation upwards (in response to a point made by Professor Jarrell in the First Jarrell Report) to US\$27.16 per ADS. At US\$27.16 per ADS (i.e. US\$13.58 per Share) the Dissenting Shareholders' total claim is US\$119,803,601.965.



- 67. The critical differences of view and approach were first identified in the Joint Statement and then discussed in the Inglis Supplemental Report and the Jarrell Supplemental Report.
- 68. In paragraph 2 of the Inglis Supplemental Report Mr Inglis summarised his conclusions as follows:
 - "2.1 As a matter of valuation approach, there is much that Professor Jarrell and I agree on.
 - 2.2 We both assess the fair value of Shanda as at 18 November 2015 and express our conclusions on a per American Depositary Share (ADS) basis.
 - 2.3 We agree that the per ADS fair value of Shanda should be a stand-alone, going-concern equity value which reflects no minority discount, reflects no lack of marketability or liquidity discount, and which excludes any elements of value to Shanda arising from the merger.
 - 2.4 We also agree that the discounted cash flow (DCF) approach is the most appropriate method for valuing Shanda and, as based on our DCF models, both conclude that the fair value of Shanda is higher than the price at which Shanda was taken private (USD 7.10 per ADS).
 - 2.5 However, there are fundamental differences in our respective applications of the DCF approach and therefore our conclusions as to fair value.
 - 2.6 I value the equity of Shanda at USD 7.3 billion and calculate a minimum fair value per ADS of USD 27.16. Professor Jarrell values the equity of Shanda at USD 2.6 billion and calculates a fair value per ADS of USD 9.56.
 - 2.7 The difference between us is considerable. It primarily relates to:
 - (i) the way we use Shanda's projections in our DCF analyses; and
 - (ii) the discount rates we apply to those projections.
 - 2.8 While Professor Jarrell and I agree that an assessment of the fair value of Shanda should be based on Shanda's own projections, subject to being satisfied that they are reasonable, there are important differences between us as regards the use of Shanda's projections in our respective DCF models.
 - 2.9 The primary one is that I consider it is essential to review Shanda's projections in detail and to check them for internal consistency and reasonableness, including by reference to the available external measures.
 - 2.10 In doing this I identified and corrected a number of modelling errors in Shanda's projections. I consider that this process is both consistent with best practice as seen, for example, in the guidelines for US auditors and important to ensure that my assessment of the value of Shanda is robust and independent.
 - 2.11 I also applied certain valuation assumptions which I consider are necessary to calculate the fair value of Shanda as at the Valuation Date, including a number which recognise that, while the model was prepared in early 2015, the valuation date is 18 November 2015.
 - 2.12 Professor Jarrell appears to consider that a detailed review of the model is unnecessary as his report does not indicate that he has carried out any such exercise and he disagrees with the majority of my corrections and adjustments.



- 2.13 As a result, the projections Professor Jarrell uses in his DCF analysis contain the errors and inconsistencies I have sought to remove in my analysis. They also contain what I consider are unreasonable modelling and valuation assumptions.
- 2.14 For these reasons I disagree with Professor Jarrell's approach to using Shanda's projections."
- 69. In the Jarrell Supplemental Report Professor Jarrell noted that:
 - "7. Both experts use a DCF model to compute their fair value opinions in this case. My DCF fair value is US\$9.56 per ADS, and Mr. Inglis' DCF fair value is US\$27.03 per ADS. Obviously, these DCF models must be using very different inputs.
 - 8. A DCF model simplified to its most basic form is a ratio with a numerator (projected net cash flows) and a denominator (discount rate). To have a reliable DCF value, you must have reliable projected net cash flows and a reliable estimated discount rate.
 - 9. My DCF model yields a mid-point value of US\$9.56 per ADS, compared to deal value of US\$7.10 per ADS. Thus, my fair value opinion is 35% greater than the deal value that dissenting shareholders rejected. For my numerator, I rely on management's Corrected Projections, which are the most informed, unbiased, and, importantly, were not prepared for this litigation. For my denominator, I use the capital asset pricing model or CAPM and rely on a directly-measured historic beta from a regression market model, which is standard practice for a publicly-traded company valuation. I believe that my DCF fair value is reliable because I believe that both the numerator and the denominator are reliable and are the most reasonable under the circumstances of this case.
 - 10. I believe that Mr. Inglis' DCF model, which yields his fair value of US\$27.03 per ADS, is unreliable and artificially over-states the fair value of Shanda by a factor of three. The main causes of this over-valuation are two his numerator is artificially overstated and his denominator is artificially understated. Together, his overstated numerator and his understated denominator combine to cause his significantly overstated DCF value.
 - 11. Mr. Inglis overstates the numerator's projected free cash flows by taking the extraordinary step of creating his own projections specifically for this litigation, and using them as a replacement for management's contemporaneous, informed, detailed projections. Mr. Inglis concedes that he is not a gaming-industry expert, a necessary credential for the expertise required to make reliable projections for Shanda, a gaming company.
 - 12. Nonetheless, Mr. Inglis exclusively uses his projections instead of management's projections, and it just so happens that Mr. Inglis' litigation-driven projections have higher net cash flows than do management's projections. Because I regard management projections to clearly be the most reliable and informed projections, I disagree with Mr. Inglis' use of any other set of projections, and I believe that Mr. Inglis' DCF value is over-stated because Mr. Inglis' inappropriate projections exaggerate net cash flows.
 - 13. But, even more quantitatively important is that Mr. Inglis also artificially understates the denominator's discount rate. Like me, he uses CAPM, but, critically, instead of measuring beta using a market model based on Shanda's actual historical returns as a public company, he instead relies on two other publicly-traded gaming companies' directly measured betas, purportedly so as to use an "industry based" estimate. The trick here is that by using the betas of these other companies, and rejecting Shanda's own beta, this largely enables Mr. Inglis to drastically lower his discount rate by five percentage points from 15.46% (my rate) to 10.2% (his rate). This is because Shanda's directly measured beta of 1.78 is significantly greater than Mr. Inglis' indirect beta of



1.00, which is the predominant reason his discount rate is so much lower than my discount rate.

- 14. In sum, in my view, Mr. Inglis overstates the numerator by using his hand-made, higher projections instead of management's contemporaneous projections, and Mr. Inglis understates the denominator by using the average beta of two other companies instead of Shanda's actual historical beta. These two errors are the predominate reasons that Mr. Inglis' DCF fair value of US\$27.03 per ADS is so much greater than my DCF fair value of US\$9.56 per ADS."
- 70. Both experts were extensively cross-examined during the trial and the evidence they gave was significant in a number of respects.
 - (a). in general I found both experts to be impressive but Mr Inglis was impressive on all aspects of his evidence while Professor Jarrell demonstrated great experience and expertise in statistical analysis and modelling but weaknesses in other areas.
 - (b). I found Mr Inglis to be an impressive witness who had obviously studied and analysed Shanda and its business in great depth and mastered a wide range of detail concerning its operations and financial position.
 - I also found Professor Jarrell to be impressive when he was dealing with questions of statistical analysis and modelling and the theory of finance. It became clear however, that while he was very experienced in and an expert on statistical analysis and modelling, about which he was fluent and convincing, he was not as experienced or entirely comfortable in other areas of financial analysis. Professor Jarrell changed, or adjusted, his views and opinions during his cross-examination on a number of matters, mainly relating to the issues which were outside his main area of expertise. This was, he explained, the result of having read the transcripts of Mr Inglis' cross-examination. He was open and candid about the fact that his reading of the transcripts had enabled him to understand the reason for the approach which Mr Inglis had adopted on a number of important issues, which approach he had been critical of in his Jarrell Supplemental Report. He did not hesitate to withdraw or qualify that criticism. His candour demonstrated his integrity but his failure fully to consider and reflect on the written evidence of Mr Inglis in advance of the trial did damage his credibility and affected the quality of his evidence on non-statistical and modelling matters. He was also properly clear and open as to his areas of professional expertise and the limits of the matters on which he felt able to opine.



(c).

(d). Mr Inglis, in contrast, was consistent in the opinions he expressed and appeared to have carefully read and understood Professor Jarrell's written reports. Mr Inglis did not have Professor Jarrell's high level of experience and expertise in statistics or modelling but he appeared to be thoroughly familiar with the key concepts and able to deal with the statistical and modelling issues that arose in this case. He also demonstrated expertise in and a deep understanding of accounting issues and the analysis and preparation of financial forecasts and financial valuations from the ground up.

The issues in dispute

- 71. In his opening submissions at trial Mr Meeson summarised Shanda's position as follows:
 - (a). There were two main issues before the Court:
 - (i). the first was a point of law regarding the correct approach to the valuation of shares which comprise a minority shareholding in a company (the Minority Discount Point);
 - (ii). the second concerned the inputs and analysis that the Court should use in constructing the discounted cash flow (DCF) analysis which was in this case to be used for determining the fair value of the Dissenting Shareholders' shares having regard to the different opinions and approaches taken by the parties' experts (the Valuation Point).
 - (b). As regards the Minority Discount Point, Mr. Meeson submitted that a minority discount should be applied to the valuation of the Dissenting Shareholders' shares in Shanda since in principle the fair value of these shares should reflect and take account of the fact that on a sale of a minority shareholding a purchaser would apply a discount. He noted that both experts were agreed that the amount of such discount, if it is to be applied, would be 23%.
 - (c). As regards the Valuation Point, Shanda relied on Professor Jarrell's valuation and challenged the approach taken by Mr Inglis. Mr Meeson identified what he said were six issues as being in dispute:



- (i). the applicable discount rate: what was the appropriate discount to be applied to Shanda's future free cash-flows? Within the discount calculation, there were four important elements in respect of which there was a dispute: first the beta; second the risk-free rate; third the market risk premium and fourth the small stock risk premium (size premium). Both sides agreed that this (in particular the determination of the appropriate Beta) was the issue which had the largest effect on the outcome of the DCF valuation and therefore the sums payable to the Dissenting Shareholders.
- (ii). the management projections: which set of projections should be used in the DCF model for Shanda? Was Professor Jarrell justified in using and relying, without adjustment or correction, on the cash-flow projections prepared by Shanda's management (being those prepared in March 2015 in connection with the Merger and the fairness opinion to be given by BAML and as disclosed in the Proxy Statement, as adjusted on 2 September 2016) or were the projections as adjusted and corrected by Mr Inglis to be preferred as more reliable? If it was appropriate to make adjustments and corrections to the projections, which of the adjustments and corrections made by Mr Inglis were to be adopted (Mr Inglis had made thirteen corrections and eight adjustments to the projections)?
- Jarrell and Mr Inglis agreed that a DCF model generally assumes either two or three stages of growth, where the first stage is based on specific year by year forecasts and the final stage is based on a constant growth rate in perpetuity. They also agreed that a three-stage model is generally used for companies with high growth in the first stage,

as it may be illogical to assume a constant growth rate immediately after the end of the first stage in such cases. In the present case, Mr Inglis uses three stages of growth in his analysis (adding a transitional stage), while Professor Jarrell uses two.



(iv) the value of Shanda's non-controlling interest in Actoz Soft Co (Actoz): Shanda owns only a majority holding in Actoz. Ltd As the majority shareholder, the consolidated group results for Shanda reflect the results as if Shanda held 100% of the shares. Therefore the value of Shanda's equity stake in Actoz needs to be adjusted for the purpose of determining the value of the equity of Shanda. In Shanda's 2015 financial projections, the non-controlling interest is deducted on the basis of the accounting book value. Mr Inglis however, considers this to be an error and instead uses the market capitalisation of Actoz on the Korean stock exchange as at 31 December 2014. His correction reduces the equity value by RMB 748 million. Professor Jarrell takes a different approach and deducts management's projected minority interest expense (i.e., the Actoz cash flows that do not belong to Shanda) in order to maintain internal consistency with management's projections.

(v). the treatment of expenditure on the take-private transaction. Mr. Inglis adds to his equity value RMB208 million of cash that he estimates was paid on or before 30 September 2015 in the form of special committee remuneration, legal fees, and financial advisor fees, consulting fees, data support fees, and legal compensation to Kilometre, all of which relate to the Merger. Shanda argues that while it is agreed in principle that the Dissenting Shareholders should not have the burdens of the transaction from which they have dissented imposed on them the costs referenced by Mr. Inglis cannot be treated as burdens of the transaction because these costs had already been incurred prior to the closing of the transaction and were not refundable, so that they would have been paid even if the Merger had not gone

(vi) the treatment of restrictive stock units and share options triggered by the Merger. When analysing the applicable number of shares in Shanda at the Valuation Date (in order to reach a value per share) Professor Jarrell accounts for and

ahead.

includes restricted stock, restricted stock units, and employee stock options but Mr. Inglis does not.

- During the course of the trial and in particular as a result of the position adopted by Professor Jarrell's on a number of points during his cross-examination, the issues between Shanda and the Dissenting Shareholders with respect to the Valuation Point narrowed and in his closing submissions Mr Meeson revised the list of live issues as follows (there are seven main issues to be dealt with):
 - (a). Shanda continued to dispute three corrections or adjustments made by Mr. Inglis to Shanda's projections, namely:
 - game revenue intensity (Error 2) Shanda projects the revenue that will be earned by each of its pipeline games on the basis of its "game type" (A1 to A3 for PC and B1 to B3 for mobile), where the game type then determines the proportion of a modelled pattern of revenue that the game will earn. For example, B1, B2, and B3 mobile games are projected to earn 100%, 50%, and 25%, respectively, of the modelled pattern of revenue for a mobile game. Mr Inglis notes, however, that for some of the mobile games projected to be launched from 2016 and beyond, the revenue proportions (which Shanda calls "revenue intensities") do not match the assumed game types. Mr Inglis says that Shanda had, in a response to a question he raised on this issue, acknowledged that this mismatch existed and he corrected it by setting the revenue intensity for each game to the one that matches its game type. This increases the equity value by RMB 616 million, Professor Jarrell took a different view. He challenged Mr Inglis' interpretation of Shanda's response and concluded that regardless of the apparent anomaly pointed out by Mr Inglis, an adjustment to Shanda's revenue intensity figures was not justifiable. Any adjustment would be speculative and unreliable. Furthermore, a reasonable reading of Shanda's response was that the differences in revenue intensities must have been intentional, and without further information to the contrary neither expert (nor the Court) was in a position to make a correction.
- (ii). **depreciation** (Error 10). Mr Inglis takes the view that Shanda has incorrectly calculated its projected level of depreciation and amortisation 170425 In the matter of Shanda Games Limited FSD 14 OF 2016 (NSJ) Released for Publication 25 April 2017 Page 27 of 112



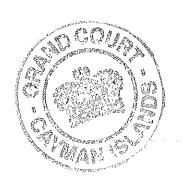
(i).

in its March 2015 and September 2016 financial projections and has included amounts which are too high. Shanda's projections model depreciation and amortisation in the future as a percentage of revenue where, because revenue is expected to increase materially in future years, depreciation and amortisation are expected to increase materially as well, reaching RMB 490 million by 2019 (as compared to RMB 238 million in 2015). Modelling depreciation and amortisation as a function of revenue is, Mr Inglis says, wrong as a matter of basic accounting. He also explains that the depreciation and amortisation in Shanda's projections, upon which Professor Jarrell relied, would show the book value of Shanda's capital assets falling rapidly over the forecast period, becoming negative from 2018, which he says demonstrates that there is a significant error. Businesses plan their capital expenditure at the level necessary to support their anticipated levels of sales and depreciation and amortisation are merely accounting entries which flow from the amounts of capital expenditure. The only conclusion that can be drawn from this analysis is that either the level of capital expenditure or depreciation and amortisation in the projections is wrong and a correction is required. Mr Inglis models Shanda's depreciation and amortisation costs for the period 2015 to 2029 and adopts depreciation rates previously used by Shanda in its filed accounts. His correction of this error increases the equity value by RMB 360 million (an increase of USD 0.22 per ADS). Professor Jarrell acknowledges the apparent problem but considers that no adjustment to the financial projections is required. From his perspective this means that the projections overstate the likely performance of Shanda and are what he terms aggressive. To that extent his reliance upon these projections make his DCF value conservative in that it is more likely to overvalue Shanda. In order to achieve the predicted revenue growth management would in reality have to invest more capex so the cash flows would be reduced and the DCF value would come down. Professor Jarrell therefore makes no correction to bring depreciation into line with the stated capex because in his opinion the projected level of capex does not support the projected levels of revenue growth. Thus he sees no reason to make a correction which would have the effect of making the already aggressive projections even more aggressive.

(iii). Mir II mobile revenues. In Mr Inglis' view, Shanda's financial projections fail properly to take into account the success and revenues likely to be generated by its Mir II mobile game. Accordingly, the projections require a suitable adjustment and he has prepared and included an estimate of the revenues and profits from the Mir mobile game based on the revenue profile for mobile games in Shanda's financial model. Although Professor Jarrell accepts that by the time of the valuation date in 2015 it was known that the Mir II mobile game launched after the projections was very successful, nevertheless he does not consider it necessary to change the projections. Essentially his view is that the projections were sufficiently aggressive in the first place to absorb this development. Accordingly the adjustment was not appropriate.

The background can be summarised as follows. Shanda partnered with Tencent Holdings Limited ("Tencent") in 2015 to distribute a mobile version of its Mir II PC game on Tencent's online platform. Tencent is a Hong Kong listed company with a market capitalisation of over USD 200 billion. Mr Inglis reviewed a copy of the Tencent distribution agreement, which states that Shanda is to receive 35% of the "net revenue" on sales through Apple's iOS platform (which he understands to be after a deduction for customer refunds and similar reserves) and 40% of the revenue on sales through the Android, HTML5, and WindowsPhone platforms. Based on the conference call meeting (in which Professor Jarrell also participated) with Mr Zhang on 23 June 2016, when Mr Zhang stated that while the majority of sales were initially through the Apple channel, the Android channel's proportion subsequently increased, Mr Inglis estimated that Shanda earned approximately RMB 1.8 billion to RMB 2.1 billion of revenue from the Mir mobile game over the eight month period from August 2015 to March 2016. Mr Inglis considers that this success was not anticipated by Shanda in its projections, as shown by the modest revenue projection of just RMB 91 million for the game throughout its whole assumed lifespan across 2015 and 2016. In Mr Inglis' opinion the success of the game would, however, have been evident by the Valuation Date and thus should be taken into account in the projections. This approach he says is consistent with the way that Shanda revised its projections for PC games

launched in 2014 — because those games had underperformed expectations by March 2015, Shanda says it lowered its projections for those games. To form a projection of revenue for the Mir mobile game as at the Valuation Date, Mr Inglis used Shanda's comments as to the monthly revenue. While those comments were made in March 2016, he understands that Shanda was entitled to information from Tencent about 1.5 months from the period in which the sales were made and therefore assumes that Shanda would have had information as to the first quarter of operations (August to October 2015) around the Valuation Date. He then formed a forward looking projection of future revenue from the Mir mobile game, as at the Valuation Date, using the profile for mobile games assumed by Shanda in its projections. On that basis, he projects Mir mobile revenue for a following six quarters of operations (November 2015 to April 2017).



- (b). Shanda no longer disputed the other corrections made by Mr Inglis (in respect of errors 1, 3, 4, 5, 6, 7, 8, 9, 12 & 13) although Shanda maintained that the (other) corrections which it had itself made in September 2016 to its financial projections ought also to be included in the final version of the corrected projections. Shanda also no longer disputed Mr. Inglis' adjustment to working capital and his valuation of the value of Shanda's minority interest in Actoz. Shanda accepted and took no issue with Mr Inglis' approach of using 2019 as the final projected year before applying a terminal growth rate and Mr. Inglis' spot rate for his currency conversion. In relation to error 11 (taxation), Shanda noted that Professor Jarrell had included subsidy income throughout his perpetuity period, but assumed it would be taxed while Mr Inglis had cut-off the subsidy but assumed that it would not be taxed. Shanda submitted that neither approach could be said to be correct and neither could be said to be wrong so that either approach could be accepted by the Court (in these circumstances, in the absence of argument on the point, I have not dealt with the point and will leave it up to the parties to reach an agreement on the approach to be adopted on subsidy income and whether or not it would be taxed although if I do need to deal with the matter I will do so).
- (c). however, Shanda maintained that a two and not a three-stage growth model was appropriate and should be used.

Jarrell's approach to calculating and his calculation of both the beta and the small stock risk premium (or size premium) were to be preferred. Both Professor Jarrell and Mr Inglis agreed that the size premium should be calculated by reference to the Duff & Phelps 2015 Valuation Handbook but Professor Jarrell included small stock risk premium of 1.71% while Mr Inglis uses 1.07%. As regards the estimate of Shanda's beta there are a number of key differences in the approach taken by the experts. In particular, Professor Jarrell calculated Shanda's beta directly rather than based on comparable companies and used 4.3 year monthly betas while Mr Inglis estimated Shanda's beta using publicly traded comparable companies and two year weekly betas. Professor Jarrell calculated and applied a beta of 1.78 while Mr Inglis uses a beta of 1.00.



- (e). Shanda maintained that it was not appropriate to add to Shanda's equity value the take private transaction costs that Mr Inglis had included in his calculation and valuation.
- (f). Shanda also maintained that restricted stock, restricted stock units, and employee stock options should be included when determining the per share price and the entitlement of the Dissenting Shareholders.

The meaning of fair value in and the interpretation of section 238 – the status and significance of the Delaware (and Canadian) authorities

73. Section 238 (11) of the Companies Law provides that:

At the hearing of a petition, the Court shall determine the fair value of the shares of dissenting members as it finds are involved, together with a fair rate of interest, if any, to be paid by the company upon the amount to be determined to be fair value.

- 74. Section 238 was introduced into Cayman law in 2009 as part of the amendments to the Companies Law (contained in Part XVI) which permitted corporate mergers and consolidations without court approval following a vote of two-thirds of shareholders. Section 238 is the mechanism by which the rights of the dissenting minority are protected and such shareholders are given access to the Court (without interference with or delaying the statutory merger process).
- 75. Statutory merger regimes have existed in a number of other jurisdictions for many years in particular in Delaware and Canada. When Part XVI was introduced in Cayman the 170425 In the matter of Shanda Games Limited FSD 14 OF 2016 (NSJ) Released for Publication 25 April 2017 Page 31 of 112

Honourable G Kenneth Jefferson noted, when moving the second reading of the Companies (Amendment) Bill 2009 in the Legislative Assembly that ".. this Bill responds to requests from the private sector in relation to merger and consolidation provisions and reflects extensive consultation with the private sector as well as the review of Bermuda, BVI, Delaware and U.K. legislative precedents." [see the Official Hansard Report for Friday 20 March 2009].

- 76. So it appears that Delaware was one of the jurisdictions whose statutory merger law was reviewed although there is no indication that Part XVI was intended to implement in Cayman or closely follow the Delaware model in particular. Having said that, the Delaware model is also based on the key concept of "fair value" and is of significance in particular because it is frequently used and has given rise to a large number of cases and a well-developed jurisprudence. Extensive references were made to and reliance placed on the Delaware jurisprudence by Professor Jarrell in particular. For that reason it is helpful to be aware of and set out the relevant Delaware statutory provisions. These are contained in section 262 of the Delaware General Corporations Law (appraisal rights) which states that [emphasis added]:
 - (a). Any stockholder of a corporation of this State who holds shares of stock on the date of the making of a demand pursuant to subsection (d) of this section with respect to such shares, who continuously holds such shares through the effective date of the merger or consolidation, who has otherwise complied with subsection (d) of this section and who has neither voted in favour of the merger or consolidation nor consented thereto in writing pursuant to § 228 of this title shall be entitled to an appraisal by the Court of Chancery of the fair value of the stockholder's shares of stock under the circumstances described in subsections (b) and (c) of this section...
 - (h) After the Court determines the stockholders entitled to an appraisal, the appraisal proceeding shall be conducted in accordance with the rules of the Court of Chancery, including any rules specifically governing appraisal proceedings. Through such proceeding the Court shall determine the fair value of the shares exclusive of any element of value arising from the accomplishment or expectation of the merger or consolidation, together with interest, if any, to be paid upon the amount determined to be the fair value. In determining such fair value, the Court shall take into account all relevant factors. Unless the Court in its discretion determines otherwise for good cause shown, interest from the effective date of the merger through the date of payment of the judgment shall be compounded quarterly and shall accrue at 5% over the Federal Reserve discount rate (including any surcharge) as established from time to time during the period between the effective date of the merger and the date of payment of the judgment....
 - 77. In Integra [2016] (1) CILR 192 Jones J accepted that the Delaware jurisprudence "can be relied upon as a helpful guide to the meaning of "fair value" in section 238 of the Companies Law" (see paragraph 19 of the judgment), although he was also referred to and discussed the Canadian legislation and commentary thereon. The relevant Canadian 170425 In the matter of Shanda Games Limited FSD 14 OF 2016 (NSJ) Released for Publication 25 April 2017



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provision is section 190 of the Canadian Business Corporations Act 1985 (which Jones J noted was "very similar" to section 238 – see paragraph 16 of his judgment). Section 190(20) states that:

On an application to a court under subsection (15) or (16) the court may determine whether any other person is a dissenting shareholder who should be joined as a party, and the court shall then fix a fair value for the shares of all dissenting shareholders

In the present proceedings Mr Meeson and Mr Levy agreed that this Court must apply Cayman law but that the Delaware (and Canadian) cases will be of assistance on questions of law and valuation practice because section 238 is in similar terms to section 262 of the Delaware General Corporations Law, the Delaware law was one of the models for the Cayman provisions and because the extensive experience in particular of the judges of the Delaware Court of Chancery (and the Supreme Court of Delaware) make their judgments particularly helpful. Mr Levy also submitted that as to questions of law, the Delaware (and Canadian) authorities, while not binding, should be considered highly persuasive and that this was the approach taken by *Re Integra* relying on the statement I have quoted in paragraph 77 above (so that this Court can and should follow on this approach on this point).

79.

78.

