Anticipated acquisition by BATS Trading Limited of Chi-X Europe Limited

ME/4904/11

The OFT's decision on reference under section 33(1) given on 20 June 2011. Full text of decision published 8 July 2011.

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

PARTIES

1. **BATS Trading Limited** is a UK-based, wholly owned subsidiary of the US company, BATS Global Markets Inc (BATS). BATS shareholders include financial institutions JP Morgan, Deutsche Bank, Credit Suisse, Getco, and Morgan Stanley. In the UK and Europe, BATS operates a Multilateral Trading Facility (MTF), a platform on which equities, commodities and some financial instruments can be traded. Its turnover last year was £12 million of which around £[ ] million came from UK-listed equities trading.

2. **Chi-X Europe Limited** (Chi-X) is a UK-based MTF which offers trading for equities. It is Europe's largest MTF. It is owned by a consortium of financial institutions (including Instinet (owned by Nomura), Merrill Lynch, Morgan Stanley, Getco, Credit Suisse and Citigroup). Its turnover last year was £42 million of which around £[ ] million came from UK-listed equities trading.

TRANSACTION

3. On 18 February 2011 BATS entered into a Sale and Purchase Agreement to acquire Chi-X. In consideration for their shares in Chi-X, Chi-X shareholders will receive [ ] per cent of the post acquisition issued share capital of BATS plus an earn-out pool of up to US$[ ].

JURISDICTION

4. As a result of the proposed transaction, the enterprises BATS and Chi-X will cease to be distinct.

5. The parties overlap in the provision of trading platforms which offer trading for equities listed on UK and a number of European exchanges. Combined, the parties' trading platforms account for over 25 per cent of the trading of on-book UK listed equities. The share of supply test set out in section 23 of the Enterprise Act 2002 (the Act) is met in this case.

6. The OFT therefore believes that it is or may be the case that arrangements are in progress or contemplation which, if carried into effect, will result in the creation of a relevant merger situation.

7. The OFT's administrative deadline for making a decision in this case is 3 June 2011.

MARKET DEFINITION

Product Scope

8. The parties overlap in the operation of trading platforms and related services (for example, routing for third parties, the provision of sponsored access and market data).

9. In the current case the parties submitted that the OFT could examine the merger on the basis of trading platforms for on-book displayed (or 'lit') UK-listed equities, although the parties' view is that the actual relevant product market is wider; that is, the trading of all EEA-listed equities.[1]

10. The OFT has considered the plausible boundaries of the relevant product market in this case, namely incumbent exchanges versus MTFs, on-book versus off-book trading, lit versus dark trading, UK-listed versus EEA-listed equities and trading of specific classifications of equities.

[1] 'On-book' trading is trading which takes place on the order book of an exchange (such as the LSE or a MTF). Conversely, 'off book' trading takes place away from broker pools. Although such trades are reported, this occurs after the event, rather than contemporaneously with it (as is the case with on-book transactions). 'Displayed' or 'lit' is explained below.

MTFs versus incumbent exchanges

11. The parties consider that the relevant product market should incorporate incumbent exchanges (in the case of the UK, the London Stock Exchange (LSE)). The parties point out that there is no rationale for excluding incumbent exchanges from the analysis since the equities which can be traded on MTFs can also be traded on the incumbent exchanges. Around two-thirds of trading of UK-listed equities takes place on the LSE.

12. The parties submitted that incumbent exchanges provide all the services that MTFs do but MTFs do not provide all the services that incumbent exchanges do (such as auctions; paragraph 34).

13. While this is true in aggregate, it is not true for any one incumbent exchange. That is, each incumbent exchange provides for trading equities that it itself has listed, whereas MTFs provide for trading of equities listed throughout the EEA.[2]

14. However, given the OFT's conclusion to restrict its analysis to UK-listed equities (below) the OFT has decided to examine this case on the basis of the LSE being in the same market as the MTFs.

On-book versus off-book trading

15. The parties both operate trading platforms for, separately, the on-book trading of equities listed on European stock exchanges (throughout the EEA and in Switzerland). They also operate limited amounts of off-book activity.

16. Off-book trading often takes place through broker pools and through bilateral trading. Broker pools allow brokers to match orders among their own client/customer base. Brokers cannot access these directly but, rather, these orders are automatically matched with each other through the broker's system. Some brokers have bilateral arrangements with other brokers which allow access to each others' internal liquidity. Both broker pool trading and trading from bilateral negotiations are forms of over-the-counter (OTC).

17. The Competition Commission (CC) examined on-book trading separately from off-book trading in *LSE/Deutsche Börse/Euronext*.[3] In that case, the CC found that the constraint imposed by off-book trading alternatives to London Stock Exchange Group's (LSEG's) pricing strategies to be weak. Further, on the supply-side, the CC concluded that providers of off-book trading platforms could not readily and viably replicate LSEG's trading platform, particularly when compared to the superior knowledge and expertise of existing on-book platforms.

18. In *LSE/Turquoise* the OFT also examined on-book and off-book trading separately.[4] In that case the OFT found that off-book trades tended to be executed in different ways and involve different considerations than on-book trades (particularly with regard to OTC trades).[5] For example, OTC trades were found to be often used for very large transactions where there is a risk that executing on-book may have a material impact on the price of an equity, and the requirement for execution certainty means breaking a trade into smaller parcels is not desirable.

19. For on-book trading, exchanges and MTFs act as central trade facilitators, whereas off-book trades occur within and between brokerages (and are reported after the event, whereas on-book trading is reported contemporaneously). In this case, as in *LSE/Turquoise*, the OFT has found that on- and off-book trading are used differently and have different demand-side criteria. On a cautious basis, the OFT has examined on-book trading separately from off-book trading.

Lit versus dark trading

20. On-book trading can be segmented into lit and dark trading. Lit (or displayed) trading is fully transparent to the market, with trades reported in real time and the depth or liquidity of the market fully visible to

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[2] For example, both parties' platforms allow for trading in equities listed in Amsterdam, Brussels, Copenhagen, Dublin, Frankfurt, Helsinki, Lisbon, London, Madrid, Milan, Oslo, Paris, Stockholm, Vienna, and Zurich.

[3] Deutsche Börse AG, Euronext NV and London Stock Exchange plc: A report on the proposed acquisition of London Stock exchange plc by Deutsche Börse AG or Euronext NV, November 2005.

