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PUBLIC VERSION

In the published version of this decision, some information has been omitted pursuant to Article 17(2) of Council Regulation (EC) No 139/2004 concerning non-disclosure of business secrets and other confidential information. The omissions are shown thus […]. Where possible the information omitted has been replaced by ranges of figures or a general description.

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Subject: **Case M.10158 – IHS MARKIT/CME GROUP/JV**
Commission decision pursuant to Article 6(1)(b) of Council Regulation No 139/2004[1] and Article 57 of the Agreement on the European Economic Area[2]

[1] OJ L 24, 29.1.2004, p. 1 (the 'Merger Regulation'). With effect from 1 December 2009, the Treaty on the Functioning of the European Union ('TFEU') has introduced certain changes, such as the replacement of 'Community' by 'Union' and 'common market' by 'internal market'. The terminology of the TFEU will be used throughout this decision.

[2] OJ L 1, 3.1.1994, p. 3 (the 'EEA Agreement').

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Dear Sir or Madam,

(1) On 15 June 2021, the European Commission received notification of a proposed concentration pursuant to Article 4 of the Merger Regulation by which IHS Markit Ltd. ('IHSM', UK) and CME Group Inc. ('CME', USA) will contribute IHSM's over-the-counter ('OTC') derivatives and foreign exchange ('FX') trade processing business (MarkitSERV) and CME's trade processing and optimization businesses (Traiana, TriOptima, Reset) to a joint venture called Parthenon Ltd ('JV', UK), which they will jointly control (IHSM and CME are referred to hereinafter as the 'Notifying Parties' and IHSM, CME and the JV are referred to hereinafter as the 'Parties').[3] The creation of the JV and the contribution of the aforementioned businesses is referred to as the 'Transaction'.

1. THE PARTIES

(2) IHSM is an international provider of information, analytics, expertise, and solutions to major industries, financial markets, and governments globally. IHSM provides pricing and reference data, financial indices, security identifiers, valuation and trading services, and data feeds/data management solutions.

(3) CME is a US based global risk management firm. CME owns and operates several exchanges (Chicago Mercantile Exchange, Chicago Board of Trade (CBOT), New York Mercantile Exchange (NYMEX) and the Commodity Exchange (COMEX)) and provides other trading and clearing services across a range of asset classes, including commodities, equity indices, foreign currency (FX) products[4], interest rate derivatives (IRDs)[5] and cryptocurrencies.

(4) The JV will be active in trade processing and trade/portfolio optimization services in a number of asset classes.

2. THE CONCENTRATION

(5) On 12 January 2021 IHSM and CME signed a Transaction Agreement pursuant to which IHSM will transfer the shares of the entities carrying out the MarkitSERV

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3 Publication in the Official Journal of the European Union No C244, 22.6.2021, p. 22.

4 FX products are derivative or so-called "spot" contracts: FX derivatives refer to contracts, whose payoff depends on the foreign exchange rate(s) of two (or more) currencies over time. FX derivatives can be used for a number of reasons, e.g., to provide exposure or hedge against risk with respect to changes in exchange rates over time, or for investment purposes. The most common FX derivatives are swaps, forwards, non-deliverable forwards ('NDFs'), futures and options. FX spot contracts are not derivative contracts, but contracts between two parties to buy one currency against selling another currency at an agreed price for settlement on the 'spot' date (usually within two days from when the trade is initiated).

5 Interest-rate derivatives, or 'IRDs', are contracts used to speculate on or hedge against a movement in interest rates, for instance by transforming a floating or variable interest-rate exposure to a fixed interest rate exposure or vice versa, depending on the respective trader's position/risk to be insured.

businesses[6] and CME will transfer the shares of the Traiana, TriOptima and Reset businesses[7] to the JV.

(6) Pursuant to the Transaction Agreement, IHSM, through its indirectly wholly owned subsidiary IHS Equity, will hold 50% of the shares of the JV and CME, through its wholly owned subsidiary CME NEX, will hold 50% of the shares of the JV. Pursuant to the Shareholders Agreement that the Notifying Parties will execute upon closing, IHSM and CME will have the right to appoint an equal number of Directors to the Board. A quorum requires at least one CME and one IHSM director to be present. All board matters will be determined by simple majority, including approval for the budget, business plan and management team. Accordingly, the positive consent of CME and IHSM is required to approval all strategic matters; therefore, the JV will be jointly controlled by IHSM and CME.

(7) The JV would perform all the functions of an autonomous economic entity on a lasting basis. The JV would have sufficient own staff, financial resources and dedicated management for its operation and for the management of its business interests. Furthermore, the JV would consist of pre-existing businesses and it would not be limited to exercising a specific function for its parents. It would have an independent market presence and would not have significant sale or purchase relationships with its parents. Finally, the JV would be set up for an indefinite period and thus intended to operate on a lasting basis. Therefore, the JV would be a full-functional joint venture.

(8) The Transaction thus constitutes a concentration within the meaning of Articles 3(1)(b) and 3(4) of the Merger Regulation.

3. UNION DIMENSION

(9) The undertakings concerned have a combined aggregate world-wide turnover of more than EUR 5 000 million[8]. Each of them has a Union-wide turnover in excess of EUR 250 million, but they do not achieve more than two-thirds of their aggregate Union-wide turnover within one and the same Member State. The Transaction therefore has a Union dimension pursuant to Article 1(2) of the Merger Regulation.

4. MARKET DEFINITION

4.1. Overview of Parties' activities

(10) The contributed businesses to the JV provide trade processing services and trade optimization services.

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6 US Parthenon Holdings LLC, Option Computers Limited, MarkitSERV Limited, MarkitSERV LLC, RCP Trade Solutions Limited, MarkitSERV FX Limited, IHSM U.S. Newco, and MSERV India Services Private Limited.

7 TriOptima AB, Reset Private Limited, Traiana, Inc, Traiana Technologies Limited, Traiana Limited, TriOptima UK Limited, TriOptima Asia Pacific Pte. Limited, TriOptima Japan K.K., TriOptima North America LLC.

8 Turnover calculated in accordance with Article 5 of the Merger Regulation.

(11) IHSM contributes MarkitSERV to the JV. MarkitSERV provides trade processing services in relation to OTC derivatives, namely credit default swaps[9] ('CDS'), equity derivatives[10], IRDs, as well as FX spot and derivatives, with a focus on IRDs and CDS. Its core service sends and receives details of executed trades to (i) the trading parties; (ii) the execution venue, if any; (iii) the central counterparty ('CCP'); and (iv) the trade repository.