I have carefully reviewed the Delaware (and Canadian) authorities cited to me. I do not treat them as binding on this Court. They are obviously decisions of a different jurisdiction applied within a different procedural law and litigation culture. Nonetheless, section 238 was clearly adopted with a view to introducing into Cayman law a statutory merger regime (including appraisal rights) which followed closely the model found in other jurisdictions which incorporated appraisal rights based on a fair value standard (and Delaware was perhaps particularly in mind since it was mentioned being one of the jurisdictions whose laws had been reviewed and the jurisdiction with the most substantial and sophisticated jurisprudence in the area). Section 238 was drafted using the same core concepts and terms (as well as similar procedural mechanisms) as appear in the law of Delaware (and Canada). In these circumstances, when this Court comes to consider the meaning under Cayman law of the terms used in and language of section 238 it is entirely appropriate to have regard to and pay close attention to the decisions of the courts in Delaware (and Canada). That in my view is consistent with and required by the manner in which the Legislative Assembly adopted the amendments to the Companies Law. However, it will also be necessary always to take care and be satisfied that the law and practice developed by such other courts fits and is consistent with other relevant parts of Cayman law and practice. I would add that the decisions of these courts on resolving valuation disputes in particular cases are also helpful examples of how valuation issues can be disposed of in the context of appraisal actions although since, as I note below, every case must be considered on its own facts and valuations will be particularly sensitive to the circumstances of each case, care must be taken when seeking to apply decisions on such cases to the different facts of another case. I refer in this judgment only to the Delaware cases cited to me. This is because they appeared to me to the most helpful and because of the depth of the Delaware jurisprudence. It also seems to me to be preferable, where possible, to ensure consistency of approach by focussing on one rather than a multiplicity of jurisdictions.

80. The approach I have outlined is, I believe, in accordance and consistent with that taken by Jones J in *Integra*.

The meaning of fair value - the key points



So what is the meaning to be given to "fair value" in section 238 and for the purpose of this application?

In his judgment in *Integra* (at paragraph 27) Jones J concluded that:

In conclusion, the Court is therefore required to determine the fair value of Integra's business as a going concern as at the Valuation Date, meaning the point immediately before the merger was approved. The fair value of the Respondent's shares is their proportionate share of this amount without any minority discount or any premium for the forcible taking of their shares. There is no presumption that the fair value offer made by Integra .. in accordance with section 238(8) constitutes a minimum price and it is open to the Court to determine that a fair value is less than [the amount of that offer].

83. In the present case:

- (a). the parties have agreed that the fair value of Shanda should be determined as at the date of the extraordinary general meeting of Shanda's shareholders on 18 November 2015.
- (b). the experts have agreed that fair value is to be determined by reference to a DCF methodology. Accordingly, there is no dispute, save in relation to the Minority Discount Point, as to the meaning and proper interpretation of fair value for the purpose of section 238.

- (c). the parties have also accepted that the proper approach to the resolution of the valuation disputes is that the onus is upon each party to adduce evidence establishing, on a balance of probabilities, the correctness of any contention relied upon.
- I take the last point to imply, and have concluded, that the Court should approach the disputed issues on the basis that it is for Shanda and the Dissenting Shareholders to establish, on the balance of probabilities, that the valuations their experts have presented on the issue in question are reasonable and reliable. If only one is reasonable and reliable then the Court should (absent some other reason for not doing so) follow and apply that approach. If both appear to be reasonable and reliable, the Court must decide which is to be preferred. If neither is reasonable and reliable, the Court must make its own determination. The Court, in a petition under section 238, is not able simply to treat fair value as not being established. It must make a determination of fair value and, if neither expert has presented a convincing (reasonable and reliable) opinion, the Court must form its own view.

I note, and find persuasive, the comments of Vice Chancellor Strine in *Andaloro v PFPC Worldwide Inc*, (Andaloro) Court of Chancery, Delaware, New Castle 2005 Del. Ch. Lexis 125 at [34].

In making the fair value determination, the court may look to the opinions advanced by the parties' experts, select one party's expert opinion as a framework, fashion its own framework, or adopt piecemeal, some portion of an expert's model methodology or mathematical calculations. But, the court may not adopt an "either-or" approach and must use its judgment and an independent valuation exercise to reach its conclusion.

More recently in his opinion in *Re Appraisal of Dell Inc* 2016 WL 3186538 (**Dell**) Vice Chancellor Laster quoted with approval dicta in this issue from a number of other cases as follows (at page 19):

"In discharging its statutory mandate, the Court of Chancery has discretion to select one of the parties' valuation models as its general framework or to fashion its own." M.G. Bancorporation, 737 A.2d at 525-26. The Court may evaluate the valuation opinions submitted by the parties, select the most representative analysis, and then make appropriate adjustments to the resulting valuation". The court also may "make its own independent valuation calculation by . . . adapting or blending the factual assumptions of the parties' experts." M.G. Bancorporation, 737 A.2d at 524. It is also "entirely proper for the Court of Chancery to adopt any one expert's model, methodology, and mathematical calculations, in toto, if that valuation is supported by credible evidence and withstands a critical judicial analysis on the record." Id. at 526. "When . . . none of the parties establishes a valuation that is persuasive, the Court must make a determination based on its own analysis.

85.

86. Both parties also accept that it is for the Court to conduct a fresh assessment of all factors relevant to value rather than start from the position of the merger offer price being a good indicator of value. Mr Levy argued that this is especially important in this case because the majority shareholders who put the Merger into effect and conducted the buy-out always had enough shares to pass a special resolution at any price; both experts consider that it is necessary to make adjustments to the merger price and external and additional factors need to be taken into account to adjust the publicly listed ADS price of Shanda's stock (because, he says, of the US share market discount of companies with Chinese businesses).

The Minority Discount Point

- Mr Meeson submitted, as I have already noted, that a minority discount should be applied when determining the fair value of the Dissenting Shareholders' shares.
- 88. Mr Meeson made the following arguments in his closing submissions:
 - [Shanda] submits that the question of whether in a fair value appraisal proceedings the shares are to be valued as a proportionate share of the value of [Shanda] or on a minority discounted basis is a question of law and not one of valuation principle.
 - 156. As a matter of Cayman Islands law there has been no binding judicial determination of whether a minority discount should be applied when considering the fair value of dissenters' shares under section 238 of the Companies Law.
 - 157. The only reported case under s.238 is that of In the Matter of Integra Group
 In that case the point was not argued and the parties agreed that no minority discount
 should be applied on the facts of that case. The Judge agreed with that proposition (see
 paragraph 18 at lines 3839& paragraph 20).
 - 158. It is correct that Jones J made it clear that in his view no minority discount should be applied, but it was not the subject of any dispute nor did he hear legal argument in support of a contrary view. It is therefore obiter.
 - 159. This Court is not bound by the obiter comments of a judge in a previous case and should consider the matter on the basis of the detailed legal submissions and authorities referred to by both parties in this case and reach a definitive view.
 - [Shanda] also accepts that the position in both Delaware and Canada is clear that no minority discount is to be applied to statutory appraisals in those jurisdictions.
 - 161. However, [Shanda] submits that a court in the Cayman Islands should first and foremost have regard to a contrary line of judicial authority in England.

- 89. The English authorities relied on by Mr Meeson are cases dealing with the unfair prejudice jurisdiction under the English Companies Act (now section 994 of the Companies Act 2006 which is the successor to section 459 of the Companies Act 1985, which is the section considered by these authorities). Under this jurisdiction, the court has the power to grant relief to shareholders in respect of unfair prejudice. Such relief may include an order requiring the members against whom a finding of unfair prejudice has been made to buy the shares of the petitioner.
- 90. In *Irvine v Irvine (No 2)* [2007] 1 BCLC 447 Blackburne J had given judgment on the section 459 petition and found that unfair prejudice had been established and ordered the first respondent to the petition to buy the shares of the petitioner (representing 49.96% of the shareholding in the company). Subsequently there was a hearing at which the petitioner argued that the shares should be valued without there being a minority discount. Blackburne J held that a minority shareholding should be valued for what it is, a minority interest, unless there was some good reason to attribute a pro rata share of the overall value of the company. He held that short of a quasi-partnership or some other exceptional circumstances there is no reason to accord to it a quality which it lacks.
- 91. Blackburne J had noted that section 459 did not regulate or stipulate how (or the basis on which) the valuation was to be undertaken and that "most if not all of the authorities in which the question has been raised whether the shares in a company which is the subject of a section 459 petition should be valued on a pro-rata or on a discounted basis [had] been cases where the company [was] or [was] alleged to be a quasi-partnership." He went on to say that the reason for treating the valuation of shares on a buy-out order in a quasi-partnership had been given by Lord Millett in CVC/Opportunity Equity Partners Limited v Almeida [2002] UKPC 16 at [41]-[42] where Lord Millett said as follows:
 - [41] The rationale for denying a discount to reflect the fact that the holding in question is a minority holding lies in the analogy between a quasi-partnership company and a true partnership. On the dissolution of a partnership, the ordinary course is for the court to direct a sale of the partnership business as a going concern with liberty for any of the former partners who wish to bid for the business to do so. But the court has power to ascertain the value of a former partner's interest without a sale if it can be done by valuation, and frequently does so where his interest is relatively small: see Syers v Syers (1876) 1 App Cas 174. But the valuation is not based on a notional sale of the outgoing partner's share to the continuing partners who, being the only possible purchasers, would offer relatively little. It is based on a notional sale of the business as a whole to an outside purchaser.
 - [42] In the case of a company possessing the relevant characteristics, the majority can exclude the minority only if they offer to pay them a fair price for their shares. In order to be free to manage the company's business without regard to the relationship of trust and confidence which formerly existed between them, they must buy the whole, part from themselves and part



from the minority, thereby achieving the same freedom to manage the business as an outside purchaser would enjoy.

- 92. As Mr Meeson conceded, the position is settled in Delaware (and Canada) in which it is clear that the dissenting minority's shares are to be valued as a proportionate share of the value of the company. The position under Delaware law can be summarised as follows:
 - (a). There is a helpful overview was in the opinion of Laster V.C. in *Dell* where he said the following:

The standard of "fair value" is "a jurisprudential concept that draws more from judicial writings than from the appraisal statue itself." Del. Open MRI, 898 A.2d at 310. "The concept of fair value under Delaware law is not equivalent to the economic concept of fair market value. Rather, the concept of fair value for purposes of Delaware's appraisal statute is a largely judge-made creation, freighted with policy considerations." Finkelstein v. Liberty Digital, Inc., 2005 WL 1074364, at *12 (Del. Ch. Apr. 25, 2005) (Strine, V.C.). In Tri-Continental Corp. v. Battye, 74 A.2d 71 (Del. 1950), the Delaware Supreme Court explained in detail the concept of value that the appraisal statute employs:

"The basic concept of value under the appraisal statute is that the stockholder is entitled to be paid for that which has been taken from him, viz., his proportionate interest in a going concern. By value of the stockholder's proportionate interest in the corporate enterprise is meant the true or intrinsic value of his stock which has been taken by the merger. In determining what figure represents the true or intrinsic value, the courts must take into consideration all factors and elements which reasonably might enter into the fixing of value. Thus, market value, asset value, dividends, earning prospects, the nature of the enterprise and any other facts which were known or which could be ascertained as of the date of the merger and which throw any light on future prospects of the merged corporation are not only pertinent to an inquiry as to the value of the dissenting stockholder's interest, but must be considered....

Subsequent Delaware Supreme Court decisions have adhered consistently to this definition of value.

- (b). Mr Levy's opening skeleton submissions contained a very helpful outline of the development of the Delaware jurisprudence on the minority discount question. He noted that:
 - 7.29. Building on [the] earlier cases, the seminal Delaware authority on the question of minority discount is Cavalier Oil Corp. v Harnett 1988 WL 15816 (Del. Ch. Feb. 22, 1988). That case involved consolidated appraisal proceedings where the dissenting shareholder, Hartnett, was the only minority stockholder in the two companies. The companies' expert determined a value for the companies, and then sought to apply a 28% minority discount (as well as a further 40% marketability discount). The Company contended that this was necessary to reflect "the fact that Harnett's ... holdings represent only a minority interest that has no ability to control the corporations' operations and return to investors and must therefore be given a diminished value". At first instance, Vice



Chancellor Jacobs comprehensively rejected that argument in the following terms:

"The Companies argue that a "minority discount" is required to reflect the fact that Harnett's holdings represented a minority stock interest. That argument, in my view, is unsound, because its premise runs counter to the statutory policy underlying 8 Del.C. § 262. The unstated premise of the "minority discount" concept is that the function of an appraisal is to value specific shares in the hands of a specific stockholder. If that were so, then the size of a dissenter's stock holdings would be an important consideration. Some jurisdictions do embrace that appraisal concept, and in those jurisdictions a "minority discount" has been upheld.

That, however, is not the policy underlying an appraisal under 8 Del.C. § 262. The objective of a § 262 appraisal is to value the corporation itself, as distinguished from a specific fraction of its shares as they may exist in the hands of a particular shareholder. Under § 262, the dissenting shareholder is entitled to his proportionate interest in the overall fair value of the corporation, appraised as a going concern. The amount of the holdings of a particular dissenting stockholder is not relevant, except insofar as they represent that shareholder's proportionate interest in the corporation's overall "fair value". That a particular dissenting stockholder's ownership represents only a minority stock interest in a corporation is, therefore, legally immaterial in determining the corporation's "fair value."

To state the proposition somewhat differently, the purpose of a Delaware appraisal is to determine the fair value of 100% of the corporation, and to award to the dissenting stockholder his proportionate share of that fair value. The objective is not to value a specific minority stock interest in the corporation as such. That a stockholder might happen to own a significant block of stock will not, for that reason, entitle him to a premium above the appraised fair value of his shares. Similarly, that a dissenting stockholder may own a minority interest (which is the case in all appraisal proceedings) will not diminish his right to receive fair value by subjecting him to a penalty in the form of a "minority discount."

7.30 The Delaware Supreme Court (564 A.2d at 1145) upheld that conclusion saying:

"The application of a discount to a minority shareholder is contrary to the requirement that the company be viewed as a "going concern" ... Discounting individual shareholdings injects into the appraisal process the various factors which may dictate the marketability of minority shareholdings. More important, to fail to accord to a minority shareholder the full proportionate value of his shares imposes a penalty for lack of control and unfairly enriches the majority shareholders who may reap a windfall from the appraisal process by cashing out a dissenting shareholder, a clearly undesirable result".

7.31 The Cavalier Oil approach is now a matter of well-settled and strongly ingrained law in Delaware.

7.37 Similarly, as the current Chief Justice of the Delaware Supreme Court Leo E. Strine, Jr. explained in re Appraisal of Orchard Enterprises:

[T]he appraisal remedy exists to a large extent to address the potential that majority power ... will be abused at the expense of the minority. Cavalier Oil and its progeny embrace an approach to valuing shares that is, in the main, quite favorable to minority stockholders. Although Delaware law putatively gives majority stockholders the right to a control premium, Cavalier Oil



...

tempers the realistic chance to get one by requiring that minority stockholders be treated on a pro rata basis in appraisal"

- (c). these authorities show that the point of principle underlying the approach of the Delaware courts is that what is being valued in a Delaware appraisal action is the dissenting minority's interest in the corporation as a whole rather than their block of shares. This is, in part, a consequence of the rejection of market value of the dissenting shareholders' shares as the relevant standard.
- 93. It seems to me that the position is the same as a matter of Cayman law under section 238 of the Companies Law both as a matter of principle and authority. No minority discount is to be applied. My reasons for so concluding are as follows:
 - (a). As regards *Integra*, Mr Meeson is right that the parties both accepted that there should be no minority discount and therefore the issue was not argued or live. However, it is clear that Jones J considered, as part of his review of the principles applicable to the determination of fair value, that there should be no minority discount (see in particular paragraph 18 of the judgment).
 - (b). it seems to me that the purpose of the fair value standard is to ensure that the dissenting minority is fully protected and that means that they should be compensated for the value of their full interest in the company. Their full interest is their proportionate share in the capital and value of the company.
 - this approach is consistent with one aspect of the legal nature of a share and the rights of a shareholder see, for example, the analysis in *Gullifer and Payne*, *Corporate Finance Law: Principles and Policy* (second edition, Bloomsbury, 2015): "even the legal owner of shares does not own a number of separate pieces of property but owns an undivided share in the share capital of the company. When a person is registered as the legal owner of 250 shares out of a share capital of 1000 what he really owns is 25% of the share capital" (paragraph 8.2.1.3.3, citing Professor Roy Goode's analysis in Legal Problems of Credit and Security paragraph 6-15) (I recognise of course that shareholders are not treated as owners of the company's assets).
 - (d). the full value of the dissenting shareholder's interest includes the shareholder's rights to a distribution of its share of the company's assets and value following a



sale or other realisation of the company's business and not merely the market value of its shares. This is equivalent to the valuation of a partner's interest in the partnership, described by Lord Millett in Almeida (paragraph 91 above) where he said that "the valuation is not based on a notional sale of the outgoing partner's share to the continuing partners who, being the only possible purchasers, would offer relatively little. It is based on a notional sale of the business as a whole to an outside purchaser [and a distribution to partners of their share of the partnership property].."

(e). the English unfair prejudice cases are clearly distinguishable. Not only is the statutory language different from section 238 but the remedy granted by the court, in relation to which the valuation issues arise, is an order for sale of the petitioner's shares. Section 238, by applying the fair value standard, does not assume a notional sale of the dissenting minority's shares. The valuation issue in section 994 cases arises in the context of a sale of shares and is therefore very different from the section 238 context. It might also be said that, since section 238 imposes a fairness requirement, the value to which the dissenting minority is entitled is that which is fair and equitable and so the equitable principles that apply in cases of quasi-partnerships should also be applied in the section 238 context.

- (f). for similar reasons it seems to me that Short v Treasury Commissioners [1948] 1 KB 116 is distinguishable (dealing with the compulsory acquisition of shares under wartime emergency legislation).
- (g). I also consider that the decision of Ground CJ in Golar LNG v World Nordic SE [2011] Bda L.R. 9 is distinguishable. The case applies section 103 of the Bermuda Companies Act 1981 which operates by using a sale mechanism the minority shareholders are required to sell their shares to the 95% majority shareholders and the Court is required to "appraise the value of the shares to be purchased." So the statutory mandate is to value the shares in the context of a sale and there is no entitlement to fair value.

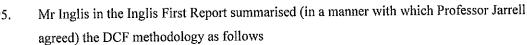
The DCF analysis

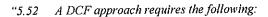
94. As I have noted, it is common ground that in this case the only valid methodology to use to value Shanda as at the valuation date is a DCF methodology. The DCF analysis is of 170425 in the matter of Shanda Games Limited FSD 14 OF 2016 (NSJ) – Released for Publication 25 April 2017 Page 41 of 112



course a well-established method of determining the going concern value of a company. As Parsons V.C. noted in the Delaware Court of Chancery in *Merion Capital L.P v 3M Cogent, Inc* (Merion) 2013 WL 3793896 (Del. Ch. July 8, 2013):

"The basic premise underlying the DCF methodology is that the value of a company is equal to the value of the projected future cash flows, discounted to the present value at the opportunity cost of capital. Calculating a DCF involves three steps: (1) one estimates the values of future cash flows for a discrete period, where possible based on contemporaneous management projections: (2) the value of the entity attributable to cash flows expected after the end of the discrete period must be estimated to produce a so-called terminal value, preferably using a perpetual growth model; (3) the value of the cash flows for the discrete period and the terminal value must be discounted back using the capital asset pricing model (CAPM). In simpler terms, the DCF method involves three basic components: (1) cash flow projections; (2) a discount rate; and (3) a terminal value."





- (i) a forecast of future free cash flows; and
- (ii) an estimate of an appropriate discount rate.
- (i) Cash flow forecast
- 5.53 A forecast of free cash flows is typically divided into two periods: an initial period during which the periodic (usually quarterly or annual) cash flows are forecast explicitly (the 'explicit period'), and a subsequent period (the 'terminal period').
- In the case of business valuation, the period over which an explicit forecast is prepared generally reflects the period during which the company is expected to reach a steady state or "maturity". The cash flows in the terminal period are usually forecast to grow (or fall) at a constant rate.
- 5.55 The cash flows for the base year to which the constant rate of growth is applied must be adjusted to ensure that they do not include any significant items that are not typical of the terminal period.
- 5.56 The value of cash flows arising in the terminal period, the 'terminal value', can be calculated using a perpetuity formula known as the Gordon Growth Model, which can be expressed as:

Terminal Value = $CF \times (1 + g) / (d - g)$

where:

CF = the cash flows arising in the financial period immediately preceding the terminal period;

g = the long-term growth rate per annum; and

d = the discount rate.

5.57 Application of the Gordon Growth Model is appropriate once a company's long-term growth rate has stabilised but is not suitable (or is difficult to apply reliably) during



- periods of high growth. In practice, this means the explicit forecast period needs to be sufficiently long to reflect growth converging on a long-run trend rate for that business.
- 5.58 As an alternative to projecting cash flows in the terminal period, the terminal value may be calculated on the assumption that the entity is sold (and valued on a multiples basis, by reference to projected profits) or liquidated (and valued based on the realisable value of projected net assets) at the end of the explicit forecast period.
- 5.59 For a typical company, free cash flow ("FCF") is usually estimated by reference to forecasts of net operating profit before interest and taxes (often referred to as Earnings before Interest and Tax ("EBIT")). To estimate future cash flows, these EBIT projections are then adjusted for:
 - □ non-cash charges included in calculating net operating profits, such as charges for the depreciation of tangible fixed assets and the amortisation of acquired intangible assets;
 - □ changes in the amount invested in net working capital (including items such as trade debtors, stocks, and trade creditors);
 - □ capital expenditure (expenditure on items such as land and buildings, machinery and equipment or intellectual property rights); and
 - equipment of interection property rights), or □ tax cash outflows.



- (ii) Discount rate
- 5.61 The use of a discount rate to translate future cash flows into their present value recognises:
 - (i) the time value of money (i.e. a dollar today is worth more than a dollar certain to be received in a year's time because money can be invested to earn a return in the interim); and
 - (ii) the risk or uncertainty associated with the expected future cash flows (i.e. the possibility that the cash flow is higher or lower than expected). The value of a dollar whose receipt is uncertain is less than the value of a dollar whose receipt is a certainty. That is because investors are generally averse to risk: given two investments with the same expected future return but different levels of risk, investors will pay less for the investment with the higher level of risk.
- 5.62 The opportunity cost of capital is the expected rate of return on equivalent investment alternatives in the capital market. Equivalent investment alternatives are those with similar relevant investment risks.
- 5.63 The discount rate that is generally used to discount a business's expected future cash flows is the weighted average cost of capital ("WACC") of that business. This is the opportunity cost of capital to the firm, or the expected rate of return on equivalent investment alternatives in the capital market, being investments with similar relevant investment risks.
- 5.64 Discounting cash flows at the WACC results in an Enterprise Value representing the sum of the value of the debt and equity in the business. Debt is deducted from, and non-operating cash is added to, the Enterprise Value to arrive at an equity value."
- 96. As I have noted, the experts in this case relied on conflicting inputs and assumptions as to all three elements of their respective DCF analyses and I must now turn to consider each of the issues in dispute. I will do so by considering in turn the seven issues in dispute as summarised in paragraph 72 above.



Management's various projections

97. Shanda's management, as I have noted, prepared three sets of projections. In March 2014, Shanda's management prepared the March 2014 Projections, a set of multi-year projections for the years 2014 through 2018 that were provided to the Special Committee, BAML, and the First Buyer Group. During the first quarter of 2015, Shanda's management prepared an updated set of multi-year projections for the years 2015 through 2020. These were the March 2015 Projections. As part of the process in preparing these projections, the Company's management stated in the Proxy Statement that they:

"...took into account historical performance of legacy games, projected launch dates of new games in the Company's pipeline, and projected revenues for each new game, combined with estimates regarding gross margin, operating expenses, tax rates, capital expenditure, EBITDA and net income."

98. In March 2015, the Company provided the March 2015 Projections to the Special Committee, BAML and the Second Buyer Group. In the Proxy Statement Shanda's management confirmed that:

"With respect to the [the March 2015 Projections BAML] was advised by [Shanda] and assumed, that such forecasts were reasonably prepared on bases reflecting the best available estimates."

- 99. Although the March 2015 Projections contained detailed forecasts up to and including the year 2020, the Proxy Statement and BAML's "Project Shengxia" presentation to Shanda's Special Committee in April 2015 only showed forecasts up to the year 2019.
- Mr Inglis, in accordance with paragraph 8 of the Directions Order, sent information requests to Shanda in six letters dated 22 and 29 April, 17 May, 17 June, and 5 and 26 August 2016. In addition, also in accordance with the Directions Order, Mr Inglis (and Professor Jarrell) participated in a telephone conference call on 23 June with Shanda's management team (the purpose of the call being for management to provide information to and answer questions from the experts). As a result he obtained further information, in particular from Mr Zhang. Furthermore, Shanda provided to Mr Inglis an amended version of the March 2015 Projections (the Corrected Projections) in an email dated 2 September 2016 sent by Conyers Dill & Pearman, the attorneys acting for Shanda. Professor Jarrell took the view that these contained corrections to the March 2015 Projections prepared by Shanda to address a number of the errors identified Mr. Inglis.



101. Professor Jarrell uses Shanda management's Corrected Projections in his DCF model. His approach was to start with and rely on management's projections and then to check the Corrected Projections for reasonableness by examining the trend in Shanda's revenue growth rates, profit margins and other assumptions. Mr Meeson in his closing submissions summarised Professor Jarrell's approach as follows:

"Professor Jarrell looks at management projections from 40,000 feet, kicks the tyres and sees if they are reasonable. In particular he is concerned to make sure that they do not understate the future performance of [Shanda] because of the inherent risk that such could occur in a management buyout type scenario. .. He was reassured in that compared with the previous five years, management was projecting a very aggressive performance during the projection period. He saw no need to carry out any further analysis and accepted the projections at face value subject only to managements three minor September 2016 corrections."

102. Professor Jarrell also considered Shanda's actual performance in 2014 after the preparation of the March 2014 Projections, based on the information contained in the Proxy Statement. He noted (in the Jarrell Supplemental Report) that:

"After the preparation of the March 2014 Projections, [Shanda's] actual financial performance in 2014 continued to decline from the prior year's results and significantly missed the projections for 2014 contemplated in the March 2014 Projections ... the March 2014 Projections forecast revenue to decline 3.1% from 2013 to 2014 and income from operations to decline an even further 6.9%. Instead, a comparison of actual results with those projected by management shows that actual revenue fell 14.4% in 2014 (significantly greater than the projected 3.1% decline) and actual income from operations fell 30.1% in 2014 (significantly greater than the projected 6.9% decline). In other words, the March 2014 Projections were overstated for at least the year 2014.... projected revenue for the nine months ended September 2015 compared to actual results for the same period show that the projections overstated revenue by RMB407 million and overstated income from operations by RMB267 million."