[4] Anticipated acquisition by London Stock Exchange Group plc of Turquoise Trading Limited, ME/4360/09, 12 February 2010.

[5] OTC trades involve direct negotiation between brokers.

participants. Dark (or non-displayed) trading is not transparent and gives no indication as to the liquidity of the trading book (known as a 'dark pool').

21. The parties do not consider that the relevant product market should be segmented by lit and dark trading. However, the parties also submitted that, given the very small proportion of on-book trading accounted for by the dark pool (and three per cent of all trading of on-book UK-listed equities), it is not necessary for the OFT to conclude on this point since it makes no material difference to the competition assessment.

22. The OFT received some third party comment saying that the reasons for using lit and dark trading are different (usually, large transactions are suited to dark trading). One third party indicated that because of the lack of transparency in dark trading, it is more akin to OTC trading.

23. The OFT agrees with the parties that it does not need to conclude on this point but has, on a cautious basis, examined lit trading separately from dark trading.

Trading of UK-listed versus EEA-listed equities

24. The Markets in Financial Instruments Directive (MiFID) came into effect in November 2007.[6] MiFID allows for financial institutions to provide services throughout the EEA but be supervised domestically (that is, in the country in which the firm is based).[7] MiFID has therefore increased competition in trading venues by allowing MTFs registered in one EEA country to offer trading in equities listed anywhere in the EEA. As such, for customers of the merger parties it is just as easy to trade in equities listed in, say, Amsterdam as it is in UK-listed equities.

25. The parties stated that (on-book displayed) UK-listed equities is the narrowest possible hypothetical market which the OFT can use in this case. The parties made clear that this view is without prejudice to their view that the relevant market may in fact be wider and comprise at least the trading of all equities listed on EEA stock exchanges and the Swiss Stock Exchange.

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[6] Directive 2004/39/EC.

[7] Both merger parties are UK based for the purpose of MiFID.

26. Given MiFID, a number of third parties told the OFT that it was appropriate to assess the merger on the basis of trading shares listed throughout the EEA.

27. In *LSE/Turquoise* the OFT focused on the trading of UK-listed equities since the vast majority of UK customers conducted their business on UK venues.[8] The parties submitted that they both have their largest presence in UK-listed equities.

28. The OFT has not seen any evidence that traders would switch to trading in equities listed in alternative jurisdictions in response to a small increase in price in trading of UK-listed equities. In particular trading strategies are usually specific to the particular equities concerned. On the supply side the OFT notes that the major operators of trading platforms in EEA listed equities that are not present in the UK (for example, Euronext and Deutsche Borse) are not able to switch into UK listed equities in response to a small increase in the cost of UK trading. In fact, some of these firms have launched specific pan-European MTFs to enable them to do this (such as Nasdaq Neuro or Euronext Arca) but these platforms have been considered in the UK-listed market and do not have a significantly larger presence outside the UK to their share in UK-listed equities. EEA incumbent exchanges did not view themselves as competing closely with the parties in UK-listed equities (only in the equities listed on their own markets).

29. Therefore, on a cautious basis and in line with *LSE/Turquoise*, the OFT has assessed this merger on the basis of trading of UK-listed equities.

Trading of specific classifications of equities

30. MTFs are mostly active in the most widely traded (liquid) equities (they are not active at all in AIM shares in the UK, for example).[9] Trading on the parties' platforms is relatively less prevalent for UK-listed equities outside of the FTSE 100, with approximately [ ] per cent of their on-book trades being in lit FTSE 100 equities. The parties together account for around [ ] per cent of trading of FTSE 100 equities but [ ] per cent in the remaining 150 companies which make up the FTSE 250.

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[8] Paragraph 13.
[9] AIM is the LSE's market for smaller companies. It is not a part of the LSE's main market.

Third parties have told the OFT that the less capitalised is a company the less likely its shares will be traded on MTFs in general.

31. The parties do not consider that the OFT should assess the merger on a basis any narrower than trading of on-book lit UK-listed equities.

32. One third party told the OFT that it looks at a platform's share of FTSE 100 and FTSE 250 trading when assessing whether to become a member of an MTF. Two further third parties said that the merger would have the greatest impact on the trading of FTSE 100 equities.

33. Without drawing a firm conclusion in this respect in relation to market definition, in addition to examining the merger on the basis of UK-listed equities, on a cautious basis the OFT has also examined the merger on the basis of trading of FTSE 100 equities.

Trading within/outside auctions

34. MTFs do not offer opening and closing auctions.[10] These auctions set the opening and closing prices of the relevant equities and are thus used as a reference point for people trading on MTFs. The parties submitted that a considerable amount of trading takes place in these auctions. Indeed, they estimated that over 10 per cent of on-book lit trading of UK-listed equities takes place in the auctions.

35. Some traders told the OFT that they prefer to trade at the published daily auction prices to demonstrate their strategy or to avoid risk (potentially including passive index trackers). There are reasons to believe that trading prior to auction is not necessarily substitutable for trading on auction. On the demand-side, traders are time sensitive (latency is a key trading criterion for them) and are therefore unlikely to substitute out of trading throughout the day for trading in auction. There is also no supply-side substitution given that other providers do not offer auctions.

36. On a cautious basis the OFT has assessed the impact of the proposed transaction by reference to a plausible candidate market in the supply of trading services for intraday FTSE 100 lit trading.

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[10] Opening auctions for selected equities allow for information gained during closing to be incorporated into the price of the equity while closing auctions allow for unmatched orders to be matched before the close of the day's trading.

Conclusion on product scope

37. Given the above discussion the OFT has considered the proposed merger on the basis of the supply of trading services for on-book UK-listed equities, but has also considered within that:

- FTSE 100 lit trading and
- intraday FTSE 100 lit trading.

38. The LSE is included in the OFT's analysis. Further, dark trading of UK-listed equities is considered separately. The OFT has not found it necessary to assess the merger in detail on the basis of off-book trading (see paragraph 44 below).

Geographic scope

39. The parties suggested the geographic market should be at least as wide as that taken in the OFT's *LSE/Turquoise* decision (that is to say, all markets hosting firms that currently compete for trading UK-listed equities).

40. Although the product scope of the market was debated by customers (in terms of whether it should be based around the equity categories or the trading index) they did not oppose the OFT considering all trading platforms active in that product regardless of their geographic location.