(12) CME contributes Traiana, TriOptima and Reset to the JV. Traiana is a market infrastructure technology provider that offers pre-trade risk monitoring and automated post-trade processing services. TriOptima consists of three core services: compression, portfolio reconciliation and margin optimization. Reset is a multilateral basis risk mitigation service based on interbank offered rates (IBORs) for interest rates, FX non-deliverable forwards ('NDFs'), FX options and inflation derivatives.

(13) The below overview shows the activities of the businesses across different services:

Table 1: The OTC trade processing and reconciliation services provided by the JV

	MSERV	Traiana	TriOptima	RESET
Trade Processing	✓	✓		
Credit Risk Management		✓		
FX Retail Aggregation		✓		
Payment and Settlement Optimisation		✓		
Portfolio Compression			✓	
Reconciliation and Margin Management			✓	
Portfolio Rebalancing				✓

Source: Form CO, Table 6.1.

4.2. Over-the-counter 'OTC' derivatives

(14) Derivatives are financial products (including options, futures and swaps) designed to transfer various types of economic risks between the parties to a trade. They do not transfer ownership of underlying financial assets but derive their value from such assets. Financial derivatives enable a transfer of risk between two counterparties without needing to invest in the underlying financial assets. There are different types of financial derivatives based on the underlying asset class, such as equity derivatives, CDS, FX derivatives, and IRDs.

9 A credit default swap (CDS) is used to transfer credit risk deriving from a bond. It can be either used by holders of a bond to ensure against default risk or by investors not holding the bond to speculate.

10 An equity derivative is a financial instrument whose value is based on movements of an equity instrument. For example, a stock option is an equity derivative, because its value is based on the price movements of the underlying stock.

(15) In broad terms, derivatives may either be traded OTC or on an exchange (i.e. exchange-traded-derivatives ('ETDs'). In 2019, OTC derivatives accounted for 92% of the outstanding notional amount of the EU derivatives market, with ETDs accounting for the remaining 8%.

(16) Exchange trading (as opposed to OTC trading) means that the agreement to trade securities or derivatives takes place on an exchange or 'regulated market'[11], which is subject to different regulation and supervision than OTC trading (venues). While trading on exchange is normally anonymous, i.e. the trading parties do not know the identity of their counterparty, OTC trading is generally more "relationship-based" and counterparties know who they are trading with, (though trading protocols ensuring anonymity do exist, e.g. on dealer-to-dealer venues). The reason for this is, that financial instruments traded on exchange are standardized and fungible, while OTC traded products are bespoke (e.g. derivatives) or not standardized (e.g. bonds).

(17) In OTC trading, counterparties need to negotiate and agree on the price and other terms of the trade. This often takes place on a regulated trading venue (such as a Multilateral Trading Facility ('MTF') or organised trading facility ('OTF'), or a regulated venue in another jurisdiction); alternatively, the OTC trades are negotiated bilaterally between the counterparties to the trade.

(18) Most OTC derivatives are traded on a bilateral basis (i.e. the contract is between two parties, the dealer trader and the buyside trader (so-called 'dealer-to-client' or 'D2C') or a dealer trader and another dealer trader (so-called 'dealer-to-dealer' or 'D2D').

(19) Given that the Transaction does not lead to any horizontal or vertical links relating to exchange trading or exchange-traded products, the Commission does not further assess the market for exchange trading.

4.3. Derivatives trading services

4.3.1. Introduction and Parties' services

(20) CME owns and operates several exchanges (Chicago Mercantile Exchange, Chicago Board of Trade, New York Mercantile Exchange and the Commodity Exchange) and an electronic trading venue for derivative products across all asset classes (called CME Globex), an electronic trading venue for fixed income cash products (called BrokerTec) and an FX trading platform (called EBS).

(21) IHSM does not operate any trading venues and does not offer any services with respect to exchange traded products. There are no vertical relationships between CME's Futures & Options trading and clearing offering (CME Globex) and MarkitSERV.[12] The only trading service leading to a vertical relationship with the JV

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[11] According to Art. 4(1)(21) of Directive 2014/65/EU of the European Parliament and of the Council of 15 May 2014 on markets in financial instruments, OJ L 173, 12.6.2014, page 349 ('MiFID II'), a regulated market "*means a multilateral system operated and/or managed by a market operator, which brings together or facilitates the bringing together of multiple third-party buying and selling interests in financial instruments – in the system and in accordance with its non-discretionary rules – in a way that results in a contract, in respect of the financial instruments admitted to trading under its rules and/or systems, and which is authorised and functions regularly and in accordance with Title III of [Mifid II]*".

[12] Notifying Parties' response to RFI 16.

(FX NOE messaging and FX CCP connectivity) is the offering of CME's FX trading venue EBS. EBS offers trading of FX spot contracts as well as FX derivatives (non-deliverable forwards, forwards and FX swaps).

4.3.2. Relevant product market definition

4.3.2.1. Commission's previous decisions

(22) In past decisions, the Commission considered that the provision of trading services for derivative contracts can be distinguished based on underlying asset classes, execution environment, types of contracts and currency pairs.[13]

(23) *First*, regarding the type of underlying variable or asset, the Commission considered that trading services for derivatives can be categorised into trading services for equity derivatives (single stock or index based), IRDs, currency derivatives, commodity derivatives, credit derivatives, and FX derivatives.[14]

(24) *Second*, the Commission previously identified separate relevant product markets for the provision of trading services for derivatives on exchanges (i.e. exchange-traded derivatives or 'ETDs') and the trading of derivatives over-the-counter (i.e. 'OTC' derivatives) in view, in particular, of their different characteristics[15] and different applicable legal framework.[16]

(25) *Third*, the Commission previously segmented the provision of trading services for derivatives according to the types of contracts and considered that trading services for swaps[17] are part of a distinct product market from trading services for options[18] and futures/forwards,[19] although it left open whether trading services for futures and for options comprise separate markets as well.[20]

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13 Commission decision of 29 March 2017 in Case M.7995 - *Deutsche Börse/London Stock Exchange Group*, paragraph 727 and Commission decision of 24 June 2013 in Case M.6873 - *ICE/NYSE Euronext*, paragraph 69.

14 Commission decision of 29 March 2017 in Case M.7995 - *Deutsche Börse/London Stock Exchange Group*, paragraphs 728-731.

15 Exchange-traded IRDs are standardised products, mainly futures and option, while the OTC trading of IRDs consist of contracts, mainly swaps and forward rate agreements, with bespoke terms.

16 Commission decision of 29 March 2017 in Case M.7995 - *Deutsche Börse/London Stock Exchange Group*, paragraphs 732-737. See also case COMP/M.6166 - *DBAG / NYSE Euronext*, paragraphs 255ff and 367.