While Mr. Inglis uses the Inglis Projections in his DCF model. Because Mr. Inglis rejects the Corrected Projections, I also recalculate my DCF analysis, just as I did in the [Jarrell First Report], except I use management's March 2015 Projections instead of the Corrected Projections. This results in a DCF value of US\$9.86 per ADS, which is 3.1% higher than my fair value opinion of US\$9.56 per ADS.

103. Professor Jarrell also noted in the Jarrell Supplemental Report that:

"Mr. Inglis contends his changes to management's projections are "necessary to correct errors and internal inconsistencies." Mr. Inglis submitted nearly 200 written questions to, and requests for information from, Shanda's management. Shanda provided written responses to all of those questions. It is my understanding that, after careful consideration of the issues raised by Mr. Inglis, Shanda's management made three specific corrections to the March 2015 Projections to address only those issues where it agreed with Mr. Inglis. Of the thirteen changes made by Mr. Inglis to management's projections, Shanda only agreed with one. Therefore, the remaining twelve changes made by Mr. Inglis were rejected by Shanda's management. Despite this, Mr. Inglis disregards management's Corrected Projections and instead replaces management's judgment with his own."



Revenue intensity

- 104. I have already outlined the issue in dispute (see paragraph 72(a)(i) above).
- 105. Mr Inglis had raised his concerns over the apparent error in the projections in one of the questions included in his letter to Shanda dated 29 April 2016. He asked the following question:

"Please confirm my observation that the percentages in the revenue intensity column are not aligned with the assigned game types from 2016 onwards. For example, please confirm that Game 17 ranked 82 at cell 0194, should have revenue intensity of 50% at cell P194, rather than 100%."



Shanda responded on 16 August as follows:

"The observation made in this question of 2.61 is correct. Classification of a mobile to certain type (i.e. B1, B2 or B3) does not mean that this game will ultimately generate the type of revenue (i.e. revenue intensity) that is commonly expected for this type of games. For the item Game 17, its projected revenue intensity in the Game List is also 100%"

- 107. In his closing submissions Mr Levy explained the Dissenting Shareholders' position in the following way:
 - "7.2 In short, the point is this. Mr Inglis identified that the model for pipeline games, i.e. games that had not yet been released, comprised three categories of games. The model (exhibit H1 tab "Pipeline Mobi" and "Game List") contained three categories of pipeline games, namely B1, B2 and B3. The key on the relevant sheet explained that B1 games were modelled to generate a revenue of 500,000 RMB per day in the first quarter, B2 games were modelled to generate 250,000 RMB per day in the first quarter, and B3 games were modelled to generate 125,000 RMB in the first quarter.
 - 7.3 All pipeline games shown in the model for 2014 and 2015 followed this precise formula. However for Pipeline Games in 2016 and onwards, the model broke down so that the revenue intensities did not match the B1, B2 and B3 categories. Some B1 games were shown as having a revenue intensity of 25%.
 - In modelling terms this made no sense; particularly when, as [Mr] Inglis explained the model applied licensing fees and royalty payments attributable to the game based on its categorisation rather than its revenue intensity (so that a B1 game that was (incorrectly) shown as having a revenue intensity of 25% would be modelled as carrying licensing/royalty fees attributable to a (four times more successful) B1 game with 100% revenue intensity.
 - 7.5 Having noticed this anomaly, Inglis pointed it out to the Company and enquired, by reference to the "Pipeline (Mobi)" sheet (the Court should note that this error is replicated in the "Games List" sheet in the projections) and sought confirmation that "my observation that the percentages in the revenue intensity column are not aligned with the

assigned game types from 2016 onwards. For example, please confirm that Game 17 ranked 82 at cell 0194, should have revenue intensity of 50% at cell P194, rather than 100%"

- 7.6 Shanda's response was, "The observation made in this question of 2.61 is correct. Classification of a mobile to certain type (i.e. B1, B2 or B3) does not mean that this game will ultimately generate the type of revenue (i.e. revenue intensity) that is commonly expected for this type of games. For the item Game 17, its projected revenue intensity in the Game List is also 100%"
- 7.7 Thus, as a matter of plain English the first sentence of the company's response was a clear and unequivocal confirmation that Mr Inglis' observation that the revenue intensities and game type were "not aligned" was correct. The second sentence merely explained that in reality, projections were not a guarantee of future performance. It goes without saying that when such games were ultimately released they would not necessarily generate the revenues attributed to their game type in an earlier model. (In any event, no B1 game would generate exactly RMB 500,000 per day in the first quarter from its launch that number was only used as an assumption for modelling purposes). The final sentence was merely confirmation that the same error appeared in another sheet in the projection, namely the "Game List" sheet (this is to be expected because the relevant data in the "Pipeline Mobi" sheet is "pulled through" from the Game List sheet.
- Thus, not only does the company's response confirm that Mr Inglis' observation is correct, it did not suggest and it has not to this day suggested that introducing the absurdity of mis-aligning revenue and costs in the model (to wit, licensing fees and royalty payments) was anything other than an error. It was manifestly an error. The match was maintained for both named and unnamed games for 2104 and 2015, and broke down (presumably due to inputting errors) for 2016 onwards. Maintaining both the game type and the revenue intensity in the model for 2016 onwards clearly demonstrates that an error occurred in the model; if Shanda had intended to model according to revenue intensity, unlinked to any particular game type, then it would have omitted the B1, B2, B3 categorisation altogether, and certainly from 2016 onwards.
- 7.9 The modelling for 2016 onwards did not appear to be specific (in the sense of relating to specific known games and there has been no disclosure to suggest that it was related). Rather, it seems to have been an attempt to model generically defined games, such games being defined by reference to their categorisation. Further, as is apparent from the relevant spreadsheet, the games are not intended to be specific games. Each listed generic projected game from 2016 onwards had a multiplier attributed to it (1.4 for 2016 rising to 2.4 for 2019) meaning that there would not just be one specific game number whatever, but rather 1.4 to 2.4 such games. As an example the notion that the company might have specifically know what game 46 was (to be launched in 2019) is fanciful and further "game 46" does not actually represent one game, but instead represents a model for 2.4 generic games of a B1 category."
- 108. Mr Meeson relied on Professor Jarrell's evidence on this issue and submitted that the Court should assume or accept that Shanda's projections for pipeline games did not contain any errors and were based on Shanda management's considered game by game assessment of revenue to be generated by and fees payable in respect of such games; furthermore, even if the projections for pipeline games did contain an error of the type identified by Mr Inglis, the error could not reliably be corrected.
- 109. In his closing submissions Mr Meeson made the following points:



- (a). "Professor Jarrell ... did not interpret Shanda's response as requiring a correction to the revenue intensities. [In] his supplemental report, he states:
 - "Clearly, management's first sentence response is only confirming Mr Inglis'
 "...observation that the percentages in the revenue intensity column are not aligned with
 the assigned game types...' Management rejects the conclusion that Mr Inglis reaches
 base on this observation. Management plainly states that the 'classification' of game
 types 'does not' equate to a specific revenue intensity. Finally, management specifically
 rejects Mr Inglis' example of a correction, where my Inglis asks if Game 17 '...should
 have revenue intensity of 50%..., rather than 100%,' when management wrote that 'for
 the item Game 17, its projected revenue intensity in the Game List is also 100%'"
- (b). In other words, the answer is not that the 'mismatch' should be corrected, but that there is possibly an intentional disconnect between the game type and game intensity for the games launched after 2016. Further, on the following page .. Professor Jarrell explains:
 - "...even if a strict relationship between game type and revenue intensity existed, the way in which Mr Inglis corrects that relationship is questionable. There are two possible ways in which this could be fixed. One would be to assume the game type was correct and to change the revenue intensity accordingly, just as Mr Inglis did. This change increases projected revenue, which in turn increases the DCF value. A second way would be to assume that the revenue intensity was correct, and instead change the game type to be consistent with the revenue intensity. This change increases royalty fee expense and increases upfront licensing fee, which in turn decreases the DCF value. Interestingly, Mr Inglis chose the first method that would increase DCF value without any discussion of the second method."
- (c). even following a reading of Mr Inglis' cross examination, when it came to his own cross examination, Prof Jarrell's position was still that regardless of the apparent anomaly pointed out by Mr Inglis, he still would not have changed the revenue intensity figures. To do so would simply be speculating. This, in his view, would leave one with the impossible decision between correcting the intensities or correcting the game type (which in turn affects royalties and licensing fees). In any event, Prof Jarrell's initial interpretation of Shanda's response to question 2.61 posed by Mr Inglis should be viewed as the correct one; the differences in revenue intensities must have been intentional, and without further information to the contrary neither expert (nor the Court) is in a position to make a correction."
- The fundamental difficulty here is that Shanda's post-2016 modelling and the presentation of its forecasts for pipeline games are unclear. It is simply not possible to work-out from a review of the model and the forecasts whether the percentages in the revenue intensity column for the post-2016 period, which are different from the revenue intensity percentages which were assigned to games with the same game type in the pre-2016 period, are errors or the result of a considered adjustment that can be justified. Furthermore, even if it was right that the revenue intensity percentages for pipeline games which appear in the model were management's carefully considered and separate estimates which were not based on game types (resulting in an "intentional disconnect" between the game type and the game intensity, to use Mr Meeson's phrase), the model would still suffer from an apparent error because licensing fees and royalty payments (costs) attributable to each game were still based on its categorisation rather than its



revenue intensity (so that games with a relatively low revenue intensity were shown as carrying licensing and royalty fees attributable to games with much higher revenue intensities. How this could be possible was not properly explained by Shanda.

111. Mr Inglis, as I have noted, raised his concerns and identified this problem with Shanda so as to give Shanda the opportunity to clarify and explain the position. The response was provided on 16 August, as set out and explained above. This was at best cryptic and has resulted in detailed commentary by Professor Jarrell and Mr Inglis as to what Shanda meant by its response and detailed submissions by both Mr Meeson and Mr Levy as to the proper interpretation and meaning of Shanda's response.



Professor Jarrell adjusted his approach during his cross-examination after having read the transcript of Mr Inglis' cross-examination. As a result Professor Jarrell appeared significantly to qualify the approach he had taken in the Jarrell Supplementary Report. During his cross-examination, Professor Jarrell recognised both the extent of the problem that Mr Inglis had identified and that that it was probably inappropriate to place much reliance on Shanda's response of 16 August.

THE COURT:

One of the issues .. that troubled Mr Inglis was the apparent inconsistency between .. having a high revenue intensity but then, for the same game, .. finding that the type meant that you had a low level of royalty or licence fee .. so he was saying .. if it is the case that you start your model by having these types and you allocate games to types and the types are supposed to identify or bring with them a level of revenue intensity and also associated levels of royalty payments and licence fees, that makes sense from a modelling point of view. He was puzzled, I think, that from a modelling point of view, you would then throw that out of the window .. and then just attribute revenue intensity on a game-by-game basis irrespective of the type that you have used .. He was worried about what the implications of that were for the model but then said "Well even if I can just about compute that that may work, in the sense that management are inputting game specific revenue intensities irrespective of the type of game .. then I find in a number of places [that] I have high revenue intensity but the game type will mean I have a low amount of royalty or licence fee payments. If that's right that just seems to be inconsistent because why on earth would you have a low royalty and licence fee payment associated with a game with a high revenue intensity. I think that's what Mr Inglis said.

[PROFESSOR JARRELL ANSWER]:

.. my Lord I read that as well and that was the first time that I had – another instance of listening to [Mr Inglis'] testimony and thinking to yourself "Oh, I didn't know



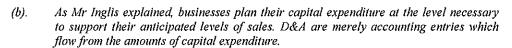
that or I didn't realise that, I didn't pick up on that and I don't quite know what to make of that." Again, though, back to the point about how you fix it not knowing what the answer is and, by definition, the fix would have to be speculative. There's no way around it. I do hear what you are saying and I agree that, well wait a second, how do you change revenue intensity. Fine, fine. But now, isn't it, say the royalty or whatever else it is incorrect or inconsistent because shouldn't there be a match between revenue intensity and royalty? .. I don't know. Maybe the revenue intensity isn't really attached so tightly to royalty. Maybe revenue intensity is a short term variable and royalty is more of a long-term variable. I'm just speculating but I do concede, I do agree with you, that that was a different point and a more subtle point that he made in cross-examination and that caused me to go back and think, wait a minute, maybe you can't draw these judgments [that I made] just from [the answer provided by Shanda to Mr Inglis' question]. Maybe there is more to it than that."

Reliance on a process of exegesis of Shanda's cryptic four line response to Mr Inglis' 113. reasonable question was not a satisfactory way of resolving this issue. It was simply not possible to establish what Shanda had meant or to read the response as providing a coherent answer to the problem Mr Inglis had raised. It seems to me that on balance the evidence suggests there was an error in the model which needed to be corrected. I also consider that in circumstances where Shanda had been given an opportunity to provide such an answer (to resolve the apparent errors and inconsistencies and demonstrate that their model and projections were reasonable) but failed to do so, I can and should infer and conclude against Shanda that there were errors and that the forecasts in this respect are unreliable. Furthermore, it seems to me to be right that, having concluded that there is an error which needs correcting, in the absence of any alternative corrections from Professor Jarrell (or evidence from Shanda), I should accept Mr Inglis' evidence and corrections. His methodology seems to be reasonable and realistic and, in so far as he has adopted a correction that treats revenue intensity as being in need of an upward adjustment (rather than royalties and fees as being in need of a downward adjustment) this seems to be fair as it is appropriate to me.

Depreciation

- 114. I have explained the issue at paragraph 72(a)(ii) above.
- 115. Mr Levy, in his closing submissions, submitted as follows:

(a). The issue here is that the projections modelled depreciation and amortisation as a percentage of revenue. The problem that results in consequence is that as Shanda's revenues were projected to increase then so too were depreciation and amortisation, rising from RMB 238 million in 2015 to RMB 490 in 2019. As Mr Inglis explains, as an expert valuer, modeller and qualified accountant, it is simply wrong to model depreciation and amortisation as a function of revenue ... He also explains ...that the depreciation and amortisation in the projections, upon which Professor Jarrell relied, would show the book value of Shanda's capital assets falling rapidly over the forecast period, becoming negative from 2018, which is, quite simply, not possible. The only conclusion that can be drawn from this analysis is that either capex or D&A is wrong. To do nothing, as Professor Jarrell does, is to leave the March 2015 Model, and thus the valuation, with a significant error.

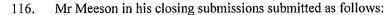


- (c). Mr Inglis asked Shanda to explain its projections for capital expenditure ..., and he expressly states that he has not seen any evidence to suggest that the figures are not reasonable (supplemental report para 5.9 ..). He proceeds on the basis that Shanda's projections for capital expenditure are sufficient for its business... Table 18 of Professor Jarrell's first report also lends support to the conclusion that the levels of capital expenditure in the model are at least adequate as the average level of capital expenditure in the five year explicit forecast period of RMB230m is more than twice as much as the actual average capital expenditure in the five years prior to that of RMB90m.
- (d). Given his view that depreciation etc by reference to revenue is simply wrong, Mr Inglis adopts the correct accounting approach and adopts depreciation rates previously used by Shanda in its filed accounts.
- (e). Professor Jarrell's evidence on depreciation etc was unsatisfactory and partial. In his supplemental report, he referred, at footnote 101 to Koller et al Valuation: Measuring and Munaging the Value of Companies, and highlighted part of a passage saying that depreciation could be forecast either as a percentage of revenue or a percentage of PP&E. In view of his wholly partial approach to matters, he did not, however highlight the passage which continued "or a percentage of property, plant and equipment (PP&E)" or the remainder of the sentence "or if you are working inside the company you can also generate depreciation forecasts based on equipment purchases and depreciation schedules."
- (f). It was put to Professor Jarrell that the experts in this case were essentially "inside the company" ... His response was that the experts were decidedly not inside the company; he repeated his "you are not a gaming industry expert" .. mantra, and said "you are not a Shanda expert".. This was illustrative of his approach to the entire valuation exercise, namely to ask no questions; merely to accept projections (even if, as is the case here, for reasons that will be explained below, it results in commercial absurdity).
- (g). But of course the suggestion that the experts were not "inside the company" was nonsense. The entire purpose of the disclosure provisions were directed at giving the experts all information needed to value Shanda as at the valuation date. Mr Inglis asked for details concerning expenditure; Shanda's responses were less than complete. There were no documents in the data room demonstrating what assets Shanda contemplated purchasing in the forecast period.
- (h). Professor Jarrell has suggested that Shanda; projections suffered from "underinvestment". Of course it suffered from no such thing. Shanda was a profitable company and there was no reason to believe that its past, or proposed, capital expenditures were inadequate. In fact, the theoretical concept that Professor Jarrell called the underinvestment problem only arose because the forecast depreciated etc by reference to revenues, so that because revenues were forecast to grow then so would



depreciation etc resulting in the absurd situation whereby in mid-2018 there would negative capital assets.

- (i). Of course in the real world, Shanda never did depreciate its assets by reference to revenue. In its filed accounts it depreciated its fixed assets in the perfectly normal way by writing them down over their expected useful lives. So had Shanda performed in accordance with the projections it would have incurred whatever capital expenditure was forecast and written it down in the same way as it always had not by reference to a proportion of revenue. Thus, in the real world, there would never have been any underinvestment and there would certainly never have been the absurd prospect of negative assets. The entire "underinvestment" point is pure sophistry and the result of writing down assets in an inappropriate non "real world" manner.
- (j). Professor Jarrell's complaints that he is not a computer gaming expert are of no significance. The company had explained (albeit in the broadest terms) what expenditure it planned to incur. All Mr Inglis did was to apply the company's own historical depreciation etc rates to planned capital expenditure. The company should not benefit from its own failure adequately to explain its exact reasoning behind its projected capital expenditure. To allow it to do so would be to permit it to benefit from its own failure to disclose documents or respond in detail to questions posed by Mr Inglis.
- (k). D&A is an accounting concept which Mr Inglis as an accountant is perfectly able to opine on and calculate. It is not a gaming issue and Prof Jarrell's attempt to avoid dealing with the point on the basis that he was neither an accountant nor a gaming expert should not be accepted. In the circumstances the correction proposed by Mr Inglis should be adopted.



- (a). Professor Jarrell explained during his cross-examination that there is an economic relationship between capital expenditure (capex), depreciation and revenue growth:
 - "in the long run it is considered by economists ..., it is impossible to continue to grow when your capital expenditures are not greater than your depreciation, in the long run. ... Because you need to have net positive capital expenditures to grow greater than the general growth rate of the economy. That's a well-known economic rule, or law, or equation ..." ...
- (b). Professor Jarrell is well aware of fact that the projections have values for depreciation which exceed the values set for capex and the reason for this is that depreciation is computed as a % of revenue. From his perspective this means that the projections overstate the likely performance of the company and are what he terms aggressive. To that extent his reliance upon these projections make his DCF value conservative in that it is more likely to overvalue the company.
- (c). In order to achieve the predicted revenue growth management would in reality have to invest more capex so the cash flows would be reduced and the DCF value would come down.
- (d). Professor Jarrell therefore makes no correction to bring depreciation into line with the stated capex because in his opinion the projected level of capex does not support the projected levels of revenue growth. Thus he sees no reason to make a correction which would have the effect of making the already aggressive projections even more aggressive.
- (e). During his cross-examination Professor Jarrell had said as follows:



What I look at, as I explained in my report, is the difference between CapEx and depreciation because one of the things that I can do to kick the tyres is to see whether the net investment that the company makes over its period is, given their projections, given their depreciation, given their CapEx, is that net investment they make over the projection period out of sync with the revenue growth.

.. because it is part of my reasonableness check where during the projections period and in the recent history I compare the what I call plowback, or what the profession calls plowback. Plowback is simply the capital expenditures minus the depreciation which is sometimes called net capital investment or net new investment. I look at that as part of my reasonableness check to see to look for again, from the 40,000 foot level, look for logical consistency between the growth rates that have been projected for the revenues and the capital expenditures that are being projected to support that growth.

I do have to select a plowback ratio for the perpetuity period, so I do have to, as a DCF analyst, I do have to come to a decision about what should be the plowback ratio in the perpetuity period and all else equal, the higher my selected plowback ratio, the lower the value.

(f). Thus his objection to what [Mr] Inglis has done is philosophical and principled.

In addition he voiced his concern as to how the exercise is to be carried out by applying historic depreciation tables to future capex the detail of which is not known. He does not consider that it is appropriate to make the adjustments to depreciation that Mr. Inglis has made.

In conclusion, it would not be appropriate to make the adjustment proposed by [Mr] Inglis for the depreciation. The effect of doing so would be to increase the already unrealistic cash flow of the company as a result of the capital expenditures are too low, relative to the depreciation given the aggressive growth rates.

117. The principal issue is whether Mr Inglis has identified an error in Shanda's model and its depreciation and amortisation projections which requires and justifies a correction and whether the correction proposed by Mr Inglis is reliable and reasonable. The issue can be dealt with as follows:

(a). The experts take different views as to the best way to project depreciation and amortisation. Professor Jarrell is prepared to accept management's approach and projections. His general approach is, as I have noted, to accept management's projection unless after testing them for reasonableness he is satisfied that an adjustment or correction is necessary. In the present context, he saw no need for a correction. Professor Jarrell considers that modelling depreciation and amortisation as a function of revenue is a widely used and well accepted methodology which he has frequently seen used (and necessary because usually when preparing forward looking projections of depreciation — as opposed to the backward looking annual financial statements using GAAP - management will have insufficient information regarding the type and projected useful life of the

nave insufficient information regarding the type and projected useful life 170425 in the matter of Shanda Games Limited FSD 14 OF 2016 (NSJ) – Released for Publication 25 April 2017 Page 53 of 112



relevant plant and equipment to be purchased in the future out of capital expenditure to be able to estimate appropriate levels of depreciation by reference to the asset type and projection useful lives). Professor Jarrell cites one textbook which supports this view (at least to the extent of saying that there are a number of acceptable methods for forecasting depreciation that include a forecast based on a percentage of revenue and one based on a percentage of property, plant and equipment). Mr Inglis contends that a revenue based approach is arithmetically wrong and unjustifiable.

(b). I accept Professor Jarrell's evidence that adopting a revenue based approach will, at least in some circumstances, be an acceptable and proper method of calculating depreciation. However, it seems to me that where the use of this method produces projections which appear to be unreasonable and unrealistic it is necessary and appropriate for the Court to take into account and adopt corrections which can be shown to be reasonable and realistic.

(c). Professor Jarrell acknowledges that management's projections for depreciation and amortisation raise issues which require him to consider, as part of his reasonableness review, whether corrections or adjustments are needed. Management's projections in his view produced "a consistent pattern of underinvestment, meaning that depreciation and amortisation were greater than capital expenditures in the historical period and the projection period" (see paragraph 97 of the Jarrell Supplemental Report). Professor Jarrell labelled this the "underinvestment problem" in the Supplemental Jarrell Report although he sought in his cross-examination to resist the inference that the under investment issue he had identified demonstrated that management's projections had been improperly prepared. However, it seems to me that Professor Jarrell has identified and accepted that the projections raise the same problem as that identified by Mr Inglis. He simply adopts a different characterisation of the problem and ultimately a different solution or response to it.

(d). For Professor Jarrell the solution involves adjustments and increases to projected capital expenditure and therefore reductions to net cash flow and his DCF valuation. The solution involves an increase in capital expenditure and not a reduction in the amount of projected depreciation. From his perspective the underinvestment problem supports his view that the projections overstate the likely performance of Shanda and are aggressive so that, in the context of his



overall reasonableness review, no adjustment to the financial projections is required. But Mr Inglis says that this big picture approach is insufficiently granular and fails to relate depreciation and amortisation to Shanda's own detailed projections of capital expenditure. As a result, management's projections are unrealistic and unreliable.

(e). Mr Inglis carefully reviewed and obtained further information from Shanda as to Shanda's forecasts for capital expenditure. He was satisfied that Shanda's capex forecasts were detailed and realistic. He was also satisfied (see appendix 11 of the Inglis First Report) that based on Shanda's annual report for 2014, he was able to establish the approach to the calculation of depreciation and amortisation that Shanda had taken in respect of assets held at the end of 2014. Making the assumption that the new assets will be depreciated or amortised on a straight-line method based on their estimated useful lives as set out in Shanda's annual report (five years for "PP&E" and three years for "Software) he was able to estimate the total depreciation and amortisation costs, including those for upfront licensing fees to be paid, from 2015 to 2019. These estimates gave the following totals (in millions of RMBs): 2015: 267; 2016: 277; 2017: 268; 2018: 264 and 2019: 304.

(f). In the Inglis First Report, Mr Inglis had explained his approach as follows:

"To estimate the depreciation and amortisation costs incurred after 2014 I assume that the existing assets will be depreciated and amortised by the same percentages to the book value in 2014" (see paragraph A11.6 of the Inglis First Report). Furthermore, as regards assets to be purchased after 2014, "Shanda's 2015 Model contains a forecast of capital expenditure on "PP&E", "Software", and "Upfront Licensing Fees" from 2015 to 2019. I have used the forecasts for "PP&E" and "Software" to estimate the depreciation & amortisation costs for new assets to be purchased after 2014. Shanda's annual report sets out the estimated useful lives for its property and equipment and intangible assets.... [I] assume that the new assets will be depreciated or amortised on a straight-line method based on their estimated useful lives as set out in Shanda's annual report: five years for "PP&E" and three years for "Software .. In Table A11.4 below, I summarise the level of capital expenditure assumed in Shanda's 2015 Model for each asset and estimate the depreciation & amortisation charges for each year based on its estimated useful life..."

(g). During his cross-examination, Mr Inglis said as follows:

MR INGLIS:

The problem management has with this is it also forecasts quite specifically its capital expenditure and I asked them questions about that and wanted a lot of detail. It is clear that they thought about it. And there is a complete mismatch between the capital expenditure they forecast and the revenue forecast. One of those must be wrong.... My Lord, the way, as I am sure you know, businesses when they are doing projections and





MR MEESON:

Mr INGLIS:

planning, they decide, they look at the market and: how much do we think we can sell, and then: what resources do we need in terms of people and capital expenditure? And you plan the capital expenditure. You don't plan depreciation. Depreciation is merely a consequence of your capital expenditure. Now, obviously I have thought and it is auite and necessary to do this as a sort of modelling valuation expert, as to whether there is responsible some evidence that the capital expenditure projected by the company is insufficient. And in this regard I think Professor Jarrell's table 18 in his first report is quite a useful guide. What you have there, my Lord, is on the left-hand column the capital expenditure, the actual capital expenditure of Shanda from five years up to 2014 and it averages around 100 million a year. We then have their forecast capital expenditure throughout the projection period, which is on average more than double that. And I asked questions as to what their plans for capital expenditure were and they came back, and there is a degree of specificity, I think: in one case they said we need to spend more money on computers because their time was expiring or expanding. I would have liked a bit more detail but overall they seemed sensible. So it seems to me that, yes, they had actually worked out plans to spend 206 million, in 2014, 242 in 2016 and something like that. Seems sensible. I look at that and say, well, while I'm not a gaming expert at all but in terms of someone who has looked at a lot of models, you know, is there anything there which suggests to me there may be not enough capital expenditure.