41. Nevertheless, in this case the OFT has not found it necessary to conclude on the geographic market. The OFT has focused its examination of this merger on trading of UK-listed equities irrespective of where those platforms are based.

HORIZONTAL ISSUES

Unilateral effects

42. The parties overlap in platforms for the trading of equities listed on EEA and Swiss stock exchanges. They also provide a range of services which are closely related to the trading platform provision. These comprise order routing for third party liquidity providers, the provision of sponsored access services to third parties and the provision of market data.

43. The OFT considers these services to be ancillary to trading platforms since they are not consumed outside the use of the trading platform. To take each in turn, order routing services attract further liquidity to a platform by giving the customer access to multiple market centres. Sponsored access services allow firms to connect directly to the trading platform without being a member of it (by using the membership of another firm). The provision of market data relates to the entire order book at a point in time or historical trading data.

44. Further, off-book trading is not an important part of the parties' offering. Last year, less than two per cent of BATS trades and less than one per cent of Chi-X trades occurred off-book. In terms of off-book trading of LSE listed shares, the parties estimated that combined they accounted for less than one per cent of such trades taking place. Given the relatively minor nature of off-book trading to the parties and their low supply levels, off-book trading is not considered any further in this decision.

45. In terms of dark trading, it is less than [ ] per cent of the volume of lit trading and accounts for a similarly small proportion of the parties' revenues. The OFT considered whether there could be competition concerns in a potential market focussed on dark trading. Although the parties operated two of the larger (pan-European) dark platforms there were no competition concerns raised about this service (even from customers that were concerned about lit trading and used both parties significantly for dark trading). Customers were confident that dark trading was constrained by the much larger volumes of lit or OTC trading, and that entry was easy and indeed several new venues were in the process of expanding.

46. The remainder of this section considers whether there is a substantial lessening of competition in relation to on-book equity trading.

Shares of supply

47. The parties' platforms accounted for [25–35] per cent of trades in UK-listed equities traded on-book in 2010 (Table 1). The LSE, either alone (around [50–60] per cent) or with Turquoise (around [60–70] per cent), is the leading platform in the on-book trade of UK-listed equities. Although the LSE and Turquoise have separate platforms, since they are in the same ownership group their prices and offerings can be jointly determined. As such, the merger effectively represents a reduction in UK-listed equity

trading platforms with a meaningful share (that is, above one per cent) from three venues to two.

Table 1 Share of supply of UK listed on-book equity trading, 2010 (per cent)

Platform	**Value**	**Volume**
BATS	[5–10]	[5–10]
Chi-X	[20–30]	[20–30]
Combined	**[25-35]**	**[25–35]**
LSE	[50–60]	[50–60]
Turquoise	[5–10]	[5–10]
LSE/Turquoise	[60–70]	[60–70]
NYSE Euronext	[<1]	[<1]
Liquidnet	[<1]	[<1]
Smartpool	[<1]	[<1]
Nomura NX	[<1]	[<1]
ITG Posit	[<1]	[<1]
Equiduct	[<1]	[<1]
Others	[<1]	[<1]

Source: The parties.

Table 2 Share of supply of FTSE 100 lit trading, 2010 (per cent)

Platform	**Value**	**Volume**
BATS	[5–10]	[5–10]
Chi-X	[20–30]	[20–30]
Combined	**[30–40]**	**[30–40]**
LSE	[50–60]	[50–60]
Turquoise	[5–10]	[5–10]
LSE/Turquoise	[60–70]	[60–70]
NYSE Arca	[<1]	[<1]
Equiduct	[<1]	[<1]
Others	[<1]	[<1]

Source: The parties.

48. For on-book FTSE 100 lit trading, the parties have a combined share of [30–40] per cent (increment [five–10] per cent) by value (Table 2). Again, the LSE is the leading platform with around [50–60] per cent (or [60–70] per cent with Turquoise).

49. Table 2 includes trading in the LSE auctions. For intraday trades (that is, where auction trading is excluded) the parties would together account for

around [35–45] per cent of trades (increment of [five–10] per cent) in 2010, although more recent data for early 2011 (January through to April) suggest that the parties' share of intraday trades has risen slightly to around [35–45] per cent. LSE and Turquoise account for almost all of the remainder. Therefore, on these measures the merger also represents a reduction in UK-listed equity trading platforms with a meaningful share from three venues to two.

50. The OFT examines below the extent to which the parties can be said to be close competitors and the constraints they will face from other suppliers.

Closeness of competition

51. The parties submitted that they do not compete against each other to a material extent but rather each competes against the LSE (and other incumbent exchanges throughout Europe). The parties' key arguments are that:

- LSE/Turquoise will remain the leading platform supplier after the merger and the merger will offer customers a stronger competitor to it
- the commercial strategies, including pricing models, of both parties are aimed at winning business from the LSE rather than from each other
- the LSE has reacted to the initiatives of the MTFs (such as lowering its pricing) whereas the MTFs have not reacted to each other's initiatives, and
- even if there were evidence of the parties being close competitors because they are both MTFs, sufficient other MTFs will remain after the merger to constrain the merged entity.

52. The OFT considers these arguments below in the context of its consideration of the closeness of competition between the parties. The OFT starts by considering the extent to which the parties themselves can be considered to be close in terms of their competitive offering.

Similarity of parties' competitive offering

53. The parties argued that their similarity in terms of competitive offering does not equate to being close competitors such that unilateral effects may arise as a result of the merger. Instead, the parties submitted, they have been focussed on winning trading volumes from the LSE. In terms of their pricing models and levels, the parties submitted that given the LSE has a broader product offering than do the MTFs (for example, it offers opening and closing auctions) and the bulk of trading of UK-listed equities takes place on the LSE, the LSE has an inherent advantage over MTFs which means that they must offer a large, not just a slight, price advantage in order to compete. Thus their similarity in profile is a result of each assessing independently what is required to compete against the LSE.

54. The parties' focus on competing against the LSE was confirmed by a number of customers, who stated that they viewed the parties as directing their competitive efforts at the LSE rather than each other.

55. However, some third party customers confirmed that the parties offered a very similar product proposition (‘almost indistinguishable’ in the words of one customer) and to this extent could be seen to be direct and close competitors to each other.

56. The OFT notes that both parties use EMCF as the central counterparty for clearing the equities traded on their platforms. Turquoise uses EuroCCP and LSE uses LCH clearnet and x-clear. EMCF may have lower costs (per transaction, though often smaller transaction sizes). The parties thus have similar clearing model.