17 A swap is an agreement between two counterparties to exchange a sequence of cash flows over a period of time. These cash flows could for example be tied to the value of fixed or floating interest rates (IRS) or to the value of foreign currencies (FX swaps).

18 An option is a contract between two counterparties under which one counterparty (the option buyer) acquires the right (against the payment of a premium), but not the obligation, to buy from, or sell to, the other counterparty (the option seller) a specific amount of the underlying asset at a specific "strike price" on or before a specified date.

19 A future/forward is a contract between two counterparties under which one party, the seller, agrees to sell to the other counterparty (the buyer) a specified amount of the underlying asset (or its cash equivalent) at a specified future date at a price agreed at the time of the conclusion of the contract. The difference between a future and forward is that futures are traded on organised exchanges whereas forwards are privately negotiated.

20 Commission decision of 1 February 2012 in Case M.6166 – *Deutsche Börse/NYSE Euronext*, paragraph 443 and Commission decision of 29 March 2017 in Case M.7995 - *Deutsche Börse/London Stock Exchange Group*, paragraph 743.

(26) *Fourth*, the Commission has previously considered potential segmentations by currency pair, but ultimately left open the product market definition.[21]

4.3.2.2. Notifying Parties' view

(27) The Notifying Parties agree that separate markets should be defined by reference to execution method (ETD versus OTC). In addition, the Notifying Parties are of the view that it is not appropriate to segment the market with respect to FX spot and derivative products since competitors and customers in this space are the same.

4.3.2.3. Commission's assessment

(28) With respect to the distinction by asset class, the Commission's market investigation did not provide any evidence that would justify departing from the approach followed in previous decisions. For the purposes of this decision, therefore, the Commission identifies separate derivative trading services markets based on asset class. The only relevant asset class for derivatives trading services markets in this case is FX. CME does not offer derivative trading services in equity derivatives, IRDs or CDS. Hence, derivative trading services in relation to other asset classes than FX are not relevant in the context of the Transaction and are not assessed further in this decision.

(29) The Commission further investigated distinctions by execution environment (ETD versus OTC), trading channel (electronic versus bilateral/voice execution) and types of contracts or currencies.

(30) With respect to the distinction between ETD and OTC execution methods, the Commission's market investigation did not provide any evidence that would justify departing from the approach followed in previous decisions. For the purposes of this decision, therefore, the Commission identifies separate markets based on execution method (i.e. ETD versus OTC). MarkitSERV is not present in, nor does it provide any services for, ETDs. Hence, ETD-based markets are not relevant in the context of the Transaction and are not assessed further in this decision.

(31) As detailed below, in the context of FX trading services, the Commission investigated whether separate markets should be defined as between: (i) FX spot and FX derivative trading services; (ii) electronic and bilateral trading (also referred to as "voice"); (iii) anonymous (dealer-to-dealer) and disclosed (dealer-to-client) trading services; and (iv) different types of contracts.

(32) All FX trading venue competitors responding to the Commission's investigation provide trading services for FX spot and FX derivatives[22], suggesting that no distinction is warranted at this level from a supply-side perspective. However, the question whether FX spot and FX derivatives constitute separate markets can be left open for the purposes of this decision, as a conclusion on this issue does not affect the outcome of the Commission's assessment in the present case.

(33) Regarding a distinction by trading channel, based on the replies to the market investigation, most FX trading venue competitors (60%) consider that separate markets exist for electronic FX trading services on the one hand, and bilateral/voice

21 Commission decision of 24 June 2013 in Case M.6873 - *ICE/NYSE Euronext*, paragraph 69.

22 Reply to question 5 of Questionnaire 5.

FX trading services on the other.[23] One competitor states: *"(...) While the market continues to become more electronic, the rate of adoption has slowed substantially, suggesting that some form of voice trading will continue to be the preferred execution method for a segment of the client market. Those customers are effectively not in scope for electronic FX trading venues/services."*[24]

(34) Other respondents consider that an overall market exists covering both electronic FX trading services and bilateral/voice FX trading services, since market participants regularly trade in both ways, electronically and via voice, depending on the trade. Respondents also indicated that preferences are also dependent on particular products or currencies. For example, non-standardized products and "non-G10 currencies" tend to be traded via voice.[25]

(35) The Commission considers that the question whether electronic FX trading services and bilateral/voice FX trading services constitute separate markets can be left open for the purposes of this decision, as a conclusion on this issue does not affect the outcome of the Commission's assessment in the present case.

(36) The Commission considered further whether "anonymous" versus "disclosed" FX trading constitute separate markets. Anonymous trading (also referred to as dealer-to-dealer trading) refers to trading protocols that keep the identity of the trading counterparty confidential before the trade. Disclosed trading (also referred to as dealer-to-client trading) means that trading counterparties on the respective platform know who they are trading with. One competitor noted that *"there is generally no requirement for particular clients to use one over the other, therefore clients can (and some do) use both anonymous and disclosed liquidity sources. Therefore, these two types of trading venue do compete for business."*[26]

(37) The Commission considers, however, that the question of whether "anonymous" and "disclosed" FX trading constitute separate markets can be left open for the purposes of this decision, as a conclusion on this issue does not affect the outcome of the Commission's assessment in the present case.

(38) The market investigation provided some evidence that it might be appropriate to define separate markets by type of contract or currency (see recital (34). Some customers consider these distinctions to be relevant in relation to the question via which channel to trade. For example, FX trading venue competitors mention specifically non-deliverable forwards, forwards, swaps and options when asked about which trading services they offer.[27] This suggests that the mentioned products may be relevant distinctions in their service offering. One competitor mentions: *"Clients can access liquidity in more than 300 currency pairs for FX spot and up to 70 currency pairs for FX derivatives."*[28] This indicates that the coverage of certain currency pairs may be a distinguishing factor in the offer of FX trading services.

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23 Reply to question 4 of Questionnaire 5.
24 Reply to question 4.1 of Questionnaire 5.
25 Reply to question 4.1 of Questionnaire 5.
26 Minutes of a call with a market participant on 24 May 2021, 14:00 CET.
27 Reply to question 5.2 of Questionnaire 5.
28 Reply to question 5.2 of Questionnaire 5.

(39) The Commission considers that the question whether different types of contracts and currencies in FX trading constitute separate markets can be left open for the purposes of this decision, as a conclusion on this issue does not affect the outcome of the Commission's assessment in the present case.