... As noted in table 18 above, the corrected projects forecasted negative net new investment with depreciation and amortisation exceeding capital expenditures in every year of the projections. This lack of reinvestment is consistent with the corrected projections being aggressively optimistic since generally real growth requires a meaningful and positive level of net new investments for that growth." So do you agree with that?

No, because his depreciation figure is wrong. Depreciation is not -- I have been an accountant for nearly 40 years now and it is one of the first things they taught us, that depreciation is calculated as a way of writing down the cost of the assets over their useful economic lives. It is always based on the cost of the asset. It has no relationship to turnover, other than the very, very broad sense that certain sorts of business, many sorts of business, as turnover increases, they will need a bigger capital base but it is highly unlikely to be proportionate to that. It is simply wrong to calculate depreciation as a proportion of income revenue. It is just wrong. His answer seems -- I mean, the company has, as we have just discovered it has made projections for capital expenditure which is the way businesses do it as is demonstrated from Professor Jarrell's report that is at the level twice the previous level. The company answered my questions as to why they needed to do it. So they clearly thought about it. So



I'm not quite sure what Professor Jarrell thinks they should do because I calculate that to match his depreciation figures they need to be spending 600 million a year as opposed to 200 million a year during the projection period. And my question really would be: what are they going to spend that money on? What assets do they need? They said they need 200, 250, Professor Jarrell says: no, no I think they need 600. Well, I think he would say he is not a gaming expert and he certainly hasn't identified what those assets would be."

118. I find Mr Inglis' approach to be convincing, and a reasonable and reliable one, and to be preferred to that of Professor Jarrell. Therefore, I shall use his forecasts for depreciation and amortization in the Court's DCF valuation.

Mir II mobile revenues

- 119. I explain the issue in dispute at paragraph 72(a)(ii) above.
- 120. In Mr Inglis' opinion, Shanda's projections failed to include a proper or sufficiently high sum for the projected revenues the Mir II mobile game and the understatement was material. Shanda's March 2015 Projections were prepared, Mr Inglis said, before the considerable success of the Mir II mobile game became apparent, that since the game had been launched in August 2015, before the Valuation Date, it was appropriate to take account of the projected revenue in establishing the fair value of Shanda in these proceedings, that since the evidence established that the game was generating very substantial revenues, the issue was material and an adjustment to Shanda's projections was necessary to the fair value determination and could reliably be done in the manner explained and set out by Mr Inglis in the Inglis First Report (Appendix 12 of which set out in detail Mr Inglis' estimate of the projected revenue for and costs of the Mir II mobile game during the seven quarters of its projected life). Mr Inglis had based his analysis and estimates on the announcement made in early March 2016 by Shanda's vice chairman (who said that since its launch in August 2015 the game had been earning between \$US 92 million and US\$107 million each month in China), a review of Shanda's agreement with Tencent and the answers given by Mr Zhang during the experts' conference call with Shanda's management on 23 June 2016.
- 121. In the Inglis First Report, Mr Inglis says as follows:

- 13.22 I have included an estimate of the revenues and profits from the Mir mobile game based on the revenue profile for mobile games in Shanda's model. This may be a conservative assumption as Shanda's historical data show that successful games can earn revenues for longer periods than the assumed profiles in the model (albeit, based on data for PC games).
- 13.23 Should a successful mobile game like Mir have the capacity to earn revenues for a longer period, this projection of revenue from Mir mobile may understate what Shanda would have expected as at the Valuation Date.
- 13.24 Because the revenue and profits from Mir mobile is significant as compared to the rest of Shanda's business, even if the Mir mobile game performed only moderately better than I assume here, it could more than offset underperformance in the rest of the business.
- 13.25 For reference, I estimate Shanda's share of the revenue from the first quarter of operations of this game alone to be RMB 844 million, which is more revenue than it reported earnings from the rest of the business in any of the first three quarters of 2015, and I estimate the profit Shanda would earn on those revenues to be around RMB 670 million, which is more profit than Shanda reported earnings from the rest of the business during the whole of the first three quarters of 2015, in total.
- 13.26 Finally, my projection of Mir mobile cash flows is based on sales in China only. I do not know if, as a result of the success of the game in China, Shanda might have anticipated earning revenues overseas. If so, my approach may understate its prospects as at the Valuation Date.
- 122. In the Inglis Supplemental Report, Mr Inglis summarised his opinion as follows:
 - "4.35 In my First Report, I discussed what I referred to as the great (but not unprecedented) success that Shanda had achieved under the arrangement with Tencent to sell a mobile version of its popular Mir II PC game. Shanda's decision to use its existing PC game intellectual property ("IP") in a mobile game is not a novel one in the industry.
 - 4.36 In March 2015, NetEase Inc ("NetEase") released a mobile game based on its 2004 massively multiplayer online role playing game (MMORPG), Fantasy Westward Journey. It was a great success, earning over RMB 700 million per month since it launched and with monthly revenues of over RMB 1 billion for the period September through November 2015.
 - 4.37 NetEase subsequently launched a mobile game version of its 2001 MMORPG, Westward Journey Online, which was also very successful.
 - 4.38 NetEase enjoyed an 87% increase in 2015 gaming revenue, which it attributed to the success of these two mobile games. Based on data published by third party research firm CNG, it generated around RMB 7 billion in 2015 or around 40% of NetEase's total online games revenue in that year. NetEase is expected to experience substantially higher growth rates in the future than it has in the past.
 - 4.39 Similarly, Perfect World's mobile game Return of the Condor Heroes launched in August 2013, based on a 2012 PC game. In 2014 it was one of Perfect World's top three online games and contributed over 10% of Perfect World's total revenue. In March 2016, Changyou.com Ltd ("Changyou") announced its intention to launch a mobile game, in partnership with Tencent, based on its popular PC game, Tian Long Ba Bu, following which (even before the launch of the game) its ADS price has increased by over 45% through September 2016.
 - 4.40 In addition, analyst reports have noted that good PC game IP can significantly reduce game development and user acquisition costs.52 Given Shanda's strong game IP



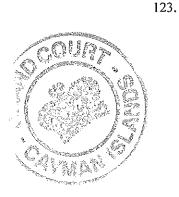
- including MIR, Woool, and Dragon Nest, and its plans to launch mobile games based on these games, a significant increase in revenues beyond 2015 is certainly achievable.
- 4.41 Professor Jarrell also makes much of the risks Shanda identified in its annual financial statements. As I demonstrate in Appendix 3, these statements by Shanda are very similar to those made by some of the world's largest global and Chinese technology companies, including Apple, Alphabet (the parent company of Google), Microsoft, Facebook, Alibaba, and Baidu.
- 4.42 I do not consider that the statements to which Professor Jarrell refers indicate that Shanda faces any exceptional degree of risk."
- Shanda has not provided or uploaded into the data room any information concerning the revenue generated from the Mir II game and Professor Jarrell did not deal with this issue in either of his reports. He was cross-examined on the point and he explained that, consistently with his general approach to valuing Shanda, he did not consider it appropriate or necessary to adjust management's projections, even in a case such as this where there was evidence that there had been significant developments after the date of management's projections which appeared to have a material effect on such projections. Professor Jarrell considered that it was reasonable to assume that any (even a significant) improvement in the performance of one of games covered by the projections was likely to be set-off by the underperformance of other games included within the projections. He said the following in response to a question on this issue from Mr Levy (on Day 4, page 111-112 of the transcript):

But, as I have listened to this, it seems to me that they make projections in March and then there is a valuation date in November, so there's an eight-month lag. Now, the company is making lots of highly uncertain projections. There are a lot of games that are already developed but then there is a lot of games that are in the pipeline, dozens. Over this eight-month period I would imagine that naturally some games turn out to give you better results than you had projected and some games turn out to give you worse results than you had projected. Now, the games that give you better results than you had projected probably are going to be more observable. You have a news story about it, and so forth, but the games that don't produce like you thought they were, maybe you don't learn about them. I would not be comfortable going in and saying: okay, let me make this one change, let me add this in. But I just don't -- I didn't do it, I would not have felt comfortable doing it. But reasonable people can certainly disagree on this point.

124. In his closing submissions, Mr Meeson summarised the position of Professor Jarrell on this point:

"Although Professor Jarrell accepts that by the time of the valuation date in 2015 it was known that the Mir II mobile game launched after the projections was very successful, nevertheless he does not consider it necessary to change the projections. Essentially his view is that the projections were sufficiently aggressive in the first place to absorb this development. Accordingly the adjustment was not appropriate."

125. Mr Levy put the point in the following way in his closing submissions:



- "12.3 Shanda had modelled the game as a B1 type game with projected revenues of around RMB 91 m (around US\$ 15 m) throughout its seven quarter lifespan. Mr Inglis says it is appropriate to take account of the revenues for this game in the Projections, and he makes what he considers to be an appropriate adjustment.
- 12.4 Of course, the approach taken by Inglis is sensible and accords with commercial good sense. He was to value the company at the valuation date, namely 3 and a half months after Mir II Mobile's massively successful launch. It is difficult to see how any credible valuer could simply ignore the fact that a game had been so overwhelmingly successful.
- 12.5 Apart from the Shanda/Tecent agreements there is nothing in the data room dealing with launch, success or revenues from Mir II Mobile.
- 12.6 That being the case it is nothing short of astonishing that Prof Jarrell did not mention Mir II Mobile (or its success, or its impact on valuation) in either of his reports. It could not be said that he did not know it it was expressly mentioned at the management meeting. This is all of a piece with his blind acceptance of the Projections with an unenquiring mind...
- 12.11 As to the nature of the adjustment Mr Inglis has made, he has kept the same profile for the revenue stream that management adopted in their Projections (see Mr Inglis' first report, para 13.23 [F/1/121]. The court will recall that the Projections anticipated that the revenues from mobile games were not consistent across the seven quarters of the game's life-span. Rather they would be highest in the first quarter and tail off over the balance of the period according to a profile established in the Projections. Despite the fact that a smash-hit game such as Mir II mobile could be successful for more than the seven quarter period, and the fact that it could well succeed in Korea (or elsewhere) Mr Inglis limits his adjustment to a seven quarter period and only Chinese revenues. His approach is conservative (in the extreme)."
- 126. It seems to me that Mr Inglis was correct to identify the revenue generated by the Mir II mobile game as material and justifying an adjustment to Shanda's projections and that the estimates made by Mr Inglis are reasonable and reliable. He has based his estimates for revenue (including his estimates of Shanda's share of the gross revenues generated by the game and the amounts payable to Tencent and others) on information derived from Shanda (the March 2016 announcement of Shanda's vice chairman and the information provided by Mr Zhang) and an analysis of the governing agreements. It also appears to be reasonable to conclude, based on this information and analysis that Shanda's forecasted revenue for the game (RMB 91 m or approximately US\$ 15 million for the whole lifespan of the game) is substantially below a reasonable forecast in light of the level of success and the revenue numbers reported by Shanda's vice chairman. I understand Professor Jarrell's hesitation in reviewing and challenging the estimates prepared by Mr Inglis since this is neither in accordance with his chosen valuation





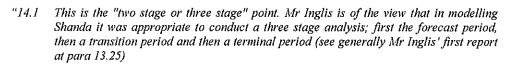
methodology nor within his area of expertise. As he pointed out during his cross-examination, he would expect this type of issue and dispute in proceedings in Delaware to be dealt with by evidence given by those involved in the preparation of the forecasts and with the relevant expertise and access to the relevant information. He did not consider that it was something he was able to deal with. Shanda was aware that this was an issue for Mr Inglis and could have provided the necessary information to rebut or challenge his estimates. They chose not to do so and Mr Inglis' estimates are unchallenged. This is not of itself sufficient since, as I have explained above, I need to be satisfied that Mr Inglis has established on the balance of probabilities that his approach is reasonable and reliable and can be accepted by the Court. I am so satisfied.

Two or three-stage growth model

- 127. I have briefly explained the issue in dispute in paragraph 72(c)(ii) above.
- 128. In his closing submissions Mr Meeson summarised Professor Jarrell's evidence and Shanda's position as follows:
 - "76. The use of 2019 as the final year of the projections means that on Professor Jarrell's model .. the growth rate in 2019 of 18.5% drops to 5.4% for the terminal period commencing in 2020.
 - 77. This gives rise to the question of whether it is necessary to insert a transitional growth stage in order effectively to smooth out that drop of 13.1% in one year.
 - 78. In his report ... Professor Jarrell explains the use of a transitional growth stage where "the projected revenue growth in the last year of the projections is much greater than the constant growth rate assumed for all years thereafter in to perpetuity".
 - 79. In his first report he rejected a transitional period because he was using the 2020 year.... which has a growth rate of 1%. In cross examination he was asked about whether it would be appropriate if the final year's growth was 18.5%. He said that he does not consider that a transitional period is required because he considers that although it could be used, the projections are already aggressive and so do not need any additional total revenues to be included. His explanation on this was clear and logical. He said on Day 6:

I would consider that if given those two growth rates and the fact that 5.4% is less than 18.5% by a multiple, a couple of multiples, that I would consider putting in a transitional year, or two, or three, or whatever, but I didn't do it in this case because I was influenced by the fact that management themselves said that the steady state would be reached by 2020 and that the growth rate in 2020 would be 1%. So, on balance, I thought that it was and in light of the aggressiveness of the projections over the previous years, through 2019, wouldn't have been comfortable to put in a transition 3 period. My normal routine my normal practice would be to take 8 5.4 and divide it into 18.5%. So my standard practice is to monotonically reduce the growth rates through the transition period, where the incremental change is approximately equal to the growth rate in the terminal period. That's just the standard practice that I would use. So that would suggest that I would add two years in between those two.

- 80. He went on to say that reasonable people can disagree on his years (monotonic) approach as opposed to Mr. Inglis 10 years using OECD growth rates.
- 81. If the Court considers that a transitional stage is necessary, then the Company submits that Mr. Inglis use of an additional 10 years is too long. His basis for choosing 10 years is [set out in the Inglis Report] which is based upon the quote from McKinsey .. where they say a total of 10-15 years.
- 82. The use of an additional 10 years is twice as long as management projected and has a significant effect to boost Inglis' DCF valuation.
- 83. It would be more reasonable to adopt either 5 years as calculated by Mr. Inglis (based upon OECD predicted growth rates) or to adopt Professor Jarrell's methodology of a monotonic reduction from 18.5 to 5.4 over 2 years by dividing the starting point by the end point so that it would decline to 13.1% in year 2020 and then 7.7% in year 2021 and running the terminal period at 5.4% from 2022 into perpetuity."
- 129. In his closing submissions, Mr Levy summarised Mr Inglis' evidence as follows:



- 14.2 Professor Jarrell adopts a two stage analysis, because he assumes that Shanda reaches a "steady state" by 2020 (with a growth rate of around 1%). He acknowledged that a two stage model might not be consistent with the expected growth in future cash flows, and that specifically for companies featuring especially large first-stage growth rates it might be illogical to assume a constant growth rate until sometime after the end of the first stage, when it becomes more appropriate. In such cases it might be preferable to use a three-stage DCF model.
- In his cross- examination Professor Jarrell did explain that if Shanda had very high growth rates in the initial period "I would be thinking and talking about doing a three-stage model because of the difference between the growth rate in the last year under your hypothetical of 18% and my decision to use, let's say, a 5% perpetuity growth rate. So that gap between 18% and 5% causes me to think about whether or not it would be appropriate to add in one or two years to transition from 18% down to 5%." Later he explained "So the first thing that causes you to go to consider a three stage model is when you have the last year and the perpetuity period -- excuse me, the last year in the forecast period having a growth rate that is significantly greater than the steady state growth rate that you have already decided to select." It was common ground between the experts that the treatment and growth rates in the terminal period are a matter of valuation for the experts, not for the Company.
- 14.4 The sole reason that Professor Jarrell adopted a two stage model is because, so he believed, management had projected that Shanda would reach a steady stage by 2020 (with a projected growth rate of 1% from the previous year). He was wrong to have done so for a host for reasons:
 - (a) Shanda itself did not use the 2020 figures in its analysis; specifically, those figures were not "pulled through" into the following tabs of the projections "Summary", "for Data Room" or, importantly "Valuation" (see Inglis Supplemental Report para 4.63) ... Therefore Shanda itself did not rely on any data for 2020
 - (b) The Company did not refer to the data for 2020 in its proxy statement (a statement to the entire world made, presumably, under penalty of perjury) and



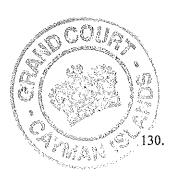
- only provided data to BAML until 2019 indeed Prof Jarrell accepts this (see Mr Inglis supplemental report at para 4.60 to 4.62 [F/3/21 to 22]).
- (c) Whilst management's projections had included certain data for 2020, the data for that year contains apparently arbitrary modelling assumptions see Mr Inglis supplemental report at para 4.67 et seq.
- 14.5 Thus it was wrong for Professor Jarrell to take the data included in the spreadsheet for 2020 and use that as the basis for determining that as growth had fallen off massively, that should be the start of the terminal period. That was expressly contrary to management's instructions to BAML and this was particularly egregious in circumstances where, as Professor Jarrell repeatedly stated, "management knows best".
- 14.6 Also, common sense dictates that a company that enjoys a compound average growth rate as great as Shanda's projected growth rate from 2015 to 2019 is unlikely to go from growth of around 18% in 2019 to 1% in 2020 (see Mr Inglis' comments in para 4.59 of the supplemental report ... All of this militates in favour of a three-stage analysis.
- 14.7 In his evidence Professor Jarrell suggested, for the first time, that had it been appropriate to use a three stage analysis he would only have included a two year transitional period. He offered no academic (or other) support of such an approach.
- 14.8 By contrast, Mr Inglis offered support from McKinsey for his three-stage approach."

In his opinion in *Cede & Co v JRC Acquisition Corp* 2004 Del. Ch. Lexis 12, Chancellor Chandler said as follows (at pages 4 and 6, a case in which Professor Jarrell appeared as an expert):

In a DCF valuation, the cash flow is projected for each year into the future for a period of years, typically five. After that point, one uses a single value representing all subsequent cash flows to calculate a company's terminal value. The terminal value may be determined by using multiples from comparable transactions, referred to as an exit multiple, or may be ascertained by assuming a constant growth rate after the initial five year forecast period, i.e., the growth rate in perpetuity....

The problem with ascertaining a growth rate in perpetuity is that it is an inherently speculative enterprise. The experts, and ultimately the Court, are asked to surmise what rate a company will grow at five years into the future. This is hardly an exact science. In this type of circumstance it is difficult (if not impossible) for litigants to "prove[e] their respective valuation positions by a preponderance of the evidence." Nevertheless, the Court must assess whether one expert's judgment is more defensible than the other.

- In the present case, as I have noted above, the live issue relates to whether it is necessary or appropriate to use a model assuming two or three stages of growth. There is a considerable measure of agreement between the experts as to when, in theory, a three stage model is appropriate but a fundamental disagreement as to whether a three stage model is appropriate in the present case.
- 132. Professor Jarrell said as follows in the Jarrell First Report:





- 204. In cases when the projected revenue growth in the last year of the forecast period is much greater than the constant growth rate assumed for all years thereafter into perpetuity, a three-stage DCF model may be used instead of the typical two-stage model Specifically, the three-stage model inserts a second stage to transition from the first, high growth-stage forecast period to the last-stage perpetuity period. The analyst then typically assumes that revenue growth rates decline monotonically over this second stage from the last year in the forecast period to a level consistent with a reasonable constant growth rate in the perpetuity period.
- 205. A transitional stage is typically only considered when the difference between the growth rate in the last year of the forecast period and the terminal-period growth rate imply a disproportionate decline in growth rates. In this case, the growth rate in 2020 for Shanda is projected to be 1.0% and, as discussed next, I use a perpetuity growth rate of 5.4%. In my opinion, such a narrow gap between growth rates negates any justification for using a transitional stage within the DCF model. Therefore, I use a traditional two-stage DCF model for my valuation of Shanda.
- 133. This view was based on Shanda's projected growth rate in 2020, which was considerably lower (as we will see shortly) than the projected growth rate for 2019. As I have already noted, during cross-examination Professor Jarrell was asked to give his opinion as to the approach he would adopt if the final year's growth rate was that projected by Shanda for 2019 and I have already set out Professor Jarrell's evidence (when summarising Mr Meeson's submissions on this issue).
- 134. Mr Inglis took a different approach. In the Inglis First Report he said as follows:
 - 13.35 As I explain ... above, the forecast used in a DCF analysis is typically divided into an explicit period and a terminal period. If the value for the terminal period is to be estimated based upon a steady state, i.e. an assumption that the cash flows will change at a constant rate, it is important that the explicit period be sufficiently long such that the company is expected to have reached maturity by that time.
 - 13.36 A business that is still experiencing rapid growth would be undervalued if the explicit forecast period is too short. This is a view that is supported by, for example, McKinsey, which states:
 - "In general, we recommend using an explicit forecast period of 10 to 15 years perhaps longer for cyclical companies or those experiencing very rapid growth. Using a short explicit forecast period, such as five years, typically results in a significant undervaluation of a company or requires heroic long-term growth assumptions in the continuing value."
 - 13.37 Shanda's 2015 Model (uncorrected) is based on a less than five year explicit forecast and assumes that Shanda's revenues would grow at 30.9% in 2016, 20.5% in 2017, 14.2% in 2018, and 18.5% in 2019. From 2019, Shanda assumes the business would enter steady state growth and estimates the value in the terminal period based on a range of constant growth rates from 1% to 2%. Thus, Shanda assumed a large step change in the business from 2019 ...
 - 13.38 In response to a query I raised as to the basis for Shanda's assumptions, Shanda stated that the terminal growth rates of 1% to 2% were selected by its senior management in

- early 2015 and that "there is no indications [sic] as to any unreasonableness of such management judgments".
- 13.39 I disagree. I do not consider it reasonable to assume that a business which has been growing at over 15% would drop to a growth rate of 1% to 2% immediately. As I also discuss below, I consider that an assumption that the long term growth of a business based in China will only increase at this rate is not reasonable.
- 13.40 A nominal growth rate is a rate of growth inclusive of inflation. As a short hand, nominal growth may be thought of as real growth plus inflation....
- 13.41 Thus, a nominal growth rate of 1.5% (the midpoint of Shanda's range) in an economy where the inflation rate is 2.5% (as it is expected to be for China) would imply negative real growth of around 1.0%. In my opinion, it is highly unlikely that a business which is projected to grow at an average annual rate of 16.3% (uncorrected) or 16.0% (corrected) in the two years prior to the terminal period would start to contract, in real terms, in the following year.
- 13.42 In my view, it is reasonable to assume some real growth in the terminal period. I have not been provided with sufficient information to attempt a detailed forecast for the business beyond 2019. Instead, I assume Shanda will grow at the rate of expected GDP growth in China for the subsequent ten years before Shanda enters a terminal period from 2029.
- 13.43 The length of this period is a matter of judgment. I consider that since Shanda was anticipated to be a high growth company in the period 2015 to 2019 it is more appropriate to use a longer period. This is consistent with the upper end of the range recommended by McKinsey.
- 13.44 Thus, I extend the period over which growth is forecast before Shanda enters a steady state from less than five years to closer to 15 years and, in doing so, assume a relatively smooth glide path from the high growth, as explicitly forecast by Shanda, to a long term constant growth rate.
- 135. There are two points to be decided. First, is the use of a transitional period required and reasonable in the circumstances of this case and secondly if it is what length should the transitional period be.
- As I have noted, the experts agree that a transitional period should be used when the projected revenue growth in the last year of the forecast period is much greater than the constant growth rate assumed for all years thereafter into perpetuity. In the present case, Shanda's forecast assumes growth of 18.5% in 2019 but since Shanda assumes that its business would enter steady state growth thereafter Shanda estimates a range of constant growth rates from 1% to 2%. The implicit drop in growth rate is dramatic and not credible. It seems to me that it is reasonable to treat the last year of the forecasts as being 2019 and to compare the projected growth rate for that year with the constant rates assumed for the perpetuity period. When that is done in the present case it is clear that the difference is large and therefore that the usual justification for a transitional period is satisfied.



137. Professor Jarrell's evidence in response to questions during his cross examination (see the transcript for Day 6, pages 84-85) acknowledge that this is a reasonable approach and that a transitional period is appropriate in the present case. He said as follows:

PROFESSOR JARRELL:



MR LEVY.

PROFESSOR JARRELL.

MR LEVY

PROFESSOR JARRELL

I would consider that if -- given those two growth rates and the fact that 5.4% is less than 18.5% by a multiple, a couple of multiples, that I would consider putting in a transitional year, or two, or three, or whatever, but I didn't do it in this case because I was influenced by the fact that management themselves said that the steady state would be reached by 2020 and that the growth rate in 2020 would be 1%. So, on balance, I thought that it was -- and in light of the aggressiveness of the projections over the previous years, through 2019, I wouldn't have been comfortable to put in a transition 3 period. I think it is exactly what I testified to.

But if you had put in a transition period, approximately how many years would you have used for your transition period?

My normal routine -- my normal practice would be to take 5.4 and divide it into 18.5%. So I would walk 18.5 -- I would add a year or two or three so that it would -- let me do it on the top of my head. I would add a year 2020 and I would make the growth rate something like 13%, okay, because I would take 18.5% minus 5.4% and then I would add another year and I would make that rate of return something like 8%, 9% -- 8% because I would then take the previous year and knock off 5.4%. So my standard practice is to monotonically reduce the growth rates through the transition period, where the incremental change is approximately equal to the growth rate in the terminal period. That's just the standard practice that I would use. So that would suggest that I would add two years in between those two.

Mr Inglis adds ten years; do you have any views on that?

This is a matter of expert discretion. I mean, obviously I would differ because, as I just explained, I would add three but reasonable people can disagree on those types of decisions.