57. In terms of pricing, the large majority of third parties told the OFT that they consider the parties to resemble each other closely in their commercial offerings. Both have maker/taker pricing models.[11] BATS prices at 0.28 basis points (bps). BATS has a rebate of 0.18 bps, does not have membership fees and does not charge for data.[12] Similarly, Chi-X charges 0.30 bps with a rebate of 0.20 bps as does Turquoise (resulting in the same net execution fee at BATS). Like BATS it does not have membership

[11] A pricing model whereby liquidity providers, or makers, receive a rebate on their execution fees as an encouragement to bring liquidity to the market and buyers, or takers pay the flat fee for trade execution.
[12] Prices quoted are for aggressive execution.

fees but does charge for data (the price for which varies according to the data being purchased).

58. Neither party has changed its fee levels since the beginning of 2010. Chi-X has not changed its execution fees since it entered.[13] When BATS entered in 2008 it charged the same level of execution fees as Chi-X. In September 2009 BATS lowered its fee for aggressive execution but raised it again later than year (albeit to a level below Chi-X's). Similarly, it raised its passive execution fee in early 2010 to a level above Chi-X's. However, as mentioned above, with rebates for making liquidity considered, the net execution fee for aggressive trades is the same for both parties. The parties submitted pricing data which showed that when BATS did adjust its fees there was no price reaction from Chi-X.

59. The parties and third parties have told the OFT that the LSE's trading fees have been falling since 2009. Indeed, some third parties have said that, for the largest customers, the net LSE price is around the same as that charged by the MTFs (the LSE offers large rebates to selected customers[14]). Thus the parties' price advantage has been diminished and since both parties have not been profitable (in Europe) for the bulk of their existence, lowering of their own prices may become increasingly difficult. Therefore, it may be difficult for the parties to achieve further growth from only competing against the LSE (as they submit that they do). In such a scenario the OFT does not consider it fanciful that in the future the parties would compete against each other to a greater extent than in the past.

Share correlation analysis

60. The parties undertook correlation analysis of shares of daily intraday FTSE 100 trading to provide evidence of the level of closeness of competition between the parties and as against the LSE. A venue's share of supply is the outcome of its total competitive offering, incorporating price offers, liquidity, latency and trading fees. The parties argued that if they are close competitors, one would expect the data to reveal a negative correlation

[13] This refers to both its aggressive and passive execution fees.
[14] The LSE re-introduced a maker/taker model of pricing for some customers in April 2010 after not offering such a pricing model for eight months.

(since if one party is gaining share the other party correlated to it will be losing it, indicating that customers had moved between the providers).[15]

61. The parties' analysis showed that since the beginning of 2009 the parties' shares have not been negatively correlated apart from in the [ ] and the [ ]. Conversely, over the period both parties have been negatively correlated with the LSE.

Table 3 Correlation coefficients between BATS and selected platforms based on LSE intraday trading

	Chi-X	Turquoise	LSE	LSE + Turquoise
1/4/2009 – 9/5/2011	[ ]	[ ]	[ ]	[ ]
2009Q1	[ ]	[ ]	[ ]	[ ]
2009Q2	[ ]	[ ]	[ ]	[ ]
2009Q3	[ ]	[ ]	[ ]	[ ]
2009Q4	[ ]	[ ]	[ ]	[ ]
2010Q1	[ ]	[ ]	[ ]	[ ]
2010Q2	[ ]	[ ]	[ ]	[ ]
2010Q3	[ ]	[ ]	[ ]	[ ]
2010Q4	[ ]	[ ]	[ ]	[ ]
2011Q1	[ ]	[ ]	[ ]	[ ]
April 2011 – 9 May 2011	[ ]	[ ]	[ ]	[ ]
Jan 2011	[ ]	[ ]	[ ]	[ ]
Feb 2011	[ ]	[ ]	[ ]	[ ]
March 2011	[ ]	[ ]	[ ]	[ ]

Note: Negative numbers are in parenthesis. Data relating to 24 to 31 December in 2009 and 2010 have been stripped out, as have data relating to the LSE reshuffle dates (23 March 2009, 22 June 2009, 21 September 2009, 21 December 2009, 22 March 2010, 21 June 2010, 20 September 2010, 20 December 2010 and 21 March 2011). LSE intraday notional values for 2009 Q1 are not available.
Source: The parties.

[15] The data used did not include LSE auctions and excluded holiday periods (which saw very low trading) and the last day of trading prior to each FTSE reshuffle.

Table 4 Correlation coefficients between Chi-X and selected platforms based on LSE intraday trading

	BATS	Turquoise	LSE	LSE + Turquoise
1/4/2009 –9/5/2011	[ ]	[ ]	[ ]	[ ]
2009Q1	[ ]	[ ]	[ ]	[ ]
2009Q2	[ ]	[ ]	[ ]	[ ]
2009Q3	[ ]	[ ]	[ ]	[ ]
2009Q4	[ ]	[ ]	[ ]	[ ]
2010Q1	[ ]	[ ]	[ ]	[ ]
2010Q2	[ ]	[ ]	[ ]	[ ]
2010Q3	[ ]	[ ]	[ ]	[ ]
2010Q4	[ ]	[ ]	[ ]	[ ]
2011Q1	[ ]	[ ]	[ ]	[ ]
April 2011 – 9 May 2011	[ ]	[ ]	[ ]	[ ]
Jan 2011	[ ]	[ ]	[ ]	[ ]
Feb 2011	[ ]	[ ]	[ ]	[ ]
March 2011	[ ]	[ ]	[ ]	[ ]

Note: Negative numbers are in parenthesis. Data relating to 24 to 31 December in 2009 and 2010 have been stripped out, as have data relating to the LSE reshuffle dates (23 March 2009, 22 June 2009, 21 September 2009, 21 December 2009, 22 March 2010, 21 June 2010, 20 September 2010, 20 December 2010 and 21 March 2011). LSE intraday notional values for 2009 Q1 are not available.
Source: The parties.

62. The parties argued that the correlation analysis does not show that the parties are close competitors – only two negative results were recorded over the past 10 quarters (and even then, they argued, the [ ] results were largely driven by those of January).