4.3.2.4. Conclusion

(40) In view of the above, the Commission considers that separate FX trading services markets exist for exchange traded and OTC traded FX products. Possible further distinctions may exist with respect to (i) trading channel (electronic, voice/bilateral), (ii) pre-trade transparency (anonymous or disclosed trading), and (iii) by type of contract and currency. However, concerning these additional possible distinctions, the relevant product market definition can be left open as the Transaction does not give rise to serious doubts as to its compatibility with the internal market even on the narrowest plausible market.

4.3.3. Relevant geographic market definition

4.3.3.1. Commission's previous decisions

(41) The Commission has previously considered the relevant geographic market definition for derivative trading markets, in particular exchange traded European interest rate, equity index and single stock options and futures[29], as well as for OTC FX trading services. The relevant geographic market definitions in those instances were considered to be EEA-wide or global.

4.3.3.2. Notifying Parties' view

(42) The Notifying Parties did not provide any explicit views on the relevant geographic market for the supply of OTC FX trading services, or the potentially narrower markets, but provided market shares of EBS and its competitors in a global market.

4.3.3.3. Commission's assessment

(43) Responses to the market investigation varied regarding the question of the geographic level of competition. Nevertheless, a majority of competitors indicate that they offer FX trading services to customers at a worldwide level, sets fees for FX trading at a worldwide level and consider that their competitors are active at a worldwide level.[30] The competitors who responded include those operating some of the biggest electronic FX trading venues globally[31] and hence cover a large proportion of global FX trading. Approximately 30% of FX trading takes place bilaterally and not on electronic trading venues and hence in this part of the market, it cannot be excluded that market participants could have a more regional focus. From a demand-side perspective, the market investigation in a previous case revealed that the majority of customers trade OTC FX products on worldwide venues.[32]

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29 Commission decision of 1 February 2012 in Case M.6166 – *Deutsche Börse/NYSE Euronext*, paragraphs 450, 460 and 462.

30 Reply to question 6 of Questionnaire 5.

31 Reply to question 8 of Questionnaire 5.

32 Commission decision of 13 January 2021 in case M.9564 – *London Stock Exchange/Refinitiv*, para 219, to be published.

(44) Regarding a plausible EEA-wide market, the Commission notes that less than [5-10]% of EBS' trading volumes (and less than [0-5]% of EBS' revenues) are accounted for by EEA customers.[33] Hence, the Commission considers that the question regarding the geographic scope of the market for OTC FX trading services can be left open for the purposes of this decision, as a conclusion on this issue does not affect the outcome of the Commission's assessment in the present case.

4.3.3.4. Conclusion

(45) In view of the above, the Commission considers, in line with previous decisions, that the relevant geographic market for OTC FX trading and potential narrower markets is likely global and at least EEA-wide. However, the exact geographic market definition (i.e. EEA-wide or global) can be left open for the purposes of this decision, as a conclusion on this issue does not affect the outcome of the Commission's assessment in the present case.

4.4. Derivatives clearing

4.4.1. Introduction and Parties' services

(46) Clearing refers to all activities occurring between the time of trading (i.e. when a trade has been agreed between the buyer and the seller) and the moment in which commitments are fulfilled, or "settled" (i.e. the seller has delivered the rights to the financial asset to the buyer and the buyer has paid the agreed amount to the seller). The main function of clearing is to insure each party to a trade against non-fulfilment of the commitments agreed to by the other party. This is commonly referred to as insuring "counterparty risk". Where the clearing service is performed centrally by a third party, this third party is referred to as the central counterparty ("CCP") or clearing house. In addition to its principal function of managing counterparty risk, the CCP can also perform other ancillary activities such as the registration and verification of the trade and its counterparties and the transmission of the details of the trade to the relevant settlement body.[34]

(47) CME offers clearing and settlement services across asset classes for exchange-traded and OTC derivatives through its clearinghouse, CME Clearing.

4.4.2. Relevant product market definition

4.4.2.1. Commission's previous decisions

(48) The Commission has previously considered separate product markets for the clearing of derivatives by underlying asset class (e.g. IRDs), execution environment (exchange-traded and OTC), type of customer and type of contract (defining swaps as separate from futures and options, while leaving open whether futures and options or separate currencies constitute separate markets in terms of clearing).[35]

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33 Form CO, footnote 174.

34 Commission decision of 29 March 2017 in Case M.7995 – *Deutsche Börse/London Stock Exchange Group*, paragraph 34.

35 Commission decision of 1 February 2012 in Case M.6166 - *Deutsche Börse/NYSE Euronext*, paragraph 444 and Commission decision of 29 March 2017 in Case M.7995 - *Deutsche Börse/London Stock Exchange Group*, paragraph 748, 750.

4.4.2.2. Notifying Parties' view

(49) The Notifying Parties submit that OTC and ETD derivatives clearing are separate relevant product markets. The Notifying Parties submit that it may be appropriate to further distinguish between relevant product markets for derivatives clearing services by asset class because the underlying financial instruments are used by different customer bases for different purposes. They argue that this is also supported by the supply-side focus of CCPs. In particular, they point to the fact that CME's market position varies considerably by asset class (c.[5-10]% for OTC IRD clearing worldwide, less than [0-5]% for OTC FX clearing worldwide) and the fact it is no longer active in some asset classes (e.g. CDS). Moreover, certain CCPs are split by asset class. For example, LCH Swap Clear specialises in clearing swaps, LCH Forex Clear specialises in clearing FX, and ICE Clear Credit specialises in clearing credit.[36]

4.4.2.3. Commission's assessment

(50) The results of the market investigation did not provide any indication that it would be appropriate to depart from the Commission's previous assessment of derivatives clearing markets.[37] In relation to whether clearing services for different asset classes should be within the same or separate product markets, the market investigation indicated that there is limited supply-side substitutability for clearing services across different asset classes. Respondents indicated that expanding into new clearing services requires significant investment and a long time period to implement the relevant technology solutions, obtain regulatory approvals and build a client base.[38]

4.4.2.4. Conclusion

(51) In view of the above, the Commission concludes, in line with its previous decisional practice, that there are separate product markets for the clearing of derivatives by underlying asset class. The Commission also considers, in line with its previous decisional practice, that there are separate product markets for the clearing of derivatives by execution environment, type of customer and type of contract. However, for the purposes of this decision, the distinction by type of customer and contract does not appear relevant. The Transaction gives rise to a vertical link between MarkitSERV's OTC FX and IRD CCP connectivity service (upstream) and CME's OTC FX and IRD clearing services (downstream). MarkitSERV's service is provided without any differentiation across all customer and contract types, and the market investigation did not give rise to any suggestion that the impact of the Transaction or dynamics of this vertical link would differ by customer and contract types. Therefore, the Commission's assessment focuses on the relevant markets for OTC FX clearing and OTC IRD clearing services without further distinguishing between customer or contract types.