138. Accordingly Professor Jarrell's evidence is that his usual approach to determining the appropriate length of the transitional period is based on a monotonic reduction of growth rates (in which the successive members of the sequence decrease consistently) which in this case would result in a transitional period of up to three years. Mr Meeson submits that the ten year period used by Mr Inglis is too long and that it would be more reasonable to adopt either five years as calculated by Mr. Inglis (based upon OECD predicted growth rates) or to adopt Professor Jarrell's methodology of a monotonic

reduction from 18.5 to 5.4 over two years by dividing the starting point by the end point so that it would decline to 13.1% in year 2020 and then 7.7% in year 2021 and running the terminal period at 5.4% from 2022 into perpetuity.

139. Mr Inglis' justification for a choice of ten years is set out at paragraph 13.43 of the Inglis First Report quoted above. He has relied on McKinsey's recommendation of having an explicit period of ten to fifteen years and having longer periods for companies experiencing very rapid growth and the evidence that Shanda was anticipated to be a high growth company during the period 2015-2019. This is a logical approach but I am concerned that ten years is too long and unreasonable in the circumstances. I note that both experts have said in their evidence that the approach to the selection of the length of a terminal period is a question of judgment on which reasonable people can disagree (that is that there is room for a variety of reasonable opinions) and that Professor Jarrell's monotonic approach appears to be statistically sound and one reasonable approach. I also note that there is an issue and dispute between the experts as to the likely level of Shanda's projected growth. Professor Jarrell repeatedly expressed the view that in his opinion Shanda's projections were unjustifiably optimistic and relied on the fact that Shanda's actual performance had underperformed its projections. He said the following in the Jarrell First Report:



- 136. Despite the decrease in overall projections from the March 2014 Projections to the Corrected Projections, the Company's actual financial performance immediately before the valuation date during the nine months ended September 2015 continued to significantly underperform relative to the reduced Corrected Projections
- The Corrected Projections anticipated that Shanda's revenues would decrease 3.4% in 2015, then increase 30.9%, 20.5%, 14.2%, 18.5%, and 1.0% in the years 2016 through 2020, resulting in a compound annual growth rate over the six-year projection period of 16.6%
- 140. This projected growth is significantly greater than Shanda's recent historical growth in revenues as shown in Table 16 below. Over the five-year period between 2010 and 2014, Shanda's revenue grew at a compound annual growth rate of -4.7%. For the last three full fiscal years before the valuation date, Shanda's revenues declined 11.1%, 7.9%, and 14.4%. For the nine months ended 30 September 2015, revenues further declined 24.6% compared to the nine months ended 30 September 2014....
- 140. In these circumstances it seems to me that the preferable approach is to follow Mr Inglis' basic methodology but to reduce the terminal period to five years as calculated by Mr. Inglis.

The discount rate - the correct approach to calculating the beta for Shanda

- 141. I have explained briefly the issue in dispute in paragraph 71(c)(i) above.
- 142. In *In re Appraisal of DFC Global Corp* (2016) WL 3753123 (Del. Ch.) (**DFC**) Chancellor Bouchard noted that:

"Market or systematic risk is measured... by beta. Beta is a function of the expected relationship between the return on an individual security... and the return on the market." Beta is used together with the equity risk premium to estimate the expected risk premium for the subject company as a component of its cost of capital. A relatively small change in beta can substantially affect the WACC and, consequently, the outcome of a discounted cash flow model. Although determining beta is an important exercise, it can be a quite theoretical one. The experts' theories diverge significantly on this metric, leading to markedly different valuations."

- 143. These comments cover the present situation.
- 144. In his closing submissions, Mr Meeson summarised Shanda's position as follows:



- "99. The Court is required to find the best estimate of the beta of [Shanda] on the evidence before it. The choice may not be perfect, but it is the best approximation of [Shanda's] beta which is available.
- 100. Professor Jarrell's starting point is that one should use the directly measured beta for the company in question: "The customary practice, and my preferred approach, when dealing with publicly traded stocks in efficient trading markets is to use a firm specific, direct measure of beta, rather than a rough industry approximation."
- 101. For this he cites the following support:
 - a. S. Pratt, R. Grabowski, Cost of Capital in Litigation, pp. 171172 "When shares of a company being valued are publicly traded in an active market, customary practice is to determine beta by reference to the company's own market prices.";
 - b. A. Damodaran, Damodaran on Valuation, Second Edition, 2006, p. 48 Using historical market data to calculate beta "...is the conventional approach for estimating betas used by most services and analysts."
- 102. Mr. Inglis said something to similar effect in his first report at .. page 269.

 "If a company is publicly traded, its Beta can often be calculated from its past trading data so long as the trading history is seen as representative of the business going forward. If the company is not publicly traded, the Betas of public companies operating in the same industry may be calculated and used as a proxy for the subject company."
- 103. In his supplemental report he repeated this statement .. and said .. that while Shanda was publicly traded he used comparable companies for two reasons that Shanda's own useable data ended 22 months before the valuation date and the data during that period would be affected by the Chinese discount period (from 2011 to end of 2012).
- 104. For the very first time in cross examination he tried to row back from the use of a directly measured beta and said he doubted whether it should be the only factor. This suggestion formed no part of either of his expert reports. ...

106. As Professor Jarrell explained he would not use daily betas as they are infected by noise and more likely to be wrong. This point is not in dispute and neither expert suggests relying upon daily betas. So the choice is between monthly and weekly betas. In relation to this he said on Day 5:

Q. It is quite common, isn't it, to use two year weeklies?

A. They have a similar problem but it is to a completely different degrees.

Daily data, most people, it seems I hesitate to say consensus because it is in dispute, but there seems to be a consensus evolving to stay away from daily data, and now you are left with weekly and monthly data and the research I have seen in the last couple of years, people are finding problems with weekly data. Now, I don't know if I understand it, I don't know if I believe it. So we will put that to one side but daily data, I have fairly convinced, professionally, that there's so many problems these people talk about with daily data, that we have to not put my on daily data. So you are left with weekly and monthly.

become that weight

107. In making the choice between the results for weekly betas and results for monthly betas he explained [in] his report:

"the monthly betas have greater explanatory power (i.e., r squareds of 38% to 48% that measure the "goodness of fit" of the regression underlying the beta) compared to the weekly and daily betas with r squareds that are less than half of that at only 4% to 13%"

108. He explained the use of r squared in his oral evidence .. and is plainly extremely knowledgeable on this and all other statistical issues. He was very impressive on the statistical aspects of this case as they pertain to the CAPM model and the selection of Beta.....

109. Professor Jarrell is very authoritative on r squared, as one might expect from a Professor of Finance as opposed to Mr. Inglis, the CA, whose criticisms of its use were quite plainly misconceived and wrong. It is an area on which Mr Inglis plainly has little experience as he frankly admitted [in his cross-examination]....

112. Professor Jarrell was plainly correct in choosing the monthly beta when faced with on the one hand a very low r squared for the weekly beta which made them unusable ... and on the other hand a very high r squared for the monthly beta which is extremely high at 38% for market models ...

113. The reason to use a beta specific to the company is because it is more "targeted" – this was observed in the recent Delaware appraisal case of Dell at page 108: "A beta specific to the Company is more targeted than a blended beta calculated from peer companies, particularly when both experts opined that the Company had few peers."

114. In the present case it is significant that neither expert considered that there were comparable companies which could be used to derive an alternative valuation based upon the comparable company methodology. Indeed Mr. Inglis rejected one of his 2 peers Changyou which he said "is not comparable" to Shanda in terms of expected future growth"....

[Mr] Inglis said elsewhere in his report that said Changyou was not comparable because of its different prospects, but there is a more fundamental problem with the use of Changyou's beta. Changyou's beta was derived from ... data which was used had a very low r squared value of 0.52 or 5.2% which is very low indeed. Professor Jarrell indicated a problem with less than 10% and his own weekly betas were "unusable" with higher betas of 7%8% than that of the date [Mr] Inglis used for Changyou. Thus the Changyou beta cannot be used.



- 120. If Mr. Inglis had rejected Changyou's beta, as he ought to have done, he would have been left only with NetEase and its beta was 1.115 so 11.5% above the beta he actually chose.
- 121. However, it is not legitimate to use a single other company as a proxy for the beta for another company. That is self-evidently the wrong approach because it assumes that the two are identical.
- 122. Thus [Mr] Inglis' peer beta approach is fundamentally flawed in that he simply does not have the data to support a peer beta analysis in the present case.
- 123. This is not very surprising in that Shanda was a Chinese online gaming company. Not only did it derive the overwhelming majority of its revenues from China it was also in a niche industry of online gaming. Even NetEase was not exclusively an online gaming company and had email and ecommerce arms and so to that extent was not a closely similar company in this specialised industry sector.
- 124. Professor Jarrell's 4.3 year monthly beta had 51 data points which is sufficient because it is more than 36. In Ancestry the Court rejected his monthly beta on the basis that it only had 30 data points. ...
- 125. No such criticism can be levelled in this case because significantly more data points than 36 are being used.
- 126. Professor Damodaran says that "monthly returns should provide sufficient observations for firms listed for more than three years"
- 127. Similarly Ibbotson says that "if fewer than 60 months of data are available for a company, the beta is then calculated using the months of data that are available, with a minimum of 36 months as acceptable".
- 128. Mr. Inglis criticisms of the 51 data points is not that 51 is an insufficient number, but that they end 22 months before the valuation date and that they cover a period when Chinese stocks were affected by market sentiment.
- 129. In neither case has Mr. Inglis any empirical data to support his concerns. They are both theoretical objections.
- 130. These objections were put to Professor Jarrell in cross examination and he answered them both and was not seriously challenged. ..
- 134. The calculation of beta is a statistical exercise as Professor Jarrell succinctly explained:
 - Q ... It was purely 6 a statistical analysis. A. The Beta was a statistical analysis.
- 135. This is exactly what beta is a statistical calculation to calculate the relationship between changes in the individual stock price of [Shanda] over time with changes in the broad stock market over the same period with a view to predicting how the stock will behave in the future.
- 136. For that reason no method of calculating beta in any case is going to perfect, but the question for the Court is what is the best measure of Shanda's beta that is available on the evidence before it.



- 137. The best evidence in the present case, is clearly Professor Jarrell's directly calculated beta of 1.78. The proposed alternative is in effect to use NetEase as a proxy for Shanda, the Changyou data being unusable. This is plainly unreliable."
- 145. Mr Levy in his closing submissions summarised the Dissenting Shareholders' position as follows:
 - 22.1 The issue between the parties is very substantial. Mr Inglis adopts a beta of 1.00; Professor Jarrell adopts a beta of 1.78, a startlingly high number. Furthermore Professor Jarrell's beta is 22 months old and covers a period when the China effect regime change was taking place.
 - 22.2 The approach of the respective experts could not be more different. On the one hand, Mr Inglis, who plainly had an in depth knowledge of Shanda, having studied its business, accounts, projections, and to some extent its industry, calculated the betas of peer companies and measured/compared them against the betas of yet further companies.
 - This is an approach recommended by Professor Damodaran and other sources (and an approach which, as was seen in Court, was used by the Courts in Delaware in a number of cases (needless to say, Professor Jarrell did not draw these cases to the Court's attention, despite citing more than 30 authorities) but acknowledged their existence in cross-examination).
 - 22.4 ProfessorJarrell, albeit only in cross-examination, admitted that there was a "large body of well-informed valuation opinion that prefers to estimate a company's beta by reference to the betas of peer companies, rather than take the directly measured beta of the target company itself" Indeed, Prof Jarrell himself had used peer betas in circumstances where it was not possible to measure the beta of the company
 - 22.5 These admissions in cross-examination, were in stark contrast to the burden of Professor Jarrell's Supplemental Report. There he said, inter alia:
 - (a) That Mr. Inglis' use of an indirectly measured industry approximation of beta "departs from the customary and preferred approach of directly measuring the beta of a publicly traded company like Shanda";
 - (b) That the Delaware court routinely uses directly measured betas when valuing publicly traded companies
 - (c) That Mr Inglis "departed from the standard approach".
 - 22.6 ... the Court will note that it is not possible precisely to measure a company's beta; as Professor Jarrell acknowledged in his cross-examination "Well you know, you don't know for sure because when you measure it, obviously every time you measure it, you know, God doesn't tell you here is what beta is, you have to measure it using statistical analysis. There's always some type of measurement error going to be involved with that". This demonstrates the underlying difficulty; one can only look at data and "samples", rather than measure the "actual" beta itself.
 - 22.7 Both were agreed that it was impossible to use Shanda's measured beta for the 22 months before the valuation date in view of the fact that the share price was trading by reference to the proposed merger price contained in the January 2014 non-binding offer announcement. That being so, on the one hand, Mr Inglis adopted a careful analysis, incorporating different metrics and cross-checks, as explained in his first and supplemental reports.

- 22.8 By contrast, Professor Jarrell adopts an entirely mechanical approach to estimating beta, a process that involved no analysis beyond a simple regression calculation (which was apparently cross checked by reference to Bloomberg), an observation of an r-squared that he considered determinative, and that was that. He confirmed as much in his cross-examination ... Of course, despite the issue between the parties, and his insistence that this was an appropriate manner in which to determine Shanda's beta, at no stage has he exhibited any academic source to demonstrate, or even support, his contention that a "good" r-squared can, let alone should, be determinative. This was in contrast to Mr Inglis, who presented a number of sources suggesting, that r-squared is not determinative, and in any event, standard error is more important.
- 22.9 Furthermore, Professor Jarrell's first report does not suggest he took any account of the fact that the standard error associated with his beta; as Mr Inglis explained in his supplemental report, the standard error associated with Professor Jarrell's selected beta is very high meaning that there can be no real degree of confidence that the "true" beta is 1.78; it could be anywhere within a very substantial range of that.
 - A yet further surprise in Professor Jarrell's analysis arises from the fact that, as Mr Inglis said, whether one measures beta using daily, weekly or monthly numbers one was still measuring the same thing .. and therefore it was surprising that there should be such a range across the different measurements. Professor Jarrell's table ... shows that 7 of his ten measurements of beta are around 1 (i.e. the daily and weekly measurements based on between 500 and 1,000 observations for the daily betas and 156 to 226 for weekly); as against that his monthly betas, based on 36 to 51 observations, are more than double that.
- 22.11 ... Professor Jarrell has been called out previously for preferring a high beta based on too few observations (see Re Ancestry)
- 22.12 Of course, having seen that the monthly beta was more than twice the daily or weekly, Professor Jarrell's analysis went no further than to accept the monthly figure due to the r-squared. What he should have done is analyse and cross-check, as Mr Inglis did, to determine whether the huge disparity between the various sets of figures rendered any of them reliable.
- 22.13 Mr Inglis' chart, at page 59 of his supplemental report puts paid to any credible suggestion that the monthly beta as measured by Professor Jarrell can be adopted. That chart shows every combination of possible monthly beta over the entire 4.3 year period that Professor Jarrell used. It is immediately apparent that it would take an exceptionally bold, in fact reckless, expert, to say that the month end, or indeed any other day, was representative of the company's "true" beta. The disparity is simply enormous—the beta ranges between .39 and 2.17 (the higher number being 5.56 times greater than the lower).
- 22.14 To the extent that it was suggested that the "convention" is to use the month end to measure beta, that is no more than a convenience if one uses a monthly beta one must pick a date. In any event, given the information in Mr Inglis' table at page 59, it is clear that whether or not there is a convention, the number chosen was massively unsafe. ...
- 22.15 In his cross-examination, Mr Inglis said he investigated the shape of the chart, as, in his opinion, it was not explicable by theory. He said he did a similar analysis of Apple and Microsoft and that their charts, whilst showing disparity between the numbers, did not display a similar shape.
- 22.17 Despite these frank admissions, Professor Jarrell gave various explanations attempting to explain what the chart meant. Before turning to these it is crucial to understand the data that the chart represents.



- 22.18 .. beta is a measure of the covariance (across time intervals, daily, weekly, bi-weekly, monthly, yearly or any other time one might choose) of the return on an individual stock against the return on the market. The chart shows Shanda's beta from one day of the month to the corresponding day of the next month over a 4.3 year period. The chart essentially shows the covariance between the return on Shanda's stock against the return on the market measured on between corresponding days of the month during the period measured by Professor Jarrell.
- 22.19 Between each of the measurement points not only will Shanda's return have moved, but also the market return will have moved. Each sample of these is a measure of covariance. one with the other, not the absolute movement. Thus it is a measurement between two distinct points in time, and what happened between those points in time is not necessarily reflected in the measurement at the second point in time: for example, the market return almost certainly will have moved both up and down between the two measurement points, and likewise the return on the stock will have moved (the beta measures the interaction between the two not their absolute value). However, the crucial point is that the only movement that is reflected in the chart is the final position of both the market return and the company's return on the second measurement date (relative to the first date). The measurement is certainly not a reflection of what happened between the two measurement points; it is a measurement of the interaction/relationship between the market return and the stock return. As such if the interaction/relationship between the two was being accurately observed it should not be impacted by measuring the same thing on successive corresponding, rolling dates.
- 22.20 Professor Jarrell tried to compare the graph with the measurement of potatoes. His analogy was inapt, but adopting it, the following observations are indubitably correct. First, the analogy of one replacing one potato at a time as each new scenario is unrealistic. The closer analogy is that 51 new potatoes are measured each time, one for every observation over the 4.3 year period. Secondly, for the beta measurement, what happened in between the monthly observation points is irrelevant one is not simply weighing the potato at monthly intervals; one is measuring how the weight (return) of the potato varied relative to the weight (return) of something else of which the potato is a part— the entire vegetable market (i.e. the chosen market index).
- 22.21 Professor Jarrell sought, on the hoof, to make something of the fact that "some of the towers have to be the same" because each month has weekends which are non-trading days. However that is incorrect because weekends occur across a month. If I January is a Saturday then I February will be a Tuesday, so there is nothing in that point.
- 22.22 Then Professor Jarrell suggested that "the middle one [date] is going to be the one that has the greatest opportunity to deviate from the actual end-to-end model" This is simply misconceived. There is no end-to-end model. It is a measurement of the interaction between two monthly return variables.
- 22.23 In response to a question from the Court, Professor Jarrell attempts to suggest that he was "following all the rules" and merely following the convention that he was used to adopting and had utilized the month-end results without giving the matter further thought and that his statistical metrics gave him comfort. He additionally noted that the beta should be above 1. Professor Jarrell did concede that although it did not invalidate his opinion, he would not "put this chart on a check mark as something that confirms my analysis".
- 22.24 [In his cross-examination] Professor Jarrell attempts to explain his unsubstantiated opinion that other charts should and would also present a U-shape similar to Shanda's. As described above, his "logical" arguments are misconceived. Indeed, he had not performed any such calculations to observe if his theory about the shape was correct, whereas Mr Inglis had done so for Apple and Microsoft and had not observed such results but had noted varied and different shapes.



- 22.25 While Professor Jarrell places a lot of weight on the R^2 he does not focus on the standard error at all although the monthly beta figure he uses has a higher standard error than the daily and weekly betas he presents. As Mr Inglis explained [in his cross-examination] "when you measure things in a sample there is a possibility that your sample is not representative of the populations as a whole and the standard error tells you how likely it is that you have got something else. R-squared is merely a split of your....when you have got.... you have measured your beta, it then tells you how much of that is attributable to movements in the market and how much is attributable to something else which may, in certain circumstances, be relevant. But it doesn't help you in saying "have I started in the right place"". Ultimately Mr Inglis concluded that Professor Jarrell's analysis contained data which was so divergent that beta could not be drawn from it.
- 22.26 Mr Inglis' conclusions as to why Professor Jarrell's estimate of beta is not reliable are summarized in paragraph 6.78 of his Supplemental Report as follows:
 - (a) his own measures of Shanda's beta on daily and weekly interval bases as at 27 January 2014 (0.91 to 1.12); the betas of Chinese games companies listed in the US as at the Valuation Date (1.00);
 - (b) the betas of non-Chinese games companies listed in the US as at the Valuation Date (average of 1.05, median of 0.94); and
 - (c) Merrill Lynch's estimate of Shanda's beta, as based on Chinese games companies listed in the US (1.04).
- 22.27 Mr Inglis also made reference to the fact that his estimate of beta had taken into consideration five other comparable US listed companies, which supported his results and conclusions as to the beta estimate derived by reference to the most comparable companies, NetEase and Changyou.
- 22.28 Although Mr Inglis was challenged in cross-examination for his omission of Changyou as a comparable company for the purposes of the comparables analysis, but his decision to select it for the purposes of beta, he was able to explain the reason succinctly: "It is not actually, and the reason is one of timing. Changyou had a sort of forecast in somewhere after August 2015, the consensus forecast moved negative. After that, so that by November 2015, the valuation date, there was a negative growth forecast and, therefore, looking at it on the spot date of 28 November it wasn't comparable. The Beta calculation is done over a period of two years and for most of that period Changyou was forecast to be profitable. I would accept that perhaps the last few observations may be impacted by it but, overall I think it is still usable for Beta purposes."
- 146. Mr Inglis, in the Inglis Supplemental Report, had listed seven primary reasons why his estimate of Shanda's beta was to be preferred to Professor Jarrell's estimate as follows (see paragraph 6.33):
 - (i) my calculation is based on betas observed in the market up to the Valuation Date. Professor Jarrell's measurement period ends some 22 months before this date;
 - (ii) the data used by Professor Jarrell for his estimate covers the period when Chinese stocks were being significantly re-rated by the US stock markets, which means that his betas are affected by factors which are unrelated to the underlying volatility of the returns of Shanda itself relative to the market (as is the relevant measure in a CAPM framework);
 - (iii) Professor Jarrell's choice of beta is only as high as it is because the day of the month he has selected is the one with the highest measure of beta. Had he chosen any other day, it would have been lower, often substantially lower. For example, his raw beta would fall



- from 2.17 to 0.39 if returns were measured from the middle of each month rather than the end of each month. Using a raw beta of 0.39, his discount rate would be 8.09% and he would value Shanda at USD 31.14 per ADS;
- (iv) Professor Jarrell's use of a monthly beta is overly influenced by a single statistical measure, R-squared, which is of limited relevance in estimating beta;
- (v) Professor Jarrell ignores another statistic, standard error, which is more important than R-squared and which shows that his chosen measure of beta is less reliable than others he has set out;
- (vi) the other measures of beta Professor Jarrell has calculated (but not used) are broadly consistent with mine and Merrill Lynch's. In contrast, the measure he has selected is much higher; and
- (vii) Professor Jarrell's beta calculation is inconsistent with the currency adjustment he makes to his cash flows.

It seems to me that the following key differences of view and points arise (which I separate out for ease of exposition although a number of the points are linked and need to be considered together):

- (a). should Shanda's beta estimate be based solely on data relating to the period (and has Mr Inglis established that Professor Jarrell's beta estimate is unreliable because of his use of a measurement period) that ended prior to the public announcement of the First Buyer Group's proposal on 27 January 2014 (is Professor Jarrell's beta estimate out of date)? (the staleness point)
- (b). should Shanda's beta estimate ignore (and has Professor Jarrell established that it is appropriate to use) data relating to the period of the China effect in U.S. markets occurring from early 2011 to late 2013 (the China effect point)?
- (c). should Shanda's beta estimate be based only on directly measured betas or only on indirectly measured betas and if indirect betas can be used is the peer group selected by Mr Inglis sufficiently comparable so that they can be used in the estimate of Shanda's beta (the direct/indirect betas point)?
- (d). what should the measurement period be should it be 4.3 years or two years (the measurement period point)?
- (e). should weekly or monthly returns be used (the weekly/monthly returns point)?



- (f). if monthly returns are otherwise preferable, should Shanda's beta be estimated using monthly returns measured from month end to month end (the month end measurement point)?
- 148. I shall consider each of these issues in turn. I note, before doing so, that the differences of approach and view on each issue were extensively explored and tested during cross-examination and that the oral evidence given by the experts was significant and will need to be mentioned.

The staleness point

- As regards the staleness point I make the following comments:
- (a). Professor Jarrell uses pre-announcement share price data and he carries out his monthly beta calculations up to 31 December 2013. As Mr Inglis points out, that is 22 months and 18 days before the Valuation Date of 18 November 2015.
- (b). The problem, and concern, of course, is that the only data relied on is from a period that is so long before the point at which the valuation is to be undertaken that the estimate runs the serious risk of being an unreliable guide as to the position on the valuation date. Mr Inglis, is of course, able to side step this problem by using the beta of his peer group which allows him to include data for the period he has chosen before and leading up to the Valuation Date.
- (c). Mr Meeson sought to rebut the staleness criticism during his cross-examination of Mr Inglis by arguing, as Professor Jarrell had done in the Jarrell Supplemental Report, that this concern would not be a problem if it was the case and could be shown that Shanda's beta remained constant in the period from December 2013 until the Valuation Date. He suggested that this could be done by looking at the peer companies selected by Mr Inglis (which I discuss below) to see whether their betas changed over that period of time. Professor Jarrell had concluded (at paragraph 49) that "Mr Inglis' peer betas show no indication of a structural shift in industry betas after the announcement of the Shanda transaction on 27 January 2014". He analyses the changes to the betas of the two Chinese companies selected by Mr Ingis, Changyou and NetEase, and the industry average in the period 25 September 2009-24 January 2014 as compared with the period 24 January 2014-18 November 2015. Changyou had moved from 1.33 to

0.89; NetEase from 0.75 to 1.03 and the industry average from 1.04 to 0.96 (this analysis is also discussed below in the context of Mr Inglis' analysis of the impact of the China effect on the use of data observed during the period of 2010-2013). Professor Jarrell had noted in the Jarrell Supplemental Report (at page 49) that even when NetEase is averaged with Changyou's beta the average pre-deal announcement beta of 1.04 is essentially indistinguishable from the post-deal announcement beta of 0.96. He considered that the changes were small and supported his conclusion that it was safe to use a measurement period ending in January 2014 since it was likely that Shanda's beta had not changed after that time and before the Valuation Date.