63. However, the OFT notes that the shares used are net results which would not necessarily capture competition between two platforms. So, for example, it may be the case that the merger parties both win share from the LSE but one also wins, to a lesser extent, share from the other. In that case there would not be negative correlation between them even though some competition is taking place between them.

64. The OFT also notes that the overall trend is that the correlation coefficients between the merger parties are decreasing (in other words, are tending toward negative). Over the same period neither party strengthened its correlation with the LSE/Turquoise. Therefore, although the evidential value of the correlation coefficients in this case can be questioned (see

paragraphs 65 to 67 below). The data provide some support for the contention that the parties are becoming closer competitors over time.[16]

65. The OFT notes also that, when interpreting these results, it should be borne in mind that the OFT's objective is to protect future competition that would be lost by the merger. Inevitably, much evidence used in an investigation will be about past competition. In most instances past rivalry will be a very good proxy for future rivalry. In other instances, however, past rivalry may not be a good indicator of future rivalry – and this includes circumstances in which the markets in question have changed, or are changing, as a result of regulatory and/or technological developments.

66. In this case, the UK equities trading market has experienced significant structural change with the advent of MiFID in 2007 and the entry of BATS into the market in 2008. The OFT notes also that its guidance states that unilateral effects resulting from the merger are more likely where the merger eliminates a significant competitive force in the market. For example, the merger may involve a recent entrant or a firm which was expected to grow into a significant competitive force.[17]

67. These considerations mean that the absence of a relationship between the parties' shares historically cannot be regarded as conclusive of an absence of competition between them going forward.

Internal documents

68. In order to gauge what the parties thought about their own future prospects in terms of growth and competition going forward, the OFT examined internal documents which made business forecasts absent the merger.

69. These documents show that, absent the merger, BATS expects to grow over the next few years. One document from February 2011[18] shows that BATS expects to increase its share of all trading of UK-listed equities from around [ ] per cent currently to over [ ] per cent in 2013.

[16] The data for 2009 may be less relevant to assessing the current state of competition due to the much smaller presence of BATS then.
[17] 'Merger Assessment Guidelines', OFT1254, September 2010, paragraph 5.4.5.
[18] BATS – Management Case – Operating Model – 15 February 2011.

70. Chi-X projected that, absent the merger, it would increase its share of UK-listed equities from around [ ] per cent today to around [ ] per cent by 2015.[19]

71. Even if the levels of growth projected were not actually obtained, the OFT considers it significant to note that each of the parties, but in particular BATS, projected growth in their own market positions absent the merger. Whilst a proportion of this share would have been expected to be gained from the LSE, it is realistic to consider that some of this growth may have been expected to be achieved at the expense of the other merger party. In this context, paragraph 59 above explains why, in terms of pricing levels, it may be difficult for the parties to achieve further growth from only competing against the LSE; paragraph 73 below explains why the parties' competitive advantage over LSE in terms of latency levels has now eroded. The internal documents therefore provide some support for the view that the loss of competition arising from the proposed merger may be greater in the next few years than it is currently.

Technological development

72. Besides price, one of the key areas in which one would expect the parties to compete in the future is technology. Indeed, the OFT has been told by the parties and by third parties that latency is a key element of competition.[20] Latency refers to how quickly a trade can be executed (the buy and sell sides can be matched) and is simply a measure of the effectiveness of a platform’s technology.

73. BATS and Chi-X appear to have had better latency performance than the LSE and Turquoise in 2009. However, in late 2010 Turquoise upgraded its technology and in early 2011 the LSE upgraded so that all four main UK trading venues now have similar latency.

74. There is some evidence that, absent the merger, the parties would compete on technology grounds. One third party said that the merger parties already compete by driving innovation in the market. Chi-X told the OFT that it would further invest in technological improvements without the merger.

[19] This is from a document dated February 2011.
[20] Customers told the OFT that in choosing a platform on which to trade they consider best price offers, liquidity, latency and trading fees.

The OFT considers that it may be the case that the merger reduces competition on technological grounds.

Conclusion on closeness of competition

75. The merger reduces the number of trading platform operators with meaningful shares (that is, above one per cent) from three to two. The evidence discussed above indicates that BATS and Chi-X are competitors with very similar offerings. Some third parties described them as close competitors.

76. The analysis of correlations of the parties' share of supply (based on intraday FTSE 100 lit trading) is, in the OFT's view, inconclusive, in particular given the limitations of historic data in this market (see paragraphs 65 and 66 above). Whilst the data do not show a historic relationship, there is some indication from that analysis that the parties are becoming closer competitors over time.

77. Internal documents show that the parties expect some growth (strong growth in the case of BATS) absent the merger. The OFT has considered evidence in relation to several parameters (price[21] and latency[22]) as to why this growth may not be obtained only from competing against the LSE. This provides further support for the view that the parties may be expected to compete against each other in the near future without the merger. This is a relevant consideration for the OFT which needs to consider – prospectively – whether the proposed merger may be expected to lead to a substantial lessening of competition relative to the likely competitive situation without the merger.[23]

78. Besides price competition, which was the focus of two of the customer complaints, it may be case that the merger would remove competition between the parties on other parameters, such as investment in technology.

[21] See paragraph 59.
[22] See paragraph 73.
[23] See paragraphs 4.3.1–4.3.4 of 'Merger Assessment Guidelines', September 2010, OFT1254.

79. Overall, the OFT considers that it may be the case that, going forward, the merger may be expected to result in a substantial lessening of competition arising from unilateral effects in the trading of on-book UK-listed equities in the absence of countervailing factors such as entry/expansion and/or countervailing buyer power (considered below). The OFT has considered first, however, the potential pro-competitive aspects of the merger in terms of any increased competitive pressure on the LSE.

Assessment of pro-competitive aspects of the merger

80. The parties submitted that the merger is pro-competitive in that it would offer more effective competition against the LSE (and other incumbent exchanges throughout the EEA). Several third parties supported this proposition, especially in that it would combine BATS' technology with Chi-X's pool of liquidity.

81. More specifically, the parties submitted that the merger would:

- broaden the parties' offer by combining BATS' US presence with Chi-X's European position

- combine Chi-X's customer base with BATS' technology (and customer base) to provide stronger competition

- provide increased liquidity to the benefit of customers

- facilitate the launch on new products including derivatives trading, and

- allow the merged entity to better influence changes to the European clearing system.