36 Notifying Parties' response to RFI 4 paragraphs 10.2 and 10.3.
37 Replies to questions 5.1 and 6 of Questionnaire 2.
38 Replies to question 5.1 of Questionnaire 2.

4.4.3. Relevant geographic market definition

4.4.3.1. Commission's previous decisions

(52) The Commission has previously considered the relevant market for clearing services (for OTC traded interest rate derivatives) to be at least EEA-wide in scope. In particular, the Commission noted that third country CCPs often have a different geographic focus and not all customers in the EEA consider them as viable alternatives to which they could switch within a short time.[39]

4.4.3.2. Notifying Parties' view

(53) The Notifying Parties did not provide any explicit views on the relevant geographic market for the supply of clearing services, but provided market shares on the basis of a global market. The Notifying Parties confirmed that these market shares (which are less than 10% on any plausible basis at worldwide level) would be even lower on an EEA-wide market.[40]

4.4.3.3. Commission's assessment

(54) The market investigation indicated that most CCPs provide clearing services at the worldwide level[41] and none of the responses to the Commission's market investigation indicated that it would be appropriate to depart from the Commission's previous assessment of the relevant geographic market for clearing services as at least EEA-wide.

4.4.3.4. Conclusion

(55) In view of the above, the Commission considers, in line with previous decisions, that the relevant geographic market for clearing services is at least EEA-wide. However, the exact geographic market definition (i.e. EEA-wide or global) can be left open for the purposes of this decision, as a conclusion on this issue does not affect the outcome of the Commission's assessment in the present case.

4.5. Trade processing services

4.5.1. Introduction and Parties' services

(56) Once the terms of a trade are agreed, the trade is submitted for post trade processing by the execution/trading venue, or by the parties themselves, if traded off-venue. This includes the transmission of messages between different parties to the trade, affirmation/confirmation of the trade, and sending the trade to the relevant CCP (if applicable) and reporting it to the relevant trade repositories/regulatory bodies (as applicable).

(57) MarkitSERV provides trade processing services in relation to OTC derivatives covering the following asset classes: CDS, equities, OTC FX products and IRD, with a focus on IRD and CDS. Its core service sends and receives details of executed

39 Commission decision of 29 March 2017 in Case M.7995 - *Deutsche Börse/London Stock Exchange Group*, paragraphs 765-768.

40 Notifying Parties' response to RFI 17, paragraph 2.1.

41 Replies to question 7 of Questionnaire 2.

trades to: (i) the trading parties; (ii) the execution venue, if any; (iii) the CCP; and (iv) the trade repository.

(58) CME is active in trade processing services through Traiana. Traiana is a market infrastructure technology provider that offers credit limit monitoring and automated post-trade processing services for FX, equities and exchange traded derivatives. Credit limit monitoring is a service provided to prime brokers, executing brokers and buy-side clients and consists in credit checks to ensure that the counterparty of a trade has sufficient credit to enter into a transaction (see Section 4.9 for more details).

4.5.2. Relevant product market definition

4.5.2.1. Commission's previous decisions

(59) The Commission has not previously considered trade processing services directly. In past decisions, the Commission has considered that the provision of trading services for derivative contracts can be distinguished based on underlying asset classes, execution environment, and types of contracts (see Section 4.3.2 above).[42]

4.5.2.2. Notifying Parties' view

(60) According to the Notifying Parties, trade processing services are separate markets based on the following criteria: (a) asset class, e.g. IRDs, equity derivatives or FX derivatives; (b) type of trade, i.e. bilateral or prime broker (also known as 'tri-party'); and (c) service type, e.g. notice of execution messaging or CCP connectivity. The Notifying Parties support their views on the basis of the following elements:

(61) Distinction by asset class. The most common underlying assets for derivatives are interest rates, credit (e.g. debt or fixed-income instruments), currencies (FX), commodities, and equities. Trade processing software and services for different asset classes are likely to constitute separate markets, because the functionality and the regulatory requirements vary between asset classes. There is no demand-side substitutability because customers require trade processing services specific to the asset class they are trading and the individuals responsible for different asset classes within an organisation also typically vary. There is also limited supply-side substitutability, since to expand into a new asset class it would be necessary to invest in new systems and to recruit individuals with the requisite knowledge of the new products and workflows, as well as to build relationships with new individuals at customer organisations.

(62) Distinction by trade type. Buy-side firms trade with multiple firms directly and can either manage their transactions with those firms throughout the life of the trades (i.e. on a bilateral basis) or they can use a prime broker. Prime brokerage services comprise a bundle of services provided by a bank (such as BNP, Citibank, Deutsche Bank, HSBC, JP Morgan, Morgan Stanley and UBS) to hedge funds, asset managers, small banks and other clients. Prime brokerage services allow a wide variety of smaller clients to trade with dealers while maintaining a credit relationship, placing collateral and settling with a single entity (the prime broker). In practice, the prime broker steps in to enter two offsetting trades: one with the client and one with the

[42] Commission decision of 29 March 2017 in Case M.7995 - *Deutsche Börse/London Stock Exchange Group*, paragraph 727.

executing broker. In this way, the prime broker takes over the trade and effectively becomes the guarantor of the buy-side client for the trade. Typically, prime broker customers choose this structure as they do not have the credit required to engage in bilateral trades. Thus, the vast majority of prime broker customers using trade processing services would not consider bilateral trades (and related trade processing services) to be a substitute for them. Prime brokerage is most prevalent in FX markets. As the prime broker sits between the two executing parties, these trades are often referred to as "tri-party", and the suite of trade processing services that are involved in supporting prime brokerage trades are different from those involved in a bilateral trade.

(63) Distinction by service type. Trade processing services can also be distinguished by the service type (i.e. services relating to different stages of the trade life cycle) including: (i) credit risk management (pre- and post-trade) (ii) notice of execution (NOE) messaging, and (iii) CCP connectivity. There is no demand-side substitutability because customers use these services for different purposes, e.g. messaging services involve the transmission of messages from a broker/venue/liquidity provider to clients who have just executed a trade to feed their internal risk management systems. This service cannot be substituted with another trade processing service like CCP connectivity, which consist in sending details of trades executed on a trading venue or bilaterally to CCPs for clearing. There is also limited supply-side substitutability as different services require different input and technical connections to different market participants. In addition, different trade processing services are typically procured by different divisions, desks and individuals within the same organisation, making it necessary to build new relationships in order to expand into new service types.