- (d). Mr Inglis, in response, during his cross-examination, pointed out that while the average beta had not moved materially there had been, in his view, significant movements in the individual betas of Changyou and NetEase and therefore it would be "risky to assume from that data alone that there had been no change in industry betas over that period." (see the transcript for day 3 at page 18).
- (e). it seems to me this issue is finely balanced. Mr Inglis has raised a serious doubt as to the reliability of Professor Jarrell's use of and sole reliance on the pre-deal announcement data. Professor Jarrell's response does provide some evidence that Shanda's beta is unlikely to have changed in the period between that announcement and the Valuation Date but that is not conclusive or completely convincing for the reasons given by Mr Inglis. The gap between the date of the observations and the Valuation Date and the failure to use any more recent data does in my view raise doubts about the reliability of Professor Jarrell's beta estimation. While it would be possible to show that there was no problem if there was sufficient evidence to demonstrate that Shanda's beta had or was likely to have remained constant (and I agree that the peer companies otherwise relied on by Mr Inglis to support his estimate of Shanda's beta are a good guide for doing so), Professor Jarrell's analysis, and the results of his comparison with the betas of the peer companies, did not seem conclusive or clear-cut.

The China effect point

150. As regards the China effect point, I comment as follows:

(a). Mr Inglis, as I have noted, concluded that Chinese companies listed in the U.S. were, from a period beginning shortly after November 2010, significantly affected by adverse perceptions held by U.S. investors of all Chinese companies (his review of the academic literature and his analysis is set out in appendix 4 of the Inglis First Report). He notes the following:



- A4.25 Studies have shown that the events of 2010 and 2011 affected market appraisals of Chinese companies in the US. Chen, Huang, Wang, and Wu (2014[Going Private Transactions by US Listed Chinese Companies: what drives the premiums paid International Review of Economics and Finance]) state that:

 "... investor confidence for U.S.-listed Chinese companies has started to evaporate since 2011, when a good number of Chinese companies were discovered engaging in fraudulent accounting practices."
- A4.26 Similarly, Beatty, Lu, and Luo (2013[The Market for "Lemons": A Study of Quality Uncertainty and the Market Mechanics for Chinese Firms Listed in the US: unpublished draft paper presented to various conferences]) note that the events of 2010 and 2011"significantly eroded investor confidence" and "precipitated a dramatic market collapse.". They state that shares in Chinese companies in the US subsequently exhibited:
 - (i) "a significant (i) 74% decrease in liquidity"; and
 - (ii) "pervasive negative returns" of around negative 65% over 2011-2012.
- 14.27 Chen, Huang, Wang, and Wu (2014 [above]) note that:

"The data compiled by Bloomberg show that the Chinese Reverse Mergers Index (ticker symbol: CHINARTO) lost more than 62% by 2011 year-end and the index underperformed the S&P500 by 44% in 2012."

- "... the index for all U.S.-listed Chinese stocks fell behind the S&P 500 by about 40% for the year of 2012."
- A4.28 Importantly, the academic research suggests that the events of 2010 and 2011 affected US market views of Chinese firms in general, regardless of whether a particular company was fraudulent or not.
- A4.29 For example, Beatty, Lu, and Luo (2013[above]) find that investors in the US are not able to distinguish between "good" and "bad" companies using a mumber of potential signals of firm quality (including stock returns, fundamental earnings performance, measures of accounting quality, or external monitoring mechanisms like auditor quality and underwriter reputation).
- A4.30 In addition, these authors state that "the dishonesty of "bad" firms spread suspicion to all other "good" Chinese firms listed in the U.S." For example, when Citron Research published a report critical of Harbin Electric Inc in June 2011, US listed Chinese companies declined by over 6%, with both "good" and "bad" firms losing substantial amounts of value.
- A4.31 This is consistent with the findings of Darrough, Huang, and Zhao (2013[The Spillover Effect of Fraud Allegations against Chinese Reverse Mergers, unpublished paper dated December 2013]), who report that allegations of fraud against Chinese companies that listed in the US through reverse mergers have, from the summer of 2010, spilled over or affected the prices of other US listed Chinese companies (whether listed through IPOs or reverse mergers). They state:

"Short sellers also target on Chinese firms and intensify the negative spillover effect from fraudulent CRMs [Chinese companies that listed in the US through reverse mergers] to non-fraudulent CRMs and CHUSIPOs [Chinese companies that listed in the US through IPOs]. Since USRMs [non-Chinese companies that listed in the US through reverse mergers] were largely spared, the most important common attribute is 'being Chinese'."



- A4.32 This suggests that Chinese companies in the US market have come to face an adverse selection problem or a situation in which, because investors on US markets cannot discern the quality of individual companies, they treat Chinese companies in general with suspicion and, thus, apply discounts to their valuations.
- A4.33 A "good" Chinese company (i.e. one with a legitimate business), faced with such a situation, may find it beneficial to de-list from the US stock exchange. Indeed, many Chinese companies have left the US market in recent years, as I discuss below.
- (b). Professor Jarrell's response to this analysis appears in the Jarrell Supplementary Report in which he says as follows:
 - 40. Mr. Inglis agrees that betas measured over a five-year period are the "most common," but he restricts his beta analysis to only a two-year measurement period because he considers:

...a five year beta would be too long, as it would incorporate data prior to the "regime change" as regards views towards Chinese companies in the US markets...

- 41. Specifically, Mr. Inglis is concerned that:
 - ...perceptions of investors in US markets towards Chinese companies have been tainted as a result of events starting around mid-2010, when a number of Chinese companies listed in the US were found to be engaging in fraudulent accounting practices.
- According to Mr. Inglis, "...attitudes of investors towards Chinese companies 42. on US stock exchanges changed in recent years." He found that "...academic research suggests that the events of 2010 and 2011 [revealing Chinese accounting fraud] affected US market views of Chinese firms in general, regardless of whether a particular company was fraudulent or not. I note that three of the four academic papers Mr. Inglis relies upon are unpublished and have not been subjected to the peer-review process. [Professor Jarrell highlighted the qualifications that appeared in the working paper of Darrough, Huang and Zhao as follows: "We need to add important caveats in interpreting our results. First, our analysis cannot address to what extent market movement is subject to rumours, overreaction [], and the whim of investor sentiments. Given that the market for U.S. listed Chinese companies is relatively small with fewer investors and analysts, it is possible that these forces may drive to a large extent the stock price movement. This possibility provides opportunities for future research. Second, the downward movement in the POST-regime may not reflect "China bashing," but rather indicate a rational downward adjustment of the euphoria about China, which drove up the stock prices of China-based stocks. It is quite possible that in a period of overly optimistic climate, too many

companies went public (either by RM's [reverse mergers] or IPOs), including those that did not have sound business models but were aided by those intermediaries who benefited in the process by collecting fees. During the subprime mortgage boom, many (e.g., investment bankers, mortgage brokers, realtors, and stock analysts) kept their eyes closed so that they could benefit from the boom before it ended. In that scenario, the drop in prices could be the result of the China bubble bursting.]

- 43. The earliest event identified by Mr. Inglis that he contends signaled a "regime change" was 28 June 2010, when Muddy Waters published a research report alleging accounting fraud at Orient Paper. One academic paper cited by Mr. Inglis (Chen, Huang, Wang, and Wu (2014)) referred to this Muddy Waters research report as "[t]he first short-selling attack...." Another academic paper (Darrough, Huang, and Zhao (2013)) cited by Mr. Inglis used 12 July 2010 as a demarcation point in its analysis "as a proxy for a change in the investors' sentiment, representing a regime change..."
- 44. Therefore, betas measured after the 28 June 2010 or 12 July 2010 events apparently would satisfy Mr. Inglis' desire to avoid "incorporat[ing] data prior to the 'regime change.'"
- 45. Although Mr. Inglis is quite concerned about the impact of a purported regime change on betas, it is important to note that none of the academic papers he cites indicate that beta has been affected by these sentiments about Chinese companies. There is no evidence or even a hypothesis from any of Mr. Inglis' cited papers that covariances are affected. Instead, the authors of those papers are concerned with the impact on the stock price levels of the non-fraudulent companies, not the impact on covariances between a company's stock and the market.
- 46. Assuming for sake of argument that Mr. Inglis' purported regime change should be addressed, "correcting" for this would actually increase my beta estimate. I note that nine of the 51 months in my 4.3-year beta of 1.78 includes data prior to the 28 June 2010 "regime change," When I exclude data prior to the "regime change," had Mr. Inglis tested, he would have found that Shanda's beta increases, which would cause my DCF value to decline. Specifically, Table 2 below shows that as I exclude each of the nine months prior to the "regime change," my beta increases from 1.78 (when measuring beta starting on 30 September 2009) to 2.02 (when measuring beta starting on 30 June 2010, after the Muddy Waters report). Beta further increases from 2.02 to 2.22 when I exclude virtually all data from 2010 and measure a three-year beta starting 31 December 2010...
- 47. Mr. Inglis also fails to empirically test if the "regime change" actually affected the betas of Changyou and NetEase. As shown in Table 3 below, NetEase's two-year raw weekly beta (the type of beta Mr. Inglis relies upon) increases from 1.024 prior to the "regime change" to 1.115 during measurement period used in the Inglis Report. Even when NetEase is averaged together with Changyou's beta (which Mr. Inglis opined was not comparable to Shanda), the average pre-"regime change" beta of 1.08 is essentially indistinguishable from Mr. Inglis' measurement period of 1.00:...
- 48. Table 3 above shows no indication that Mr. Inglis' industry beta has been significantly affected by concerns of a "regime change." Therefore, Mr. Inglis unnecessarily avoids data prior to the "regime change."
- 49. Finally, Mr. Inglis' peer betas also show no indication of a structural shift in industry betas after the announcement of the Shanda transaction on 27 January 2014. As shown in Table 4 below, NetEase's raw weekly beta (the type of beta



Mr. Inglis relies upon) prior to the Shanda deal announcement increases from 0.75 to 1.03 during the post-deal announcement period. Even when NetEase is averaged together with Changyou's beta (which Mr. Inglis opined was not comparable to Shanda), the average pre-deal announcement beta of 1.04 is essentially indistinguishable from the post-deal announcement beta of 0.96:.....

- 50. This indicates that Mr. Inglis has no valid basis for ignoring Shanda's pre-deal announcement beta. It further indicates that, because there was no structural shift in Mr. Inglis' industry beta between these two time periods, there should be no expectation of a structural shift in Shanda's beta either.33 Therefore, Shanda's directly-measured pre-deal announcement beta is a reasonable and appropriate estimate for Shanda's beta as of the valuation date.
- 51. In sum, the best indication of Shanda's beta as of the valuation date is Shanda's directly measured beta of 1.78, not Mr. Inglis' indirect beta that is the average of two other gaming companies' directly measured betas.
- 52. As I have shown, Mr. Inglis' concerns about "regime change" are unfounded and cannot justify his rejection of Shanda's beta. Moreover, Mr. Inglis has no criticism of the efficiency of the trading market for Shanda's stock, which is a relevant issue when deciding to use a market-model approach. This is probably because Shanda's trading market exhibits several of the hallmarks of stocks that trade in an open, developed, and efficient marketplace. As I stated in the Jarrell Report, "I found that the trading market on NASDAQ for Shanda's common stock was characterized by active trading, low trading costs, and a sizeable market capitalization. I provide the detailed bases for this conclusion in Appendix C, which further supports the use of a 4.3-year beta measurement period.
- (c). I have carefully read the papers relied on by Mr Inglis. They do seem to me to demonstrate a clear consensus among experts in the field that there was a significant adverse impact on the value of all Chinese companies listed in the U.S., that many such companies' shares were undervalued and that the exceptional circumstances had given rise to a form of market failure. As Beatty, Lu and Luo note "the large scale of detected frauds [during 2010-2011] significantly eroded investor confidence and precipitated a dramatic market collapse. Our study documents pervasive negative equity returns, severely constrained liquidity and very few new Chinese firm U.S. IPOs ..both good and bad firms suffered substantial losses ." (pages 4-5). They also highlight what they label as a "severe information asymmetry between investors and entrepreneurs" which present, in the words of Chen, Huang, Wang and Wu, "insiders with superior information [with the opportunity to] take the company private for a wealth gain."
- (d). but I also accept that the research on which the papers are based represents to some degree work in progress (Hansen and Oqvist writing in August 2015 state that their "study is an early probe into a phenomenon that is arguably still on-



going we hope that later studies will follow up this one .."), that the data samples on which the research is based are in some cases acknowledged to be limited (although Beatty, Lu and Luo used a sample of 279 Chinese firms) and that none of the papers have been published in peer reviewed publications. This does suggest to me that the evidence and the undervaluation hypothesis which is based on such research are yet to be fully verified and therefore that the weight to be given to the research needs to be adjusted accordingly.

- (e). however such caveats do not, in my view, mean that it is appropriate to ignore completely the careful and detailed work done by a by a significant number of academics and analysts. I note that Professor Jarrell says that even if the "regime change" for which Mr Inglis contends is accepted, it would not result in a reduction of his (Professor Jarrell's) estimate of Shanda's beta and that furthermore Mr Inglis had failed to show that the calculation of the beta was affected. However, I was not satisfied that these responses meant that the Court could safely ignore Mr Inglis' opinion or the evidence upon which he relied. Like Mr Inglis I was puzzled as to why Professor Jarrell thought it was relevant to adjust his beta estimate by excluding data prior to the regime change, when the issue relates to data relating to the period of the regime change. I was also not convinced by Professor Jarrell's argument that there was no evidence that the data would impact the beta analysis or that co-variances were affected. It seems to me that Mr Inglis had adequately dealt with this point and explained his reasons for believing that these effects would impact the analysis of beta in the Inglis Supplemental Report (see page 58 of the Inglis Supplemental Report, paragraphs 6.54 and 6.55).
- (f). once again the evidence is finely balanced. But I am satisfied that there is sufficient evidence of the problem identified by Mr Inglis to raise material concerns that the data derived during the relevant period has been subject to exceptional and distorting effects such that it might be unreliable and result in an error in the beta estimate.

The direct/indirect betas points

151. As regards the direct/indirect betas point I would comment as follows:

- (a). Professor Jarrell's opinion was set out in the Jarrell Supplemental Report as follows:
 - 22. Beta is generally computed using market model regression analysis. For public companies, their actual betas are easily calculated by running a market model directly using the public company's actual stock returns. For private companies, however, "comparable" publicly traded companies must first be identified and then those companies' betas are directly measured. This collection of betas from those other companies are then used to determine an "indirect" beta for the private company. Because Shanda is a publicly traded company, I use Shanda's actual returns to directly estimate Shanda's beta.
 - 23. Mr. Inglis calculates his discount rate using an indirectly-measured beta of 1.00. This beta is based on the average of: (i) Changyou.Com Ltd's ("Changyou") two-year weekly raw beta of 0.886, and (ii) NetEase Inc.'s ("NetEase") two-year weekly raw beta of 1.115.....
 - 27. As I discussed in the Jarrell Report, there are two general ways to estimate a company's beta: directly and indirectly. A directly-measured beta is based on a regression of the subject company's publicly-traded stock returns against the returns of the market. An indirectly measured beta is based on regressions of peer companies or comparable publicly-traded companies, not the subject company.
 - 28. The customary practice, and my preferred approach, is to use a firm-specific direct measure of beta, with reference to the company's own historical market prices, rather than a rough industry approximation. As Shannon Pratt and Roger Grabowski indicate:
 - "When shares of a company being valued are publicly traded in an active market, customary practice is to determine beta by reference to the company's own market prices." [See S. Pratt, R. Grabowski, Cost of Capital in Litigation, John Wiley & Sons, Inc., 2011, pp. 171-172 (emphasis added).]"
 - 29. Indirectly-measured peer company betas are typically used only as a substitute for a directly-measured beta when the subject company is so thinly traded that the market model cannot be relied upon or privately held and thus a directly measured beta is unavailable. Ibbotson states:
 - "Many securities do not trade every day. The market for some securities is so thin that they may not trade for several days. If a stock is not trading, its stock price is not reflecting the movement of the market, which drives down the covariance with the market, creating an artificially low beta. Because betas for individual companies can be unreliable, many analysts seek to calculate industry or peer group average betas to determine the systematic risk inherent in a given industry.... A beta is either difficult to determine or unattainable for companies that lack sufficient price history (i.e., non-publicly traded companies, divisions of companies, and companies with short price histories). Typically, this type of analysis involves the determination of companies competing in a given industry and the calculation of some sort of industry average beta."
 - 30. I also note that the Delaware Court of Chancery routinely uses directlymeasured betas when valuing publicly-traded companies:
 - "The experts disagreed about beta. Cornell derived a beta of 1.35 by analysing the Company's peers. Hubbard derived a beta of 1.31 by analysing weekly observations over a two-year period. A beta specific to the Company [i.e., a directly measured beta] is more targeted than a blended beta calculated from peer companies, particularly when both experts opined that the Company had



few peers. This decision uses Hubbard's beta." [In Re Appraisal of Dell Inc., 2016 WL 3186538 at page 48]

31. Even though a firm-specific direct measure of Shanda's beta is more scientifically valid than a rough approximation using industry data, Mr. Inglis only reports Shanda's directly measured beta using post-deal announcement data, which is inappropriate and unusable. In the [Jarrell First Report], I noted the widely-known problem of using post-deal announcement data for measuring betas and instead used pre-deal announcement data. Incredibly, Mr. Inglis does not even report, let alone use, Shanda's directly-measured beta using pre-deal announcement data.

anywhere in his report or exhibits.

32. Had Mr. Inglis examined Shanda's pre-deal announcement beta that I use, he would have found that it has explanatory power that is more than seven times greater than his indirect-beta from Changyou (i.e., 38% R-squared versus 5%) and more than twice his indirect beta from NetEase (i.e., 38% R-squared versus 16%). Additionally, Shanda's directly measured beta has a higher level of statistical significance (with a t-statistic of 5.48) than either Changyou (t-statistic of 2.36) or NetEase (t-statistic of 4.44).

(b). during cross-examination, as Mr Levy noted in his closing submissions quoted above, Mr Levy had challenged Professor Jarrell's evidence that it was the customary practice to use a firm specific directly measured beta and his failure to refer the Court to examples of Delaware cases in which the Delaware courts had questioned the reliability of directly measured betas and preferred indirectly measured betas. Mr Levy referred Professor Jarrell during his cross-examination to a recent Delaware case in which the court had indicated and expressed concerns over the reliability of using directly measured betas alone and preferred an estimate based on a peer group. This was *DFC* (in which the court also referred to *In re Global Telecom* 993 A.2d. 523, an opinion of Chancellor Strine decided on 23 April, 2010). Professor Jarrell, in response, conceded that there were cases in which an indirectly measured beta would be preferred. He said this during his cross-examination (see the day 5 transcript, pages 173-174):

MR LEVY.

I have taken you essentially to two cases for the price of one, because I have given you DFC and the reference to Golden Telecom, in which the court adopted a different approach, didn't it?

PROFESSOR JARRELL

Let me add this to the discussion. There are conditions, as I pointed out in my report and as is obvious from these papers that we have been reading ,that there are times when you don't -- when I wouldn't be comfortable using - I myself have used peer company Betas to estimate the Beta of a company when I didn't have confidence that the trading market for the company that's being appraised is sufficiently efficient. So if there are defects in the trading market or other types of problems that beset the



measurement of the directly measured Beta, then of course you would turn to this type of methodology to help correct that defect. So I don't know in this case, because I'm not that familiar with this case, why both experts were using pure Betas. But I do know that the issue of the efficiency of the market, I think, in Golden Telecom, was an issue. But I agree with you. What you said is true.

MR LEVY

So, (inaudible) do you not consider it would have been appropriate to have informed the court, even if this was nominally Delaware court, that there are these other approaches and I prefer mine because -- for reasons X, Y and Z; would that not have been a more appropriate way to report the accurate state of the authorities in Delaware? You don't think that would have been a more appropriate way to have reported the matter to the court?

PROFESSOR JARRELL

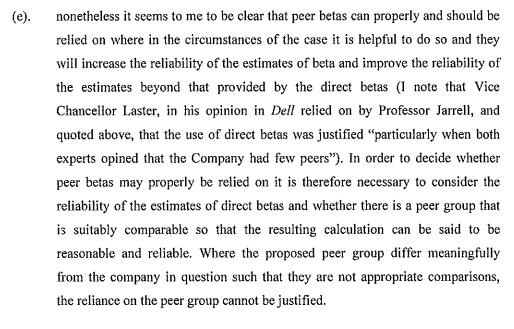
I don't know. I didn't think of it at the time you are asking me to consider it now. If I re-wrote it, maybe I would take your advice.

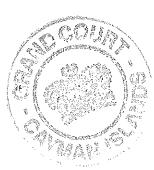
(c). the relevant quotation from *DFC* which was shown to Professor Jarrell by Mr Levy is a statement made by Chancellor Bouchard in his opinion in which he said (at page 10) as follows:

... the experts agree that using a peer group tends to be preferable to using only [the relevant company's] own beta because using a single company's beta exposes the estimate to measurement error and idiosyncrasies ... I agree that using [the relevant company's] beta in isolation would expose the discounted cash flow model to measurement error ..

(d). DFC was publicly traded on the NASDAQ (see page 1 of the opinion) and so is inconsistent with the suggestion, implicit in or at least suggested by Professor Jarrell's evidence, that the Delaware courts will generally not use peer betas in cases where listed shares are involved. Having said that, in *DFC* as Chancellor Bouchard noted, the experts had agreed that using a peer group was preferable (and indeed one of the experts commented in his evidence at trial that he was sufficiently comfortable with the relevant company's standalone beta to use it in isolation). Furthermore, *DFC* is a case in which at least some of the peer betas relied on by one of the experts were rejected by the court - Chancellor Bouchard was not satisfied that the members of the peer group relied on by one of the experts were sufficiently similar and therefore did not rely on them for the purposes of the Court's valuation (see page 9 of the opinion).







- (f). the reasons relied on by Mr Inglis for using and relying on peer betas were summarised and explained in the Inglis Supplemental Report as follows (see pages 52-53):
 - 6.35 If a company is publicly traded, its beta can often be calculated from its past trading data so long as the trading history is seen as representative of the business going forward. However, where it is not possible to do this (because, for example, the company is not publicly traded, traded share prices are distorted, the shares are illiquid, etc.), the better approach is to calculate the betas of public companies operating in the same industry and use them as a proxy for the beta of the subject company.
 - 6.36 While Shanda was publicly traded, I estimated its beta using publicly traded comparable companies as at the Valuation Date. I consider this is the most appropriate approach in these circumstances for two reasons:

first, Shanda's share price reflected the take-private process after the announcement on 27 January 2014 and thus is not usable after that date. It appears that Professor Jarrell agrees with me on this point, yet he still uses Shanda's own pre-announcement share price data and, thus, ends up with a measure that is 22 months out of date by the Valuation Date; and

second, a beta calculation using data prior to 27 January 2014 would be affected by the re-rating of Chinese companies in the US from around the start of 2011. I do not know why Professor Jarrell considers it is appropriate to estimate a beta for Shanda over a period when US markets began to apply a discount for "being Chinese".

- 6.37 In particular, for my analysis, I identified four Chinese games companies trading in the US (all on the NASDAQ), of which I excluded two on the basis that they received take private offers in June 2015. I used the average beta of the other two as a proxy for the beta of Shanda.
- 6.38 I checked these data against the average beta of non-Chinese games companies listed in the US, which was broadly similar.

- (g). I have already discussed each of these points above.
- (h). as regards the reasons and justifications for the peer group he had selected, Mr Inglis said the following in the Inglis First Report:
 - A14.3 1.00 is my estimate of Shanda's equity beta, a measure of its market risk, as based on the betas of Chinese games companies listed on the NASDAQ...
 - A14.25 As I explain in Section 8, while Shanda was publicly traded, its share price appears to have reflected the take-private process after the announcement on 27 January 2014. I therefore do not consider that a measure of Shanda's beta at the Valuation Date(negative 0.004, as based on a regression of weekly USD returns over a two-year period against the S&P 500 index),524 is a meaningful indicator of its beta.
 - A14.26 I estimate Shanda's beta using publicly traded comparable companies as at the Valuation Date. In particular, I have identified four Chinese games companies trading in the US (all on the NASDAQ),526 of which I rely on two for the reasons I explain in Appendix 6....
- (i). in Appendix 6 Mr Inglis said as follows:
 - A6.10 Because my estimate of Shanda's WACC is based on US market statistics, I consider the four US listed companies in my analysis of Shanda's beta, as I explain in Appendix 14. Of these, I exclude two companies (#7 and 8 in Table A6.1) on the basis that they received take-private offers in June 2015, from which point their publicly traded share prices are likely to have been affected by those offers.
 - A6.11 I have also sought to identify non-Chinese games companies listed in the US, using the same screening criteria set out above. I obtain a list of 11 companies, of which I then manually screen out six on the basis that, as based on their business descriptions, they are involved in unrelated or highly diversified businesses.
- (j). Mr Inglis' two "Chinese games companies trading in the US" are Changyou.Com Ltd and NetEase Inc. In Appendix 6 of the Inglis First Report, Mr Inglis set out the steps he had taken to identify potentially comparable companies for the purpose of calculating the trading multiples and betas used in his analysis. Table A 6.1 listed and provided outline details of twenty six companies whose operations were located in China and whose shares were listed on an exchange in the U.S. Table A6.2 then listed and provided outline details of eleven gaming companies whose operations were located and whose shares were listed in the U.S.



(k). The following details of and comments concerning Changyou.Com Ltd and NetEase Inc. appear in table A6.1:

Changyou, Com Ltd

Stock Exchange: US

Location of operations: China

"Changyou.com Limited is an online game developer and operator. The Company is engaged in the development, operation and licensing of online games for personal computers (PCs) and mobile devices. The Company's segments include an Online Game segment, which consists of PC games, mobile games and Web games, and the Platform Channel segment, which consists primarily of online advertising services on the 17173.com Website, and a relatively small amount of Internet value-added services (IVAS). PC games are interactive online games that may be played simultaneously by hundreds of thousands of game players; mobile games are played on mobile devices and require an Internet connection, and Web games are online games that are played through a Web browser with no local game software installation requirements. The Company's 17173.com Website is an information portal in China, which provides news, electronic forums, online videos and other information services on online games to game players."

Comparable, subject to my comments at paragraph 7.8 as to differences in growth prospects which nevertheless limit suitability as a comparable [in paragraph 7.8 Mr Inglis had noted: Changyou.Com Ltd, whose revenues were expected to decline in overall terms over 2016 and 2017, is not comparable to Shanda in terms of expected future growth. For that reason I present the average multiples for Chinese games companies in the US both with and without Changyou.Com Ltd].