82. However, the OFT notes that the evidence indicates that the parties separately already provide strong competition to the LSE and (as noted in paragraphs 69 and 70 above) there is no evidence that either would imminently exit the market absent the merger such that they would not independently continue to provide a competitive constraint absent the merger.

83. The OFT does not have sufficient information in this case to assess whether any increased competitive pressure that would be brought to bear by the merged firm on LSE in relation to the trading of UK-listed equities would outweigh the harm to competition that could arise from the merger.[24] While not disputing that the merger may have pro-competitive aspects, the OFT has not been able to conclude in this case that they would be on a scale such as to prevent a substantial lessening of competition arising.

Coordinated effects

84. The OFT found no evidence of any pre-existing coordinated behaviour in the markets it was considering. However, the OFT considered whether the structural changes brought about by the merger (in particular the reduction from three to two in equity trading platforms for UK-listed equities with meaningful market shares and from three to two in the number of significant pan-European lit MTFs) may mean that tacit or explicit coordination could be more likely after the merger.

85. The OFT considered whether, after the merger, BATS and Chi-X could reach and monitor the terms of coordination, whether coordination would be profitable for the firms and internally stable, and whether co-ordination would be externally stable or could be defeated by firms outside any coordinating group.[25]

Reaching and monitoring terms of coordination

86. Coordination on the basis of pricing for UK-listed equities between the merged entity and LSE/Turquoise may be difficult to reach and sustain without explicit communication. The daily market shares of the different venues is volatile and the pricing of the LSE is relatively complex with (often volume related) discounts for different user groups being revised. Obvious focal points are pricing and daily market shares.

87. The OFT also considered a potential pan-European coordinated outcome based on market sharing, where the merged firm would focus its growth outside the LSE's core markets of UK- and Italian- listed equities in return

[24] 'Merger Assessment Guidelines', September 2010, OFT1254, paragraph 5.7.4.
[25] Merger Assessment Guidelines, OFT1254, September 2010, paragraphs 5.5.9–5.5.19.

for Turquoise competing less aggressively in trying to grow volume in other European listing venues.[26] The OFT considered that this could be monitored, for instance, via the transparent pricing of Turquoise in Europe and the merged entity in the UK.

Internal stability of coordination

88. For coordination on UK-listed equities, the OFT considered whether a coordinated outcome would be stable due to the lack of symmetry between the platforms (the merged entity would still have roughly half the trading volumes of LSE/Turquoise). The merged entity's lower share may mean that it would have more to lose from any coordination.

89. In terms of pan-European coordination, the OFT considered whether deviation from such a strategy could be punished by discounts specific to particular listing venues. These type of discounts have already been offered by MTFs. Although the combined LSE/Turquoise and the parties are not symmetric, the OFT considered whether they could each benefit post-merger by co-ordinating compared to continued competition. The merged firm will generate more than half its revenues on equities listed outside of the UK (or Italy) and expects to get more than half of the post merger volume growth from these indices. LSE/Turquoise achieves most of its volume and profits on the markets where it is the regulated market and incumbent (London and Italy). Thus there may be scope for both firms to benefit by allocating markets in this way.

External stability of coordination

90. The OFT's evidence on entry (discussed below) did not demonstrate that coordination would necessarily be defeated by firms outside of the leading two (post-merger) operators entering or expanding. In the case of the pan-European theory (discussed at paragraph 87 above), third parties tended to believe that MTFs would be able to grow share in other European listing venues due to the increased awareness and offering post-merger even if there were competitive responses by the regulated markets. Coordination affecting these listing venues may bring the post-merger outcome closer to the pre-merger levels, removing some of the potential benefits associated with the merger in these listing venues.

[26] The LSE Group owns Borsa Italiana.

91. No third-parties raised concerns about coordinated effects in this case.

92. Given the OFT's decision on unilateral effects it has not been necessary to reach a conclusion on whether any of these potential co-ordinated outcomes gives rise to a realistic prospect of a substantial lessening of competition.

Barriers to entry and expansion

93. The parties submitted that barriers to entry and expansion are low. In the past, investment banks and large traders have formed consortia to establish a MTF (which was the case with Turquoise) or invest in one and then support it in their trading activities (which were the case with both merger parties). As such, according to the parties, the threat of new entry sponsored by key customers (or actual new entry, as the case may be) would be sufficient to constrain trading platforms after the merger. Further, the parties said that barriers to expansion are very low and that traders can move volumes to existing alternate platforms very quickly (and in large volumes).

94. Some third parties agreed with both these propositions.

95. In *LSE/Turquoise* the OFT did not find it necessary to conclude on barriers to entry and expansion.[27] However, the OFT did note that barriers to entry are not likely to be insurmountable with the main impediment being attracting sufficient liquidity to remain viable.[28]

96. By way of background, there has been entry in recent years, especially following the introduction of MiFID in 2007. Chi-X entered in 2007 (before MiFID), followed by BATS, Turquoise, NASDAQ Neuro (now exited) and Equiduct, all in 2008. Further entry followed including NYSE Arca, Burgundy, Xetra (Deutsche Borse) and QuoteMTF (among others). However, as can be seen in Tables 1 and 2, these entrants (other than Chi-X, BATS and Turquoise) have achieved very small shares of supply and have not significantly increased their volumes recently. It is therefore unclear to the OFT how viable these entrants are (and therefore how much of a competitive constraint they will offer the merged entity).

[27] Paragraph 78.
[28] Paragraph 77.

97. When considering barriers to entry and expansion, the OFT assesses the prospects for entry and/or expansion using the criteria of whether it would be timely, likely and sufficient.[29]

Timeliness of entry/expansion

98. In terms of new entry, market enquiries revealed that developing trading technology from scratch can take years and involve substantial investment. As such, much new entry in the UK has been by companies with existing technology which is being used in other jurisdictions (for example BATS, NASDAQ OMX and NYSE Arca all had existing operations in the US).

99. Trading platforms must also gain regulatory approval. Once regulatory approval is obtained from a relevant regulator subject to MiFID, a company can offer trading services throughout the EEA. As such, regulatory approval does not have to be sought from the Financial Services Authority (FSA) in the UK.

100. Some market participants advised that the regulatory approval process, including that with the FSA in the UK, can be time consuming and quite costly in terms of application and legal fees.

101. The parties and third parties have told the OFT that trading volumes can be moved quickly and therefore expansion by existing platforms should be considered to be timely.