4.5.2.3. Commission's assessment

(64) While the Commission has not previously considered trade processing services directly, the results of the market investigation indicate that trade processing service markets are separate markets in similar ways to trading services (e.g. by asset class), as proposed by the Notifying Parties.

(65) Regarding a distinction by asset class, a customer explains that "*different products have different requirements and different system integrations*".[43] Even though customers do not necessarily source different trade processing services from the same provider, 44% say they do procure some products together, but only within the same asset class.[44] Customers often seem to be organised internally by asset class. One customer states: "*Within each asset class we try to align the negotiation of products / contracts*."[45] One market participant notes: "*(…)customers themselves operate in very different ways across asset classes and procure products separately (e.g. the FX trading desk of a major bank will not align with the fixed income desk).*"[46]

(66) On the supply side, there would seem to be some substitutability across asset classes. For example, one market participant states: "*From a supply side perspective, the*

43 Reply to question 6 of Questionnaire 3.
44 Reply to question 7 of Questionnaire 3.
45 Reply to question 7.1.3 of Questionnaire 3.
46 Minutes of a call with a market participant on 7 May 2021, 14:30 CET.

technical requirements to offer services are the same/similar across asset classes."[47] However, generally suppliers start providing trade processing services by focusing on one asset class at first. For example, "*Traiana started in FX and has expanded to cover other asset classes*" notes one customer.[48] One market participant observes that "*[FX] is much simpler as an asset class than fixed income. Fixed income is even more complex because different types of fixed income instruments trade in different ways, and trade differently in Europe/US/Japan. Therefore would not be easy to expand from FX to fixed income, as it requires a lot of work."*[49]

(67) One competitor notes: *"For asset class, there are differences in requirements in terms of trade source, trade matching and enrichment criteria and potential workflows. For FX specifically, trade source could be from risk management systems or trading platforms which tend to be asset class specific. The matching and enrichment requirements for FX also vary from other derivatives and those of equity or fixed income along with different market standards and governing regulations."*[50]

(68) Also, some market participants contacted during pre-notification, considered that they do not compete with the Parties because their services, while equivalent to the Parties', related to a different asset class, in which the Parties were not active.[51]

(69) Based on the above, the Commission considers that trade processing services for different asset classes constitute separate markets.

(70) As regards a distinction by trade type (bilateral, tri-party), a customer who is active as a prime broker as well as an executing broker notes: "*We run bilateral and PB at arms length as they have different requirements*."[52] Several customers answering the market investigation answered in a similar fashion, e.g. "*Segregation required between Prime and Franchise activity*."[53] A competitor in this space confirms this view: *"Often there are information barriers and physical separation between the PB and other desks within sell-side participants."*[54] These quotes from both customers and competitors indicate that customers distinguish in their operations between bilateral and tri-party FX trading, if they do both, and tend to keep these operations separate.

(71) Equally, from a supply-side perspective, competitors in other related trade processing services markets underline the different purposes and focus of the Parties' services, particularly in terms of trade type. One market participant exemplifies the view of the majority by noting that they *"do not see much overlap nor complementarity between Traiana and Markitserv, the former being PB focused and the latter being sell-side market making focused."*[55] Responses from competitors also support the Notifying Parties' view that MarkitSERV and Traiana serve different customer groups and

47 Minutes of a call with a market participant on 7 May 2021, 14:30 CET.
48 Reply to question 8.1 of Questionnaire 3.
49 Minutes of a call with a market participant on 7 May 2021, 14:30 CET.
50 Written response to questions from a competitor, 5 May 2021.
51 Minutes of a call with a market participant on 7 May 2021, 14:30 CET and Minutes of a call with a market participant on 15 May 2021, 18:00 CET.
52 Reply to question 6 of Questionnaire 3.
53 Reply to question 6 of Questionnaire 3.
54 Minutes of a call with a market participant on 11 May 2021, 16:00 CET.
55 Minutes of a call with a market participant on 11 May 2021, 16:00 CET.

types of transactions[56], and that services generally differ for bilateral and tri-party transactions.

(72) Based on the above, the Commission considers that trade processing services for different trade types constitute separate markets.

(73) With respect to a distinction by service type, on the demand side, the results of the market investigation indicate that customers do not consider trade processing services to be substitutable: "*We utilise different services for different needs."*[57] Some customers consider that links/connectivity between services lead them to procure from the same provider: *"From a pricing and technology integration perspective it often makes sense to procure products from the same supplier – particularly from a connectivity perspective."*[58] The majority of customers (77%) purchase some products together[59], though the possibility to purchase services together does not seem to be a major factor in the decision from whom to procure.[60] One customer states: "*We consider each component individually based on our needs, weighed with convenience of using same provider.*"[61]

(74) One competitor notes that the market is *"segmented based on the service type required by the client, for example there are different dynamics between products that provide for the monitoring of trades in front office (such as credit limit checking) compared with products that control trades that are received for middle and back offices. There could be thus a distinction between purely 'technical' services and more 'value added' business services."*[62]

(75) Both customers and competitors seem to view different trade processing services separately, though there may be certain product combinations that are purchased together. For example, when asked which services customers procure together, many answer that they buy several products from each Party.[63] However, no clear pattern emerges from the answers as to which combinations are more prevalent than others. Also, most respondents state that they negotiate the procurement of different products separately, noting that "*these services are typically procured separately*" and they are "*separate contracts*".[64]

(76) From a supply-side perspective, there may be a certain level of substitutability of general capabilities across services, as evidenced by the fact that Traiana is active in several trade processing services. However, the landscape of providers is fragmented and diverse.[65] Since trade processing services are ancillary to the trading and clearing of trades, the market participants active in these services are in some cases also trading venues (e.g. FX trading venues provide NOE messaging as part of trading services) or CCPs themselves, or other ancillary services providers (providers of order management systems or risk management systems). However, the providers of

56 Form CO, paragraphs 394ff.
57 Reply to question 6 of Questionnaire 3.
58 Reply to question 7.1.2 of Questionnaire 3.
59 Reply to question 7 of Questionnaire 3.
60 Replies to questions 10 and 13 of Questionnaire 3 with respect to FX NOE messaging services.
61 Reply to question 6 of Questionnaire 3.
62 Minutes of a call with a competitor on 12 May 2021, 11:00 CET.
63 Reply to question 7.1.1 of Questionnaire 3.
64 Reply to question 11.1.3 of Questionnaire 1.
65 Form CO, paragraph 442ff regarding an overview of competitors in trade processing markets.

order management systems or risk management systems do not seem to compete closely with the Parties for most services as evidenced by responses to the market investigation.[66] In any case, offering a new service from the perspective of an already active provider of trade processing services is not necessarily an easy undertaking. For example, a market participant notes with respect to IHSM: *"(…) in 2013-4, Markit attempted to enter the credit limit checking space, but today (…) is not aware of any significant competition to Traiana."*[67]

(77) In summary, the answers from market participants indicate that while customers may buy several trade processing products from the same supplier, the decisions are made independently for each particular service, based, first and foremost, on service quality.[68] The least important criterion when choosing trade processing service providers was whether the provider also offered other related services.[69] Competitors agreed that separate trade processing services markets exist by service type.[70] Considering that customers procure these services separately and competitors offer them standalone, the Commission considers that trade processing services are separate product markets by service type.