NetEase Inc

Stock exchange: US

Location of operations: China

NetEase, Inc. (NetEase) is a technology company. The Company operates an interactive online community in China and is a provider of Chinese language content and services through its online games, Internet media, e-mail, e-commerce and other businesses. The Company operates through three segments: Online Game Services; Advertising Services, and E-mail, E-commerce and Others. Its online games business primarily focuses on offering personal computer (PC)-client massively multi-player online role-playing games (PC-client MMORPGs), as well as mobile games to the Chinese market. The NetEase Websites provide Internet users with Chinese language online services centred over three core service categories, which include content, community and communication. Its online advertising offerings include banner advertising, direct e-mail, sponsored special events, games, contests and other activities. It offers free and fee-based premium e-mail services to its individual users and corporate users.

Comparable

(l). the (asset) betas derived by Mr Inglis for these two companies was 0.886 for Changyou, Com and 1.115 for NetEase Inc. The mean (or average) for these two companies was 1.00.



(m). Mr Inglis then checked this analysis against asset betas for five of the companies of the U.S. (non-Chinese) gaming companies he had identified as being comparable (and listed in Table A6.2 of the First Inglis Report). The six companies left out were excluded because based on their business descriptions they were involved in unrelated or highly diversified businesses (see paragraph A6.11 of the Inglis First Report). The descriptions of the five companies included were set out in Table A6.2. The five companies were Activision Blizzard Inc (beta: 0.936); Electonic Arts Inc (beta: 1.114); Glu Mobile Inc (beta: 1.405); Take-Two Interactive Software Inc (beta: 0.936) and Zynga Inc (beta: 0.862). The mean for this group was 1.051. Mr Inglis therefore concluded that using this group supported his beta estimate and would also result in an estimate of 1.00.



(n). The following details were provided by Mr Inglis in Table A6.2 as to the nature of the businesses of these five companies and the basis for their being comparable with Shanda:

Activision Blizzard Inc

Stock exchange: US

Location of operations: US

"Activision Blizzard, Inc. is a developer and publisher of online, personal computer (PC), video game console, handheld, mobile and tablet games. The Company operates through Activision Publishing, Inc. (Activision) and its subsidiaries, BlizzardEntertainment, Inc. (Blizzard) and its subsidiaries, and Other segments. The Company also develops products spanning other genres, including first-person action, action/adventure, role-playing, simulation and strategy. It distributes interactive entertainment hardware and software products in Europe through its European distribution subsidiaries: Centresoft in the United Kingdom and NBG in Germany. It offers games that operate on the Microsoft Corporation (Microsoft) Xbox One (Xbox One) and Xbox 360 (Xbox 360), Nintendo Co. Ltd. (Nintendo) Wii U (Wii U) and Wii (Wii), and Sony Computer Entertainment Inc. (Sony) PlayStation 4 (PS4) and PlayStation 3 (PS3) console systems."

Comparable

Electronic Arts Inc

Stock exchange: US Location of operations: US

"Electronic Arts Inc. develops, markets, publishes and distributes games, content and services that can be played by consumers on a range of platforms, which include consoles, personal computers (PCs), mobile phones and tablets. The Company's games and services are based on a portfolio of intellectual property that includes established brands, such as FIFA, Madden NFL, Star Wars, Battlefield, the Sims and Need for Speed. The Company markets and sells its games and services through retail channels and

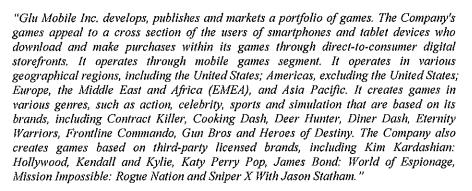
through digital distribution channels. The Company's PC games and additional content can be downloaded directly through its Origin online platform, as well as through third-party online download stores. Its mobile, tablet and PC free-to-download games and additional content are available through third-party application storefronts, such as the Apple Application Store and Google Play."

Comparable



Stock exchange: US

Location of operations: US



Comparable

Take-Two Interactive Software Inc

Stock exchange: US

Location of operations: US

"Take-Two Interactive Software, Inc. is a developer, publisher and marketer of entertainment for consumers around the world. The Company develops and publishes products through its labels, Rockstar Games and 2K. It operates through publishings agreement. It has a portfolio of software content for the hardware platforms in a range of genres, including action, adventure, family/casual, racing, role-playing, shooter, sports and strategy, which it distributes across the world. The Company's products are designed for console gaming systems, such as PlayStation 3 and PlayStation 4; Xbox 360 and Xbox One, and personal computers, including smartphones and tablets. Rockstar Games is the developer and publisher of Grand Theft Auto, as well as other franchises, including L.A. Noire, Max Payne, Midnight Club and Red Dead. 2K publishes owned and licensed titles across a range of genres. It has internal development studios in Canada, China, Czech Republic, the United Kingdom and the United States."

Comparable

Zynga Inc

Stock exchange: US Location of operations US

"Zynga Inc. is a provider of social game services. The Company develops, markets and operates social games as live services played on mobile platforms, such as iPhone Operating System (iOS) and Android and social networking sites, such as Facebook. The



Company operates through developing and monetizing social games segment. It has developed various social games, including games in its Slots, Words With Friends, Zynga Poker and FarmVille franchises. The Company also launched various games on mobile and Web, including Words on Tour and FarmVille: Harvest Swap in the Casual category; Black Diamond Casino and Princess Bride Slots in the Social Casino category; Empires & Allies in the Action Strategy category, and Mountain Goat Mountain. It invests in various game categories, including Social Casino, Casual, Action Strategy and Invest Express. It analyzes the data generated by its players' game play and social interactions to guide the creation of content and features."

Comparable

- (o). Professor Jarrell criticised Mr Inglis' approach in the Jarrell Supplemental Report as follows:
 - 34. Not only did Mr. Inglis depart from the standard approach of directly measuring Shanda's beta, his reliance on indirectly measured "peer" betas is logically inconsistent with his rejection of those very same "peers" for purposes of valuation based on his conclusion that such companies were not sufficiently similar to Shanda.
 - 35. Specifically, Mr. Inglis concludes in his trading multiples analysis that "Changyou.Com Ltd is not comparable to Shanda in terms of expected future growth" and presents his average multiples "both with and without Changyou.Com Ltd." Despite this, Mr. Inglis places a 50% weight on Changyou for his determination of Shanda's beta. It is inconceivable to me that Changyou's valuation multiple can be unreliable in valuing Shanda, but yet Changyou's beta which is a significant determinant of Changyou's value—can simultaneously be considered comparable and reliable for use as a proxy of Shanda's beta.
 - 36. In addition, both Changyou and NetEase (the other half of Mr. Inglis' peer beta) traded in the U.S. on NASDAQ and were used as part of Mr. Inglis' trading multiples analysis. [In addition to Changyou being "not comparable" to Shanda, NetEase also has significant comparability issues. NetEase had LTM revenue of RMB18.4 billion that was more than six times greater than Shanda's LTM revenue of RMB3.0 billion. NetEase also had LTM EBITDA of RMB6.3 billion that was nearly six times greater than Shanda's LTM EBITDA of RMB1.1 billion. See [the Jarrell First Report], Exhibit 5. As I stated in the [Jarrell First Report], "[g]enerally, such a wide dispersion in size among companies vitiates the necessary assumption that these companies are comparable for valuation purposes."]Mr. Inglis concludes that "...trading multiples in the US should not be afforded any great weight." Again, despite this, Mr. Inglis places 100% weight on these two "peer" companies, which decision alone increases his DCF fair value by more than 80%.
 - 37. Even after rejecting these "peer" companies for valuation purposes, Mr. Inglis inconsistently embraces them as a proxy for Shanda's beta. This is inconsistent because the necessary assumption when using peers-based betas to approximate a company's beta is that the peers are subject to similar risk as the subject company. But by using a peer company beta for Shanda, the "risks" that Mr. Inglis is measuring, however, are not specific to Shanda, but rather are specific to the companies underlying his rejected trading multiples analysis.
 - 38. The Delaware Court of Chancery has previously rejected the use of peer-based betas when those peers were deemed to not provide a reliable indication of

value:" The Respondent also calculated beta using a peer group method, i.e., a comparable companies analysis. For the reasons stated in subsection C above, I do not find the Gordian Experts' comparable companies analysis reliable. Accordingly, I rely solely on my calculation of a [directly-measured] Cogent forward beta of 1.397 for purposes of determining the appropriate WACC here"

39. Mr. Inglis does not explain why a peer-based beta is appropriate here in spite of his concession that those same peers do not provide a reliable indication of value.



Mr Meeson pressed Mr Inglis during his cross-examination on these points and the justification for treating these companies as comparable. As regards the challenge made to his use of ChangYou, he explained (as Mr Levy mentioned in his closing submissions) that ChangYou was comparable for the purposes of estimating beta because the beta calculation is done over a period of two years and for most of that period ChangYou was forecast to be profitable (so that the relevant observations save possibly for the last few observations were) reliable for the beta calculation. The position was different as regards using ChangYou as a comparable company for a valuation in November 2015 by which time ChangYou had become loss making and was subject to a negative growth forecast. Mr Inglis also explained that it was justifiable to use the betas derived for the U.S. gaming companies since the evidence demonstrated that from the beginning of 2014 these companies have a great deal in common with Shanda because the most important factor was that they were all gaming companies and the Chinese effect had by then ceased to have an impact.

(q). in my view NetEase Inc (despite the revenue differences highlighted by Professor Jarrell) is sufficiently comparable with Shanda to be a useful and reliable peer company for the purpose of calculating Shanda's beta. Changyou also has a significant number of points in common and on balance I am satisfied that it is appropriate to use it in the estimate of Shanda's beta. I find it more difficult to assess, on the evidence, how close the comparison is with the U.S. companies but I have not been convinced by the evidence of Professor Jarrell that Mr Inglis' opinion is unreasonable and that they are of no assistance and therefore to be ignored.

The measurement period point

152. As regards measurement period point:

(a). In DFC Global Chancellor Bouchard noted (page 10) that [emphasis added]:

In selecting their betas, Beaulne used a five-year measurement period and Dages used a two-year period. A five-year period is the most common for measuring beta and generally results in a more accurate measurement, although two-year periods are used in certain circumstances [see the footnote: Cost of Capital at 208; James R. Hitchner, Financial Valuation: Applications and Models 256 (3d ed. 2011). A related decision is how frequently to sample beta, with a monthly basis being the most common Cost of Capital at 208. Here, both experts used weekly sampling, as do I.]

At trial, Dages opined that he used the two-year measurement period to capture the regulatory uncertainty in the market. Beaulne contended that shorter periods are used when a fundamental change in business operations occurs, not when an industry is continuously going through regulatory change. Beaulne's account better matches that of authoritative literature, which lists reasons for a shorter period such as a major acquisition or divestiture, financial distress, or cancellation of a significant contract. In my opinion, a five-year measurement period is conducive to a more accurate beta estimate in this case.

(b). In *Andaloro v PFPC Worldwide Inc* 2004 Del. Ch. Lexis 12, Vice Chancellor Strine said as follows:

[The experts] did not take their betas from the same reporting periods or unlever them in the identical way. [The first expert] chose to measure his beta over five years, taking monthly measures providing 60 data points over the 60 months. [The second expert] instead measured the beta over a two year period, taking weekly data for a total of 104 data points over the 104 weeks. Both methods find support in the literature as responsible methods. Neither party has cited any study proving that one is preferable to the other, and there are reasons to believe each has some value

(c). the footnote to this paragraph stated:

See, e.g., Aswath Damodaran, Applied Corporate Finance, 109 (2d. ed. 2005) ("[T]he trade off [between two and five year betas] is simple: a longer estimation provides more data, but the firm itself might have changed its risks characteristics over the time period."). The longer five year period might be thought to provide an estimate that includes price movements in both bull and bear markets and that smoothes out any short-term anomalies. The two year period might be thought to provide information that is more current and that provides a better insight into the current beta, especially where some seismic market or industry shift is thought to have occurred. In explaining the use of the two year beta, [the first expert suggested that two of PFPC's comparables had strong shifts in their betas over the five year period, and also suggested that the tragedy of September 11, 2001 might have seriously altered the systemic risk in the investment industry. He did not support these assertions with convincing empirical data.

(d). these dicta seem to me to record the right approach to disputes over measurement periods. As with so many issues that arise in relation to the estimate of a company's beta, there are trade-offs between different approaches and it is necessary to make a judgment about which approach is most appropriate on the facts of the particular case. In this case Mr Inglis' use of the shorter two





year period has been driven by his view that the data relating to a longer period is tainted. As I have already noted, it seems to me that this is not an unreasonable view in the circumstances. The question then becomes whether a two year period is too short to be reliable and it seems to me to be clear from the cited textbooks and literature that it is not. The further question then arises as to whether the use of a 4.3 year period (ending with the public announcement in January 2014) is clearly preferable. I do not think it is, but neither is two year period clearly preferable either. While the longer period offers the benefits noted in the extract from Professor Damodaran's book quoted in paragraph 152(c) above, and is clearly a measurement period which can be reliable and consistent with the literature, it is in this case subject to the risks of error that Mr Inglis has identified and which I have found to be credible and incapable of being dismissed.

The weekly/monthly returns point

- 153. As regards the weekly/monthly returns point, I would make the following comments:
 - (a). Professor Jarrell relied on his statistical analysis to demonstrate that the monthly betas had a greater explanatory power and reliability, in reliance on the Rsquared analysis.
 - (b). Mr Inglis challenged Professor Jarrell's view and took the position that the monthly observation periods used by Professor Jarrell were not statistically more reliable than the weekly periods because the weekly betas he had presented had higher standard errors than the monthly betas and this was a more useful guide than R-squareds.
 - (c). R-squared (R^2) and standard error are two of the statistics that emerge from and are used in connection with the regression approach to estimating betas. This involves the preparation of a regression of returns on the shares against returns on a market index. The slope of the regression corresponds to the beta of the shares and measures, as we have seen, the riskiness of the shares. While the statistical explanation of the R-squared is that it provides a measure of the goodness of fit of the regression, the economic rationale is that it provides an estimate of the proportion of the risk of a firm that can be attributed to market risk; the balance $(1 R^2)$ can then be attributed to firm-specific risk. So, for

example, where the R-squared of the regression is 9.43% it suggests that 9.43% of the risk (the variance) comes from market sources while the balance of 90.57% of the risk comes from firm-specific components. The standard error of the beta estimate is a different measure. The slope of the regression, like any statistical estimate, may be different from the true value, and the standard error reveals just how much error there could be in the estimate. The standard error can also be used to arrive at confidence intervals for the "true" beta value from the slope estimate. Thus if the standard error of a beta estimate is 0.23, and the estimate is 0.56, this statistic implies that the true beta for the company concerned could range from 0.33 to 0.79 (subtracting and adding one standard error to the beta estimate of 0.56) with 67% confidence and from 0.10 to 1.02 (subtracting and adding two standard errors to the beta estimate of 0.56) with 95% confidence (see Damodaran Investment Valuation 3rd edition, 2012 pages 184-186 - note that Professor Damodaran comments that "while these ranges may seem large they are not unusual for most U.S. companies. This suggests that we should consider estimates of betas from regressions with caution."!]

(d). in the present case the R-squareds for the monthly betas were significantly higher than those for the weekly betas (see paragraph 144 above). This means that they support the view that the monthly betas capture more of the Shanda specific risk and are therefore more reliable. However the monthly betas have a higher standard error than the daily and weekly betas that Professor Jarrell presents and therefore can be considered to be less reliable (since this weekly and daily data is likely to be closer to Shanda's true beta). I see that both these statistical measures are helpful in making the comparison between weekly and monthly measurement period but it seems to me that in this case neither is determinative. R-squared is focussing on how much risk comes from the company rather than the market; standard error focusses on how far away from the true beta the estimated beta could be. The monthly betas are strong on one measure and weaker on the other. However, that does not, in my view, mean that the application of the statistical measures entitles the Court to conclude that one is clearly to be preferred and more reliable than the other.

The month end measurement point

154. As regards the month end measurement point I would comment as follows:

(a). Professor Jarrell candidly acknowledged during his cross-examination that there were doubts about the reliability of his approach to calculating monthly betas. His evidence was given in response to a question that I raised with him, as follows:

THE COURT:



In terms of your opinion, in light of this evidence or this analysis, which suggests that the Beta that you come up with for a monthly Beta varies according to the start and end date within the month, that's what this suggests. I understand that you have not seen this kind of analysis before. What is your opinion as to the impact of this on the reliability of just using a monthly Beta that ends --begins and ends

PROFESSOR JARRELL.

My Lord that is the relevant auestion to me. As I look at this and as I ponder this and I have given that a lot of thought and, although I don't know what to make of this, I have thought a lot about it. I have several things I can say. I don't know if they are relevant but I have several things I can say, but the answer to your question is that: first off, I followed all the rules, the standard conventional rules. Nothing up my sleeve, this is how everybody computes returns, this is all the evidence that we have, all the comparables that we have, risk premiums that we rely on, the size premiums that we rely on, all of that is predicated on measuring returns the same way. Number one, for purposes of comparability, I'm confident that I followed all of the conventional standard rules and no one has suggested otherwise. Secondly, if you look at my particular model compared to all of these other models, the end of the month to the end of the month model, which gives me my Beta of 1.78, has the highest R-squared, it has the highest t-statistic, and it has the lowest standard error of the Beta. So, of all of these, my model would be the best model, hands down. Since I followed all the rules given that information, I'm comfortable -- and it makes sense to me that Shanda's Beta should be above 1. That's just common sense. But, in light of all the evidence, I have gone back and thought about it and I think that my opinion is valid and I don't think that this undercuts it. I do not think I would put this chart on a check mark as something that confirms my analysis. You know, I have given it a lot of thought because it is, in appearance, troubling. What's troubling is I understand why it has the pattern that it has because of the overlap. The 15th will always be -- if you do this again and again, I have thought about this, regardless of whether -- whatever model you use, if you do this sequential changing of the days that you use to measure the monthly Beta, the 15th will always be the one that is the most deviant from the end points. As you get to the end points, you are getting back to the same thing, right? So, now, the middle one that has an opportunity to be the most different, will either be lower than the end point equal to the end point, or higher than the end point. Those are the three choices. This one is lower than the end point. Well, if it is lower than the end point then the



end points will have to move more or less gradually down to that middle. So you will get that pattern, that U or that V. If it is equal to the end points then it will be roughly flat If it is greater than the end points, then the overlapping models must kind of start from here and they will approach that, you will get an opposite, a frown instead of a smile. That much I have figured out, just from logic and knowledge of empirical thing that's troubling, the only thing -- the thing that's troubling, the thing that matters from this, in terms of any potential diagnostic is what happened on the 15th? It says here that if you measure it from the 15th to the 15th the market model fails. It is statistically insignificant. There's no t-statistic. I mean, the Beta is below 0.5. So that, I don't know what to make of that and I'm just stuck there. But I go back and I say, does this really undercut -- maybe ten years from now this will become a famous diagnostic test, maybe this will be discovered, maybe Mr Inglis should write this up and submit it to a journal, I'm serious. Maybe this will turn into something, maybe this means something but, at this point, I have to withhold judgement, and I have to go back to all of the other reasons that I -- that's [a]bas[i]s for choosing my monthly Beta. I have a very high R-squared by market model standards, and that's the most important piece of information. I have a very, very good tstatistic. For market models, an R-squared near 50% is extraordinary...

(b). I have quoted the extract from Professor Jarrell's answer at length because it seems to me to involve a candid admission that he has been unable to dismiss or find a convincing solution to Mr Inglis' challenge to his use of month end observations, which he agrees is "troubling" and which suggests that there is an arbitrary element in the estimate of beta on such a basis. It appears that this is not an issue that has yet been adequately addressed in the literature or seriously been raised before. The Court is not in a position to resolve the dispute but must assume that there is a material doubt over this approach to calculating betas. It is, on the other hand, correct to say, as Professor Jarrell does, that reliance on monthly betas calculated by reference to month end observations is a frequent and perhaps standard practice but that does not, to my mind, remove the risk that Professor Jarrell's methodology is subject to error.

Conclusions on beta

155. I have carefully considered the opinions of both experts, their respective challenges to the reliability of each other's beta measurement and the extensive arguments and submissions made by Mr Meeson and Mr Levy and reached the following conclusions:

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(a). it seems to me that both experts have adopted methodologies which are consistent with accepted practice and the literature and to that extent each is, prima facie, reliable. But each of their estimates is subject to certain risks and problems which the Court is unable to ignore or completely dismiss.



- (b). as I have explained, in my view there are risks of error associated with a beta estimate for Shanda based solely on the use of (i) data gathered in the period before the announcement of the First Buyer Group proposal in January 2014; (ii) data gathered during the period between 2011 and 2013 affected by the US market undervaluation of the shares in Chinese companies and (iii) monthly betas based on month end observations. There are also risks of error associated with a beta estimate based solely on (i) a small peer group, some of whose members are only just comparable with Shanda and where there remains some room for argument as to the extent of their compatibility since there are a number of points of difference between members of the group and Shanda and (ii) weekly betas measured over a two year period where on some statistical measures the weekly betas are clearly less reliable that the monthly betas.
- (c). it therefore seems to me that in such circumstances it is not safe to rely on just one estimate on its own but preferable (as a way of reducing the risk of error and to take the widest sample available) to use and rely on both estimates. The right course is for the Court to use and combine both estimates and use the average of the two for its beta. It does seem to me to be more reliable in this case to blend and use both the directly and the indirectly measured betas.
- 156. In reaching this conclusion I bear in mind (although I am not formally following) the comments made and approaches adopted by a number of Delaware judges both as to the nature of the process involved in a fair value determination and the appropriateness if the circumstances so justify of using the average of the experts estimates of beta (as well as a blend of direct and indirectly measured betas).
- 157. In Dell, Vice Chancellor Laster said that:

The statutory obligation to make a single determination of a corporation's value introduces an impression of false precision into appraisal jurisprudence." The value of a corporation is not a point on a line, but a range of reasonable values, and the judge's task is to assign one particular value within this range as the most reasonable value in light of all the relevant evidence and based on considerations of fairness." Cede & Co. v. Technicolor, Inc., 2003

WL 23700218, at *2 (Del. Ch. July 9, 2004), aff'd in part, rev'd on other grounds, 884 A.2d 26 (Del. 2005).

158. In the same case, Vice Chancellor Laster concluded that "Having no reason to prefer one realistic case over the other this decision weighs them equally." Of course, I have not concluded on the beta issue that each approach is realistic and without risk. Instead I have taken the view that both approaches are essentially or prima facie reasonable but because of risks identified in relation to each the best approach, which minimises the risks involved, is to use and combine both estimates.

159. In *DFC*, Chancellor Bouchard adopted an approach that involved blending the company's beta with a peer group's beta. He said as follows:

I agree that using DFC's beta in isolation would expose the discounted cash flow model to measurement error. At the same time, the most comparable company to DFC is DFC itself, and in my view it is appropriate to factor DFC's beta into the analysis, a proposition that Dages supports and Beaulne did not rebut. The simplest way to do so is by adding it as a seventh beta in the peer analysis. Although commentary on this approach is somewhat sparse, constructing a beta that blends the company's beta with a peer group's betas finds some support in financial literature and this Court's precedent.

In the Golden Telecom case, this Court supported the theory in two ways. First, the Court used as a peer group an index of NASDAQ-traded telecommunications companies, which the Court noted included the subject company itself. Second, and more importantly, the Court's final beta was a blend of the Company's observed beta, weighted 2/3, and the industry peer group's beta, weighted 1/3. By adding DFC as a seventh "peer" in the beta calculation, I am essentially performing the same exercise, albeit with a smaller peer group and a more modest weight applied to the subject company than in Golden Telecom, to arrive at a final beta weighted 14% (1/7) to DFC's beta and 86% (6/7) to the peer group's beta. Because DCF's own observed beta is a meaningful input alongside the betas of its peers, I consider this weighting preferable to the 0% weighting DFC would receive in the peer-only analysis. I therefore use DFC and its six peers to estimate DFC's beta."

In the present case, because the issues and uncertainties affecting each expert's calculation of beta relate not just to the use of direct or indirect beta I consider that the preferable approach is to use an average of Mr Inglis' beta of 1 and Professor Jarrell's beta of 1.78; that is 1.39. Had I used the blending approach applied by Chancellor Bouchard and simply added Professor Jarrell's directly measured beta to the seven peer companies identified by Mr Inglis the result would have been 1.2925. The difference in this case will no doubt have a not immaterial effect on the amount payable to the Dissenting Shareholders but for the reasons I have given I prefer and will adopt the former approach.

- 161. In the Inglis First Report, in the summary of his conclusions as to value, after confirming that he valued the equity in Shanda at US\$ 7.3 billion (and each ADS at US\$27.03) and that he considered the DCF approach to be the most appropriate way to assess the fair value of Shanda, Mr Inglis went on to say that he considered this to be the *minimum* fair value. He said that:
 - 2.4 I consider this to be the minimum fair value. The fair value of Shanda may, in my view, be greater than this when account is taken of the respective advantages and disadvantages that each of the identified parties (the buyer group and the Dissenting Shareholders) will gain from the transaction.
 - 2.5 I say this because my analysis indicates that the buyer group has the opportunity to relist on a Chinese stock exchange at a price which my analysis indicates is likely to be considerably higher than the amount I have calculated......
 - 3.15 [after having noted that his analysis of the difference between trading multiples for Chinese games companies in the US and China demonstrated that the China values were around 4.9x higher than those in the US he said that]if Shanda were to re-list in China within this range of multiples of China to US traded share price values, it would be valued at around USD 7.1 billion to USD 11.7 billion, implying a value of USD 26.34 to USD 43.17 per ADS.......
 - 3.27 I can find no reliable support for a value of USD 7.10 per ADS, the price at which Shanda was taken private. In my view, this value is far too low on any basis.
 - 3.28 The latest buyer group transactions (and the only ones for firm, rather than contingent, prices) implied prices of USD 10.26 and USD 11.61 per ADS.
 - 3.29 My assessment of the fair value of Shanda, USD 27.03 per ADS, is higher than a valuation based on trading multiples for Chinese games companies listed in the US and Hong Kong, USD 13.43 and 21.91 per ADS, respectively, but significantly lower than one based on those listed in China, USD 66.28 per ADS.31 It is in the region of one based on transaction multiples for sales of 100% of Chinese games companies, USD30.68 ADS, albeit that is based on smaller companies.
- 162. Professor Jarrell challenged any reliance by Mr Inglis on any value to be obtained by Shanda's remaining shareholders from a subsequent listing in China. In the Inglis Supplemental Report, he said as follows:
 - 141. Despite this agreement on the standard of value, Mr. Inglis repeatedly violates this standard by discussing at length the "advantages... the buyer group... will gain from the transaction." Specifically, Mr. Inglis notes that "...the buyer group has the opportunity to relist on a Chinese stock exchange..." at a price he suggests is "likely to be considerably higher" than his fair value opinion.
 - 142. Obviously, the buyer group's opportunity to re-list in China is an "element of value arising from the accomplishment or expectation of the merger..."158 that is to be explicitly excluded from a fair value appraisal. Moreover, Shanda's "operative reality" as it existed immediately prior to the merger was that of a publicly-traded company listed on NASDAQ in the United States. Under this operative reality, Shanda cannot legally re-list on a Chinese stock exchange because the Chinese stock market is closed to



virtually all foreign investors. In order for Shanda to re-list in China, it would first need to buyout all "foreign" investors, which would violate Shanda's operative reality. As the Delaware Court of Chancery stated, "...the company must be valued 'without regard to post-merger events or other possible business combinations.' Therefore, I believe that to the extent Mr. Inglis contends at trial that his US\$27.03 per ADS is consistent with fair value because it does not reflect this Chinese discount, then that is an inappropriate valuation basis for Mr. Inglis' fair value, because it allows the dissenting shareholders to receive more than their pro rata share of the going-concern value of Shanda within the confines of its operative reality.