102. On the evidence before it, the OFT considers that expansion of existing platforms could well be timely. Whether expansion is likely or sufficient is discussed below. As for new entry, the OFT does not consider that the evidence is sufficient for it to conclude that new entry could occur within a timely period, although the OFT does note the number of new entrants that have entered the market in recent years (see paragraph 95 above).

Likeliness of entry/expansion

103. In terms of whether entry or expansion is likely, recent history indicates that entry – and to some extent expansion – has been possible.

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[29] Paragraphs 5.8.1–5.8.15 of 'Merger Assessment Guidelines', September 2010, OFT1254.

104. However, the persistent low shares achieved by other venues leads the OFT to question whether other platforms are likely to enter. Many of the platforms mentioned in paragraph 95, for example, have either exited or found market share very difficult to achieve over the past few years, demonstrating the difficulty of expanding in this market. These include platforms with strong branding such as NYSE and NASDAQ. Having seen such platforms struggle for market share it may be the case that potential entrants are deterred from entering.

105. The OFT has not seen any evidence to suggest that significant expansion by existing suppliers is likely; nor does it consider that, as explained in paragraph 117 below, customers are likely to be willing to sponsor entry.

106. On the evidence available the OFT is not persuaded that entry or expansion is sufficiently likely as to be able to be relied upon to prevent a substantial lessening of competition occurring as a result of the merger.

Sufficiency of entry/expansion

107. It is not sufficient that further entry or expansion by existing operators be timely and likely: it is also necessary to demonstrate that it would be sufficient to constrain the merged entity such as to prevent a substantial lessening of competition from occurring.

108. Recent history indicates that entry – and, in the case of the parties and Turquoise, expansion – has been possible. Many customers told the OFT that they could move trading volumes to other venues if need be. However, the persistent low shares achieved by firms other than the parties and the LSE Group leads the OFT to question whether these do, in reality, offer a viable alternative to the parties and to LSE/Turquoise. Some of the customers appeared, when questioned, to be mainly considering dark trading venues when considering the ease of switching venue and did not feel there were suitable lit alternatives to the leading two post merger providers.

109. The OFT considered the prospects for new entrants attracting share from existing suppliers. In this respect, several third parties said that Chi-X enjoyed a first mover advantage on entering since there are network

characteristics of trading platforms.[30] Even if traders were willing in theory to move volumes to other platforms it is not clear to the OFT that they would be willing to in practice if other traders had not done so already. In other words, third party comment to the OFT has strongly indicated that traders will trade where the liquidity lies. Without a mechanism to coordinate movements of trading volumes (such as forming a consortium of investment banks to sponsor a platform) the OFT cannot be confident that entry or expansion would be sufficient to offset the competitive harm arising in this case.

110. That Chi-X was able to build up market share and a reliable pool of liquidity does not mean that others are able to replicate that (either through entry or expansion). MTFs who entered after Chi-X, other than Turquoise and BATS itself, found it difficult to build up a pool of liquidity since traders, who by then already had the LSE and some MTFs to choose from, did not invest in using a further MTF; especially if those newer MTFs did not offer materially better technology or pricing.

111. In addition, some third parties have questioned whether some of the existing venues have the right product offering to induce large-scale trading volumes to move to their platforms (and thus ameliorate the effects of the merger through expansion). One said that the newer MTFs struggle to differentiate their offer from the older, more established MTFs.

112. The OFT notes that two third parties pointed out to the OFT that MTFs with strong branding behind them have failed to capture a significant market share – NYSE Arca (whose UK market share appears to be lower in 2011 than in 2010) and NASDAQ Neuro (now exited).

113. Moreover, some third parties – both customers and competitors – told the OFT that a key element to successful entry or expansion is to have the support of large traders/investment banks, preferably as owners. Despite active involvement of customers in the management of some of these operators there are no signs of significant growth by (displayed) competitors. This adds a further element of uncertainty as to whether expansion (or entry) is likely to be sufficient in scope.

[30] In essence, the value of the platform to one user is increased as each additional user joins.

114. The OFT is conscious that no trading platforms beyond the parties and LSE/Turquoise have achieved a share of supply of one per cent. For this reason, and those set out above, the OFT cannot be confident that existing platforms can expand, or new platforms can enter on a meaningful scale, such as to prevent a substantial lessening of competition from occurring.

Conclusion on entry/expansion

115. On the evidence available the OFT is not persuaded that entry or expansion will be timely, likely and sufficient such as to be able to be relied upon to prevent a substantial lessening of competition from occurring as a result of the merger.

Countervailing buyer power

116. The parties submitted that many customers have countervailing buyer power. This is because traders – some of whom trade in very large volumes – can move trades to other venues very quickly (within a day). The parties noted that many customers use multiple venues currently,[31] making it even easier for them to move trades around.

117. Moreover, the parties submitted that the experience of Turquoise was that large customers can form a consortium to sponsor entry in order to discipline a competing platform. However, when asked about this, few customers appeared willing to sponsor entry.

118. To the extent that the parties will have increased liquidity as a result of the merger, this may further limit customers' willingness to move trades around. The OFT is not aware of any evidence that shows customers having countervailing buyer power to prevent price rises but which does not involve sponsoring entry. To the extent that customers could switch larger volumes to other platforms, this has already been considered in the discussion of barriers to expansion.

119. The OFT has found that countervailing buyer power would not be sufficient in this case to offset any substantial lessening of competition.

[31] This was corroborated by the customers themselves.

THIRD PARTY VIEWS

120. Few customers were opposed to the merger. Indeed, many were in favour of it, citing deeper liquidity pools, low existing fees and low barriers to entry (and expansion) as reasons why the merger should proceed. Some saw the combination of BATS technology and deeper liquidity as providing the merged entity with a good base to offer more effective competition against the LSE in areas other than equities trading (such as trading in derivatives).

121. Many third parties said that sufficient alternatives (some displayed and some non displayed) would remain after the merger to provide competitive constraints in trading platforms. Turquoise, Equiduct and NYSE Arca were cited as alternatives for lit trading.

122. However, the OFT considers that there are a number of reasons why the majority of customers' lack of concerns should be treated with some caution in this case. First, a sizeable proportion of customers who commented on the merger are shareholders of one or both of the merger parties (and who therefore may have conflicting interests in whether the merger goes ahead, although the OFT readily acknowledges that these customers are also sophisticated, knowledgeable and significant market players). The OFT considers that greater weight should therefore be placed on the views of the customers who are not shareholders: of these, the larger customers are not concerned whereas the concerns received by the OFT came from smaller customers.