(78) In addition, a distinction by type of customer is conceivable regarding some trade processing services. One competitor states: *"Competitors may also vary based on target market as the requirements for the likes of asset managers, hedge funds and banks significantly differ based on functionality specifics. For example, some buy side clients may require support for master/sleeve account structures which would not be as applicable to banks."*[71]

(79) The Commission considers, in line with its previous decisional practice in related markets (e.g. derivatives clearing, see Section 4.4.2), that it is possible that there may be separate product markets for trade processing services by type of customer. However, for the purposes of this case, the distinction by type of customer does not appear relevant. The Transaction gives rise to a horizontal overlap in FX NOE messaging services and FX PB give-up management services, as well as a vertical relationship between CME's OTC FX trading services (upstream) and MarkitSERV's OTC FX CCP connectivity service (downstream). All those services are provided without any differentiation across customer types, and the market investigation did not give rise to any suggestion that the impact of the Transaction or dynamics of these relationships would differ by customer types. Therefore, the Commission's assessment focuses on the relevant markets for FX NOE messaging, FX PB give-up management, OTC FX CCP connectivity services and OTC FX trading services without further distinguishing between customer types.

4.5.2.4. Conclusion

(80) In view of the above, the Commission considers that trade processing services consist of separate markets (i) by asset class, (ii) by trade type (bilateral, tri-party) and (iii) by service type (at least into NOE messaging, PB give-up management, CCP

66 Replies to question 15 and 28 of Questionnaire 3.
67 Minutes of a call with a market participant on 11 May 2021, 16:00 CET.
68 Replies to questions 10 and 24 of Questionnaire 3.
69 Replies to questions 10 and 24 of Questionnaire 3.
70 Written response of a competitor, 5 May 2021, call with a competitor on 12 May 2021, 11:00 CET.
71 Written response of a competitor, 5 May 2021.

connectivity). A separate market by customer type may exist though a conclusion on this distinction is not necessary as it is not relevant in the markets affected by the Transaction.

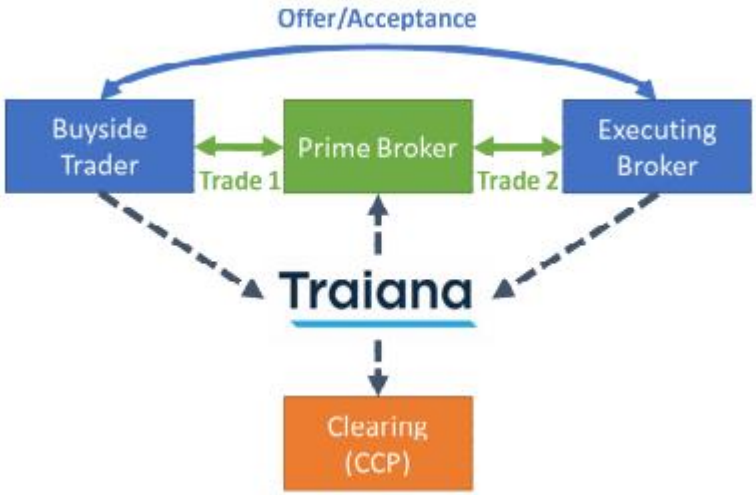
(81) The relevant distinct trade processing services markets in which the Parties overlap horizontally or vertically (JV with the parent or within the JV) are covered in Sections 4.6 to 4.10, namely FX PB give-up management, FX NOE messaging, CCP connectivity, credit limit management for OTC derivatives and trade confirmation.

4.6. Prime broker (PB) give-up management

4.6.1. Introduction and Parties' services

(82) When a prime brokerage trade is agreed between the two trading parties (the buy-side trader and the executing broker), they submit a message via a PB give-up management services provider's "message interface" and a prime broker can then agree to step in, with the parties being notified through the message interface. The prime broker then enters into two offsetting trades: one between its client (the buy-side trader) and the prime broker; and one between the executing broker and the prime broker. The client, prime broker and executing broker must communicate with each other throughout this process. PB give-up messaging services facilitate this trilateral communication, including confirmation that a broker has agreed to step in between the parties, allocations and confirmations. The below Figure provides a graphic visualization of the process to which PB give-up management services relate.

Figure 1: Illustration of prime broker give-up process



Source: Form CO, Table 6.3.

(83) Traiana is active in PB give-up management services for FX, equity, IRD and exchange-traded derivatives trades across several asset classes (though not for FX).[72] PB give-up management services comprise the following sub-services: PB give-up messaging services, processing give-up agreements, tri-party documentation management, credit limit management and aggregation.

[72] Notifying Parties' response to question 3 in RFI 18.

(84) MarkitSERV provides a sub-set of PB give-up management services for a very small volume of FX prime brokerage trades for a limited number of customers. Concretely, MarkitSERV has […] customers who use FX NOE messaging services for both bilateral and prime broker trades. In addition […], a small number of customers use MarkitSERV's TradeSTP service for FX PB give-up messaging. MarkitSERV does not provide any other FX PB give-up management services mentioned in the previous recital.

4.6.2. Relevant product market definition

4.6.2.1. Commission's previous decisions

(85) The Commission has not previously considered the prime broker (PB) give-up management services market. However, the Commission has considered the related market of trading services for derivative contracts and considered in past decisions that the market can be distinguished based on underlying asset classes, execution environment, and types of contracts.[73]

4.6.2.2. Notifying Parties' view

(86) The Notifying Parties' views with respect to the general distinguishing criteria in trade processing services markets (by asset class and trade type) applies also to PB give-up management services (see Section 4.5.2).

(87) The Notifying Parties note that FX is the only asset class with a significant volume of prime broker trades. In addition, on the demand side, different divisions, desks and individuals are responsible for services by asset class in customers' organisations.

(88) The Notifying Parties consider that FX PB give-up management services constitute one relevant product market which should not be further distinguished by service type. Traiana offers different, distinguishable FX PB-give-up management services that are all available to be purchased individually. Some customers purchase only one service, while others purchase several. However, the Notifying Parties submit that it is not necessary to conclude on whether FX PB give-up management services should be further distinguished by service type, as it does not affect the competitive assessment.