163. However, Mr Inglis made clear during his cross-examination that the references to the upside of and the value to be derived from a Chinese listing were only referred to by him as a way of checking (a "reality check") that his own valuation, done on a DCF basis, was not unrealistic. He also made it clear that the reference to the impact of a Chinese listing and the valuations based on Chinese trading multiples did not form part of his valuation in these proceedings. He said as follows (see the transcript for day 3, pages 78-79):

THE COURT:

MR INGLIS:

But the listing itself, in terms of giving rise to a capital raising opportunity, doesn't directly affect the value of the assets and doesn't affect the DCF calculation with which we are concerned, but it might.

All it would mean is -- as I say, I valued the business as -- I looked at some of the future cash flows, applied the discount rate and said: this is an asset worth, in a sort of objective sense, as far as one can be objective, \$7.3 billion. The issue was put to me by Mr Meeson that that was an artificial figure because, in fact, Shanda or the shareholders could never realise

that value. I think that's incorrect because they could. Shanda could have, you know, put the word out in the market, employed a Chinese investment bank, and said "We want to sell our business" and the question: is would anyone want to buy it? The answer is: they jolly well should do because anyone who has the capacity to re-list in China can buy it and re-list it and make a lot of money.

THE COURT: But in terms of how that is relevant to the cash flows,

which support your valuation --

MR INGLIS. Not at all. I have ignored that for the purposes of my

valuation.

THE COURT: Right.

MR LEVY: As I understand it, Shanda operated computer games, be

they PC games or mobile games; what is it that Shanda

could actually sell to an interested third party?

MR INGLIS. Effectively, that whole operation, everything. I mean,

the entire business they could sell.

THE COURT: But I think we are saying, aren't we, the prospect of a

sale to a purchaser who could take advantage of a Chinese listing, that that possibility/prospect event doesn't actually affect your valuation?

MR INGLIS:

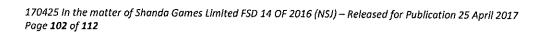
No, it doesn't. Obviously, if I had done a valuation. and come up with \$27 a share and then looked at all my comparative measures and they had all been at \$10 a share then I would have said "Actually, I have a bit of a problem here because the reality check says that, even though I may be satisfied that internally this all works, the fact of the matter is everything in the market suggests no one would pay anything like this amount for it", which would cause me to go back and have a look. The thing that gave me comfort that my figure was a reasonable one was the fact that, actually, at least in one part of the world, there is every prospect that people would pay, possibly even more than that for it but it didn't impact my valuation at all. My valuation is based on looking at Shanda itself.

- Accordingly, the question of whether it would be permissible to rely on the availability of a Chinese listing for the purpose of a section 238 fair value determination does not arise in these proceedings.
- 165. Of course, the Chinese context is important in this case and, as we have seen, the fact that Shanda has its operations in China and that is treated in U.S. markets as a Chinese company has had an impact on the valuation of Shanda, but in this case that has been done and the Chinese connection only relevance for valuation purposes, is through the DCF valuation.
- 166. I should add that the same is true of the block transactions in Shanda's shares to which I have referred earlier and which are summarised in paragraph 52 above.

Equity size (or small stock) premium

167. As Vice Chancellor Parsons noted in *Merion Capital* quoting from two earlier Delaware opinions:

In addition to the equity risk premium, an equity size premium generally is added to the company's cost of equity in the valuation of smaller companies to account for the higher rate of return demanded by investors to compensate for the greater risk associated with small company equity. A size premium is an accepted part of CAPM because there is evidence in empirical returns that investors demand a premium for the extra risk of smaller companies.





- 168. As I have already noted, in the present case Professor Jarrell has used a small stock premium of 1.71% while Mr Inglis uses 1.07%.
- 169. Mr Meeson in his closing submissions explained Shanda's position on this issue:
 - "87. Both experts agree that in order to calculate the size premium the "Ibbotson" (now Duff & Phelps) tables should be used.
 - 88. As they state at the heading of the columns they divide companies into categories according to their market cap and ascribe a corresponding size premium to a company falling within that range.
 - 89. Professor Jarrell has clearly explained that when Ibbotson first considered the question of size premium he divided companies into 3 broad categories and this is what [Mr] Inglis has used. However as more research was done and more data accumulated, the 3 broad categories were broken down into 10 deciles and the modern and better approach is to use the deciles rather than the broad categories. [Mr] Inglis approach is "old fashioned" and [Professor] Jarrell's approach of using deciles should be preferred.
 - 90. As [Professor Jarrell] concluded [in his cross-examination]: ... "It is the categories that are the problem."
 - 91. The appropriate manner in which to use the Ibbotson table is to establish the market capitalisation as at the valuation date. This is how the tables are constructed.
 - 92. This issue was considered in Merion [citation] where it was pointed out that the Ibbotson tables were based on important research which found a relationship between "market value" and higher rates of return statistical relationship between market cap & equity size premium.
 - 93. The manner in which Professor Jarrell has used the tables is the logical and necessary approach. If you use Ibbotson tables then you must use market cap. That is what the tables relate to. They do not relate to a DCF value for the company and Mr. Inglis use of the tables is manifestly incorrect.
 - 94. In the present case the unaffected share price was 22 months prior to the valuation date and so it would be necessary to make the market adjustment set out in Professor Jarrell's first report .. The market rose by 29% and so using Professor Jarrell's beta of 1.78 the market cap as at the valuation date would be 37.2% higher at \$7.75 per ADS (i.e. US\$3.87 per share) equating to a market cap of \$2.1M (3.87 x 541,220,058 shares). This would put the company in Decile 6 (E/2 tab 34) which actually has an associated SSRP of 1.74%.
 - 95. If you use Mr. Inglis beta of 1 then the adjustment would be 29% and the adjusted market price would be US\$6.83 (\$5.65 x 1.29) which is \$3.41 per share equating to a market cap of \$1.85M (3.87 x 541,220,058 shares) which would also be Decile 6.
 - 96. If you use the broad categories used by Mr. Inglis then you would actually need to use 1.8 (low cap 68).
 - 97. So the use of Decile 7, which has a lower value (1.71) than Decile 6, is conservative in the [Dissenting Shareholders]' favour in that it understates the discount rate.
 - 98. The Court should therefore use 1.71 as proposed by Professor Jarrell."



170. The Dissenting Shareholders' position was summarised by Mr Levy in his closing submissions as follows:

"With respect to small company risk premium, Mr Inglis note in his Supplemental Report ... that his approach was less granular than Professor Jarrell's, but that the granular approach could lead to a less meaningful measure as can be seen where some deciles produce anomalous results in respect of lower small company risk premiums for smaller companies. Professor Jarrell appeared to accept in cross-examination ...that both approaches are acceptable and [said] that:

"If you grant him (Mr Inglis) the broad category and say "Okay, we are going to use the broad categories", then I have no criticisms left of his approach."

171. In the Inglis Supplemental Report, Mr Inglis had said:

- "6.94 While Professor Jarrell and I both consider an SSRP by reference to the Duff & Phelps 2015 Valuation Handbook, I include an SSRP of 1.07% in my analysis, while Professor Jarrell uses an SSRP of 1.71%.
- 6.95 The difference relates, in part, to our different views as to the size of Shanda –
 Professor Jarrell considers Shanda to be materially smaller than I do. However, we also select our SSRPs in different ways.
- 6.96 Duff & Phelps reports SSRPs on a decile level, i.e. for ten categories, 187 and by broader 'mid' size, 'low' size, and 'micro' size groupings. I selected an SSRP by reference to the broader size groupings, while Professor Jarrell selected an SSRP by reference to the deciles.
- 6.97 I prefer my approach on the basis that a more granular split by size does not necessarily result in a more meaningful measure of the SSRP. This can be seen, for example, in the decile that Professor Jarrell uses the seventh decile, which includes smaller companies than the sixth decile, has a lower SSRP than the sixth decile.
- 172. Professor Jarrell set out his position in paragraphs 66 to 73 of the Jarrell Supplemental Report. His conclusions were explained and summarised by Mr Meeson in his closing submissions which I have set out above. Mr Meeson submitted that Professor Jarrell's approach was consistent and in accordance with the methodology on which the Ibbotson tables had been prepared and this had been recognised in the Delaware jurisprudence, in particular *Merion Capital*.
- 173. This seems to me to be correct. In Merion Capital Vice Chancellor Parsons noted:

The Ibbotson table headings clearly state —market capitalization. In addition, the relevant treatises focus on the market value of common equity and do not suggest making an adjustment to exclude cash reserves. Consistent with Ibbotson's headings and the treatises, the Court of Chancery consistently has used market capitalization as the benchmark for selecting the equity size premium. Despite those authorities and [one expert's] awareness that —the definition [for equity size premium] says market capitalization, [he] chose a size premium by "look[ing] at the



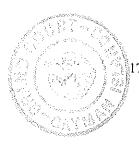
size of the market value less cash of [the company]." That adjustment was based on [the expert's] view that "we're valuing . . . [the company] absent its cash. We're not valuing [the company] in the DCF. Because the way the DCF works is, we value the cash streams the company throws off and then we add the cash on top of it. So we split the baby in two parts and look at the values of each."

I am not persuaded, however, that [the expert's] approach is consistent with the proper use of the Ibbotson tables. The Ibbotson tables were based on important research in 1981 by Rolf Banz, who found an empirical relationship between the market value of stocks and higher rates of return. Put differently, the Ibbotson tables look at the statistical relationship between market capitalization and equity size premium. The [expert] failed to present a convincing explanation as to why their use of a different metric—enterprise value—more accurately reflects the correlation that the equity size premium attempts to reflect.

- 74. Vice Chancellor Parsons supports his decision with various citations to Delaware decisions and I note in particular footnote 162 which includes the following quotation from In re Sunbelt Beverage Corp. S'holder Litig., 2010 WL 26539, at 11 (Del. Ch. Jan. 5, 2010) ("The Ibbotson table assumes one already knows or has an estimate of a company's market capitalization. Based on that knowledge or estimate, one can determine which decile the company falls into and then select the corresponding premium from the Ibbotson table").
- 175. Vice Chancellor Parson's analysis and the commentary from the other Delaware cases seem to me to provide a convincing explanation of the basis of the Ibbotson tables and support Professor Jarrell's view that their application must be based on the use of market capitalisation established before calculating and without reference to the expert's DCF.

Treatment of the restrictive stock units and employee options

- 176. The issue and competing arguments are neatly set out in paragraphs 128 142 of the Jarrell Supplemental Report as follows:
 - 128. Both Mr. Inglis and I use the same number of Class A ordinary shares and Class B ordinary shares. We, however, treat dilutive securities differently. While I account for restricted stock, restricted stock units, and employee stock options ("Shanda's Dilutive Securities"), Mr. Inglis does not. Mr. Inglis states:
 - "Consistent with the Court's approach in the Integra matter, I have not made any allowance for dilution from exercise of outstanding share options..."
 - 129. Apparently, Mr. Inglis is relying upon the Integra court's decision to:
 - ...not take account of the fact that unvested units awarded by way of deferred remuneration to certain of Integra's directors and employees under its Restricted Stock Unit Plan <u>vested pursuant to Clause 5.4 of the Merger Implementation Agreement...</u>
- 130. As a result, the Integra court excluded restricted stock units because "the 170425 in the matter of Shanda Games Limited FSD 14 OF 2016 (NSJ) Released for Publication 25 April 2017 Page 105 of 112



- dissenting shareholders should not bear any diminution in the value of their investment directly attributable to the transaction from which they were entitled to dissent."
- 131. In excluding Shanda's Dilutive Securities, Mr. Inglis fails to recognize that "...at the point immediately before the merger is agreed, disregarding the effects of the merger, whether it would have had a positive or negative effect upon..." the dissenting shareholders had they continued to be shareholders of Shanda, Shanda's Dilutive Securities would have still existed.
- 132. Absent any evidence (of which there is none) that Shanda's Dilutive Securities would have been cancelled but-for the transaction, then the dissenting shareholders are "entitled to their proportionate share as it existed on the Valuation Date," which clearly includes Shanda's Dilutive Securities.
- 133. The inclusion of Shanda's Dilutive Securities is also consistent with the Delaware Court of Chancery's use of fully diluted shares that accounts for outstanding shares as well as stock options and restricted stock when calculating per share values.
- 134. Moreover, Mr. Inglis and I both account for future dilution projected by management in the form of stock-based compensation expense, but Mr. Inglis then inconsistently excludes dilution that is already present as of the valuation date. This makes no economic sense.
- 135. To correct Mr. Inglis' incorrect exclusion of Shanda's Dilutive Securities, I recalculate his DCF work using Shanda's Dilutive Securities, just as I did in the Jarrell Report. Based on this change, the DCF equity value implied by Mr. Inglis' model (including all of the other previously discussed corrections) decreases by US\$0.10 per ADS from US\$9.35 per ADS to US\$9.25 per ADS (see Exhibit 7).
- 177. In his closing submissions Mr Meeson explained Shanda's position as follows:
 - 144. [Mr Inglis] adds to his equity value the cash derived from the exercise of the options.
 - 145. This is plainly the correct approach because this was the situation as it existed at the valuation date and so must be taken into account in working out what the dissenters' proportionate share of the value of the company was as at the valuation date.
 - 146. Mr. Inglis accepted this as a matter of valuation principle on Day 3 [transcript pages 67-68].
 - Q. You agree that if one was looking purely on an economic basis rather than looking at what Mr Justice Jones did or did not decide in Integra, that you would, in principle, count these dilutive shares, but you might count them in a different way?
 - A. That is correct. On a valuation basis, I would include them but not in the same way that Professor Jarrell has.
 - 147. Mr. Inglis is wrong to seek to try to wriggle out by suggesting he would have valued them in a "different way". He has explained no such case anywhere in his report and it is not supported by any analysis of the actual terms and conditions of the options. The correct approach is to account for them in full and account for the option exercise cash proceeds in full.
 - 148. Any reliance upon Integra is misplaced as it was dealing with a different issue, namely "restricted stock units" which vested "pursuant to the merger implementation agreement" in that case, see Integra [¶69]. It is agreed that those would be excluded.
- 149. The correct share count is therefore **551,293,260.**170425 In the matter of Shanda Games Limited FSD 14 OF 2016 (NSJ) Released for Publication 25 April 2017 Page **106** of **112**





- 23.1 In the Integra ruling, Jones J determined, after argument, that the Court should not make an adjustment for the conversion of restricted stock units or share options into shares as a result of the merger. At paragraph 70 of the ruling on page 30, after quoting a passage from the leading Canadian Ruling of Brant v Keeprite, the learned judge stated that "... the dissenting shareholders should not bear any diminution in the value of their investment directly attributable to the transaction from which they were entitled to dissent. As at the Valuation Date they owned 17.3233% of the issued share capital. As a result of the merger transaction being approved and implemented new shares were issued on the Implementation Date with the result that, if the Respondents had still been shareholders, they would have owned only 15.3801% of the Company. In my view, they are entitled to their proportionate share as it existed on the valuation date. They should not suffer any diminution in value attributable direct to the transaction from which they dissented. If my approach were held to be wrong, I would include the cost savings of going private into the DCF calculation, thus increasing the equity value by US\$4.058m."
- 23.2 It is respectfully submitted that the same approach should be adopted by this Court. That is the approach adopted by Mr Inglis. In re-examination he explained that:

"MR LEVY: ... One point that I will end with then is the RSUs. You spoke about restricted stock units this morning with Mr Meeson. We say it is a point of law but, putting that to one side, if you were to take account of RSUs, options, or whatever else, how would you deal with that?

MR INGLIS: Well, I think the appropriate approach would be to try to work out how many of those were actually going to be exercised in practice because, between the date on which they were actually exercised, because of the merger, and the date on which they would have been exercisable in the normal course, there would inevitably have been some fall out of people leaving, whether voluntarily or involuntarily, so the number of rights ultimately exercised would be lower than the amount that were in fact exercised. How one would go about it, I haven't really given a lot of thought. One would look at perhaps typical attrition rates, past experience, options that lapsed, and that sort of thing, but I have not given it a lot of thought."

- 23.3 In other words, if the Court was to depart from Integra and treat the RSUs and options as converting into shares on the date of the EGM, then it would result in unfairness to the dissenting shareholders because their stakes would become more diluted by virtue of the merger due to the apparent vesting of all RSUs and options including those which would not otherwise vest if the merger had not taken place.
- 23.4 Professor Jarrell took a different approach in his reports, in which he assumes that the RSUs and options will be converted in accordance with what is stated in the Proxy Statement. However, he has relied on materials that were not put before the Court [i.e. the proxy statement of 18 November 2015] and in any event the implementation date of the conversion is after the valuation date.
- 23.5 It is therefore submitted that the Court should, in line with Integra, decline to dilute the Respondents' shareholding by adjusting the share count to reflect the conversion of RSUs and options.
- 179. It seems to me that the position is as follows:

- (a). the proposition for which *Integra* is authority is that the Dissenting Shareholders' entitlement to their proportionate share is fixed as at the Valuation Date and is not to be reduced as a result of the issue of further shares where the entitlement to subscribe for such shares only arose upon, was dependent on and only triggered by the merger.
- (b). in *Integra* unvested units awarded by way of deferred remuneration to certain of Integra's directors and employees under its Restricted Stock Unit Plan vested in these parties pursuant to the terms of the Merger Implementation Agreement (under which the Integra board agreed to resolve [presumably pass a resolution]) that the units shall vest immediately on the date of implementation of the merger.
- (c). the vesting of the units and the right to have shares issued pursuant to the plan were therefore triggered by the merger.
- (d). in the present case the precise terms of the relevant restricted stock, restricted stock units and employee stock options were not referred to in the written submission of Mr Levy and Mr Meeson. I was not taken to the relevant terms and therefore am unable to assess the nature of the rights of the employees and the holders of the units and stock. However, the principle seems to be clear. If the employees and holders had rights to subscribe for and to the issue of shares in Shanda which were exercisable as at the Valuation Date without reference to or reliance on the merger (so that such rights were not conditional or dependent on the merger) then the Dissenting Shareholders' interest in Shanda was always subject to the issue of further shares and at risk of being diluted by shares issued to the holders and employees. If, however, the right to have the shares issued was conditional on and could only take effect upon the closing of the merger (for example the conditions governing the exercise of the stock options included Shanda entering into a merger) then the Dissenting Shareholders should not be affected by a change in their interest in Shanda which came about in consequence of the merger.
- (e). I would hope that with the principle established the parties would be able to agree on the treatment of the stock, units and options. If they are unable to do so I shall order that the terms and conditions with written submissions from both sides as to their effect be filed and I shall then decide the point.



Should the costs of the merger transaction paid on or before 30 September 2015 be added to Shanda's equity value?

The final issue is whether the fees and costs incurred by Shanda in obtaining advice concerning the Merger and in implementing the Merger should be deducted from Shanda's equity value and therefore reduce the entitlement of the Dissenting Shareholders. Mr Inglis thought they should not and Professor Jarrell thought they should.

- 181. In the Inglis First Report, Mr Inglis said as follows:
 - 13.78 Finally, I add back the cash Shanda spent in relation to the take-private transaction. This is, in my opinion, consistent with the principle set out in the Integra decision that shareholders who dissent from a transaction should not have the burdens of the transaction from which they dissented imposed upon them in the assessment of the fair value of their shares.
 - 13.79 In my third request for additional information, I asked for details on the amount, nature, and timing of all costs incurred by Shanda in relation to the going-private transaction In response, I have been provided with a spreadsheet which sets out some of this information.
 - 13.80 The spreadsheet indicates that about USD 56 million (RMB 360 million) of costs were incurred, in total, relating to the Special Committee's remuneration, legal fees, financial advisor fees, consulting fees, data support fees, and legal compensation to Kilometre.
 - 13.81 Because some cells are left blank in the spreadsheet, I do not know the precise amount of cash that was spent by 30 September 2015, the date at which I assess Shanda's net cash position for use in my analysis.
 - In the absence of additional information, I assume that any cost said to relate to a period that extends beyond 30 September 2015 was unlikely to have been paid by that date (even if the majority of the period to which it relates falls before 30 September 2015). The costs relating to periods extending beyond 30 September 2015 represent about 31.5% of all the costs for which a date is provided. Inversely, 68.5% of all the costs for which a date is provided relate a period before 30 September 2015.
 - 13.83 For the costs for which no date is provided I know that two amounts the success fee payable to Merrill Lynch for its fairness opinion (USD 600,000) and the amount paid to Kilometre to settle a legal dispute in connection with the take-private transaction (USD8,500,000) could only have become payable after 30 September 2015. For the rest, I assume the same percentage, 68.5%, relates to the period before 30 September 2015.
 - On this basis, I estimate that about USD 33 million (RMB 208 million) of Shanda's costs in relation to the take-private transaction were paid by 30 September 2015, which, I therefore add back to the equity value of Shanda.



- 123. Mr. Inglis adds to his equity value RMB208 million of cash that he estimates was paid on or before 30 September 2015 in the form of special committee remuneration, legal fees, financial advisor fees, consulting fees, data support fees, and legal compensation to Kilometre, all of which relate to the transaction that was completed on 18 November 2015.
- 124. Mr. Inglis' basis for adding these expenditures back to his valuation is to maintain "consisten[cy] with the principle set out in the Integra decision..."

 He then cites paragraph 70 from Integra, which states:

The Respondents have a statutory right to dissent from the merger transaction, as a result of which they cease to have the rights of shareholders and are instead entitled to receive the fair value of their shareholdings. They should not be afforded the benefits of the transaction from which they have dissented. Nor should the burdens of the transaction be imposed upon them.

- 125. Despite this statement, the Integra decision does not add back cash spent on the transaction as Mr. Inglis does.
- 126. From an economic perspective, I interpret this to mean that dissenters do not derive post-merger benefits from the transaction (such as merger-related synergies and cost savings), and, likewise, dissenters do not bear the post-merger costs of the transaction (such as the investment banker's success fee or costs of achieving synergies). This economic interpretation is also consistent with Shanda's operative reality immediately prior to thecompletion of the transaction. For example, had the transaction been terminated on 17 November 2015, Shanda would not be refunded the RMB208 million in expenses identified by Mr. Inglis and the burden of those expenses would still be borne by a hypothetical stand-alone Shanda. Therefore, because the dissenting shareholders cannot escape these expenses regardless of whether the deal does or does not close, then in my view such expenses are consistent with Shanda's operative reality as of the valuation date.
- 127. To correct Mr. Inglis' cash, I recalculate his DCF work without including the cash spent on the take private transaction. Based on this change, the DCF equity value implied by Mr. Inglis' model (including all of the other previously discussed corrections) decreases by US\$0.12 per ADS from US\$9.47 per ADS to US\$9.35 per ADS (see Exhibit 7).
- 183. Mr Levy relied on Integra and Jones J's statement, that the "burdens of the transaction" should not be imposed on dissenting shareholders. Jones J went on to say his citation from the judgment of Romaine J in the Canadian decision of Brant Investments v KeepRite (1987) 60 OR (2d) 737 (a decision of the Ontario High Court), that "... the dissenting shareholders should not bear any diminution in the value of their investment directly attributable to transaction from which they were entitled to dissent." Romaine J had said that "........ In my view [the dissenting shareholders should have no enhancement in the value of their investment attributable to the transaction which gave rise to their dissent." (page 772)

184. Mr Meeson submitted that these costs and liabilities should not be added back to Shanda's equity value because the costs and liabilities had already been incurred as at the Valuation Date by Shanda irrespective of the merger and whether or not the merger concluded. It was therefore wrong in principle to add them back in - such liabilities were not, he submitted, "burdens of the transaction imposed on them."

185.

In *Brant*, the court held that the economic benefits of the merger that would arise in the future after the merger had been completed (as a result of business synergies) were not to be included in the equity value of the company and therefore could not be shared by the dissenting shareholders. In *Integra*, as I discuss above, Jones J held that the interest of the dissenting shareholders was to be fixed by reference to the shares in issue at the Valuation Date. Neither case dealt with the costs and expenses connected with negotiating and implementing the merger and whether the dissenting shareholders were entitled to say that such costs and expenses should not be for their account (and therefore that the equity value of the company should be calculated without deducting such liabilities). Mr Levy did not cite any Delaware or Canadian authority discussing this issue or deciding that such costs and expenses were within the no burdens of the transaction principle. I would have thought that if this was the law in Delaware (or Canada) or the practice in appraisal actions there, there would have been some authority on the point.

186. So the cases decided to date only hold that the dissenting shareholders are not to benefit from the future improved performance of the business which results from the merger and that their share of the value of the company is to be fixed by reference to the legal rights of all those who hold or have rights to shares in the company at the valuation date. It would require a material extension of the no burdens of the transaction principle to cover the costs of the merger and while I can see the force in the argument that dissenting shareholders should not have to pay their share of the costs of a merger (which costs are in this case and no doubt will in other cases be substantial) which they are otherwise unaffected by, I am not, based on the authorities cited to me and in the absence of evidence of the law and practice in other appraisal rights jurisdictions, prepared so to decide in these proceedings. I will however order that the position as is proposed by Shanda (namely that all merger costs incurred prior to the Valuation Date be deducted from the equity value of Shanda).

DATED the 25th day of April 2017

The Hon. Justice Segal

JUDGE OF THE GRAND COURT