123. Second, there are reasons to believe that the views of some customers may have been influenced by a misunderstanding of the commercial prospects for each of the parties absent the merger. Some customers told the OFT that the merger would strengthen each of the parties' financial position so as to place them in a better position to compete against the LSE. Some suggested that the merger would guarantee the parties' very survival. Some of these customers were apparently supportive of the merger on the basis that they would have been concerned to see the parties exit the market and therefore see a return to a market structure akin to that which existed historically. However, internal documents available to the OFT showed that this may not be such an important factor – Chi-X made a profit for the first time in 2010 and BATS is expecting to make a profit for the first time in 2011. Further, each of the parties anticipates

growth in their own market shares absent the merger (see paragraphs 68ff above).

124. Third, many of the customers spoken to emphasised that execution pricing was only one component of the overall attractiveness of a particular supplier's competitive offering for a specific trade. Latency and liquidity were potentially more significant factors in determining the overall attractiveness of trading on a particular platform for a given transaction. As a result, it may be that customers would be less concerned about an increase in price resulting from a reduction in competition than may be expected to be the case in other markets.

125. Notwithstanding the above, some customers were concerned about the merger. One considered that the post-merger market structure would allow the merged entity to raise trading fees. Another raised the same concern, stating that competition will be reduced, especially as the LSE now owns a majority stake in Turquoise and that price competition for execution and execution fee models will be diminished.

126. The OFT is mindful of the sophistication of customers in this market and the general lack of concern about the merger expressed by the majority of customers. However, as a result of the considerations expressed above (paragraphs 122 to 124) and concerns received from some smaller customers, the OFT does not view the general lack of concerns as being conclusive of the absence of a substantial lessening of competition resulting from the merger.

ASSESSMENT

127. The parties overlap in the supply of trading services for equities listed in the EEA and Switzerland. The OFT has assessed this case on the basis of trading platforms for on-book UK-listed equities, but has, on a cautious basis, considered also FTSE 100 lit trading and intraday FTSE 100 trading.

128. The proposed merger reduces the number of equity trading platforms with meaningful market shares (that is, above one per cent) from three to two (on any measure employed by the OFT). For on-book trading of UK-listed equities, the parties have a combined share of around [25–35] per cent (increment of [five–10] per cent) with the LSE/Turquoise accounting for around [60–70] per cent. For FTSE 100 lit trading the parties and

LSE/Turquoise have similar shares. For FTSE 100 intraday trading the parties account for around [35–45] per cent (increment of around [five–10] per cent) with LSE/Turquoise accounting for the bulk of the remainder. As such, the proposed merger represents a significant structural change in the marketplace.

129. On the available evidence, the OFT considers that BATS and Chi-X have similar competitive offerings. Several customers told the OFT that, to the extent that they are similar in this respect, they consider them to be competing closely (paragraph 55 above). The parties have very similar pricing models and levels, and use the same central counterparty for clearing.

130. In considering the prospect of a substantial lessening of competition, the OFT is concerned to protect rivalry in the relevant markets going forward. In markets that have remained structurally unchanged for a substantial period of time, evidence about competition that has taken place between the parties in the period leading up to the merger provides a reasonable proxy for the prospects for competition that would be lost if the merger proceeded. By contrast, in this case, the market has experienced significant structural change with the advent of MiFID in 2007 and the entry of BATS into the market in 2008. As a result, the existing conditions of competition in this market do not necessarily provide an accurate guide of the prospects for competition going forward.

131. Although evidence to date clearly indicates that the parties have exerted competitive pressure on, and won share from, the LSE, this may be expected to change once BATs and Chi-X reach a point at which they seek to win share from each other.

132. The correlation analysis of the parties' shares provides some support for the view that they are becoming closer competitors over time. The OFT also notes that internal documents from the parties show that both expect to grow in the near future which further suggests that the parties are likely to compete more strongly absent the merger. This is not surprising given that many customers have told the OFT that the LSE has greatly improved its offering over the past couple of years (in both price and technology terms) which has made market share gains from the LSE more difficult to achieve.

133. The OFT is conscious that this is a nascent market with a former monopolist incumbent. In assessing the proposed merger the OFT must consider how the competitive conditions of the marketplace after the merger will compare with those without the merger. In this light, the evidence available in this case indicates that the parties may be in the process of becoming closer competitors to each other over time. Therefore, the merger may reduce both price and non-price (for example, technological) competition.

134. In terms of expansion or entry offsetting any harm to competition, the OFT is not confident that it would be timely, likely and sufficient to do so. Existing competitors to the parties, including those with strong brands, have not been successful in gaining a meaningful market share (other than LSE/Turquoise). Third party comment to the OFT points to first mover advantages combined with network characteristics, a lack of an attractive business offering and the lack of large trader support as reasons why these competitors have not, to date, been more successful in challenging the merger parties. As such, the OFT does not view expansion (or entry) as being able to prevent a substantial lessening of competition occurring in this case.

135. The OFT is highly mindful of the fact that the large majority of third party responses to the OFT's consultation have been either neutral or in favour of the merger, rather than against it because of a perceived loss of competition. The OFT notes that customers in this market are universally large and sophisticated institutions. However, for the reasons explained in the decision, the OFT believes that there may be several reasons to treat the weight of customer responses with some caution in this case.

136. These considerations mean that the general lack of customer concerns in this case is less probative than they would be in other analogous situations. The OFT also notes that there are customers who are in fact concerned about the merger.

137. Taking all the above into account, the OFT considers that this merger creates a realistic prospect of a substantial lessening of competition on the basis of unilateral effects in the market for the supply of trading services for on-book UK-listed equities.

138. The OFT also examined whether the merger creates a realistic prospect of coordination between platforms. The OFT considered coordination on trading of UK-listed equities as well as on a pan-European basis. However, given its finding on unilateral effects, discussed above, the OFT did not find it necessary to conclude on coordination.

139. Consequently, the OFT believes that it is or may be the case that the merger may be expected to result in a substantial lessening of competition within a market or markets in the United Kingdom, namely the supply of trading services for on-book UK-listed equities.

140. The parties did not offer any undertakings in lieu of a reference.

DECISION

141. This merger will therefore **be referred** to the Competition Commission under section 33(1) of the Act.