4.6.2.3. Commission's assessment

(89) The results of the market investigation indicate that it is appropriate to consider PB give-up management services as a separate product market from other trade processing services. Furthermore, the market investigation supports the conclusion that there are separate PB give-up management services markets by asset class and trade type.

(90) Regarding distinctions based on type of contract and execution environment, there may be separate markets with respect to PB give-up management services in other asset classes or trade types. However, in the present case, affected markets only arise

[73] Commission decision of 29 March 2017 in Case M.7995 - *Deutsche Börse/London Stock Exchange Group*, paragraph 727.

with respect to FX PB give-up management, and within FX a further separation by type of contract or execution environment is not relevant.

(91) Regarding distinctions by service type or trading channel, the market definition can be left open as no serious doubts as to the Transaction's compatibility with the internal market arise regardless of whether a broader market (including all FX PB give-up management services, i.e FX PB give-up messaging services, processing give-up agreements, tri-party documentation management, credit limit management and aggregation for trades executed electronically and bilaterally/via voice) or separate markets are assessed. The below sets out in more detail the Commission's considerations.

(92) In terms of a distinction on an asset class basis, the majority of respondents to the market investigation considered that, from a demand-side perspective, a distinction between PB give-up management services by asset class is relevant.[74] The respondents refer in particular to FX as a relevant asset class. This may be related to the fact that FX is the only asset class with significant volumes of prime broker trades.[75]

(93) From a supply-side perspective, the question does not arise in a meaningful way, as no other asset class except FX has significant volume of primer broker trades.[76] The Commission considers that the PB give-up management services market is separated by asset class. Hence, the Commission considers for the purposes of this decision, that FX PB give-up management services constitute a separate market.

(94) In terms of execution environment, the distinction of whether a trade is executed on exchange or OTC is not relevant for the markets in the present case, as FX PB trades are all executed OTC and not on exchanges.[77] Hence, a distinction by execution environment is not relevant for the assessment of the overlap the Transaction leads to in FX PB give-up management services. This distinction is therefore not further assessed for the purposes of this decision.

(95) In terms of type of contract, FX PB give-up management services do not provide for any distinction by type of contract. The market investigation did not reveal any such distinction as being relevant in FX PB give-up management services. Traiana and its competitors provide FX PB give-up management services for all contract types for FX and no distinction is made with respect to the services by type of contract.[78] Hence, a distinction by type of contract is not relevant for the assessment of the overlap the Transaction leads to in FX PB give-up management services. This distinction is therefore not further assessed for the purposes of this decision.

(96) In terms of a distinction by service type within FX PB give-up management services, the Commission notes that such a distinction may exist, given that products are

74 Reply to question 6 of Questionnaire 3.

75 Form CO, paragraph 433 and Notifying Parties' response to RFI 13, question 1.

76 Based on a November 2020 ISDA report, the overall OTC equity swaps market is approximately 5% of the overall OTC FX market (based on notional outstanding), with OTC equity swaps being the only other asset class in which prime brokerage exists to a meaningful extent according to the Notifying Parties, see Key-Trends-in-the-Size-and-Composition-of-OTC-Derivatives-Markets-in-the-First-Half-of-2020.pdf (isda.org) and reply to question 1 in RFI 13.

77 Notifying Parties' response to question 2 in RFI 18.

78 Notifying Parties' response to question 4 in RFI 18.

available standalone and in combination, and customers seem to buy one or several products depending on their needs and hence, there seems to be no "fixed bundle" constituting FX PB give-up management services.[79] The majority of Traiana's customers buy the FX PB give-up messaging service ([…] clients of FX PB give-up management services overall), indicating the importance of this service within FX PB give-up management services.

(97) In the market investigation, the Commission asked whether customers considered that they could use other service types to replace their current FX PB give-up management provider. Responses were mixed with a minority answering "yes" and a majority answering "it depends" or "no". When asked to explain, the general tenor was that certain parts of FX PB give-up management can be replaced by in-house self-supply or other providers while other parts, like the messaging service, rely on the "network" which only Traiana currently seems to provide.[80]

(98) In addition, evidence available to the Commission suggests that entry in the market of FX PB give-up management is not easy in the sense that suppliers in adjacent markets are not able to switch quickly to provide FX PB give-up management services and market them in the short term.[81] This is supported by the fact that MarkitSERV entered the market 10 years ago but has not gained significant traction, even though it already competed in adjacent trade processing services markets.

(99) While a distinction by service type cannot be excluded based on the evidence available, a conclusion on this point is not relevant, as the competitive assessment would not change based on a narrower market definition distinguishing FX PB give-up management services further.

(100) In terms of trading channel, prime brokers use Traiana's FX PB give-up messaging services regardless of how a trade was executed (electronically or bilaterally), so from a demand-side perspective, customers do not distinguish between those channels when purchasing this service.[82]

4.6.2.4. Conclusion

(101) Based on the results of the market investigation and the evidence available to it, the Commission considers that PB give-up management services are a separate relevant product market from other trade processing services and that it is appropriate to distinguish the market for PB give-up management services by asset class and trade type.

(102) While separate markets based on the execution environment and types of contracts may exist with respect to other asset classes, these distinctions are not relevant for the present case, as the Parties' activities only present a link with respect to FX. In FX PB give-up management services, these distinctions are not relevant.

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79 Form CO, paragraph 438 a), reply to question 7.1.1 of Questionnaire 3.

80 Reply to question 23 of Questionnaire 3.

81 Commission Notice on the definition of relevant market for the purposes of Community competition law (97/C 372/03), para. 20.

82 Notifying Parties' response to question 9 in RFI 19.

(103) Potentially narrower separate markets by service type and trading channel within FX PB give-up management may exist, though these can be left open, as the Transaction does not give rise to serious doubts as to its compatibility with the internal market irrespective of such a distinction. Concretely, the Transaction leads to a horizontal overlap in FX PB give-up messaging services (see Section 5.5) and possible conglomerate effects with respect to FX PB give-up management services (see Section 5.9), the assessment of which does not change depending on the above further plausible distinction.

4.6.3. Relevant geographic market definition

4.6.3.1. Commission's previous decisions

(104) The Commission has not previously considered the relevant geographic market definition for FX PB give-up management services. However, relevant geographic market definitions in related markets like derivative trading and clearing have generally been at least EEA-wide or global.[83]

4.6.3.2. Notifying Parties' view

(105) The Notifying Parties submit that the relevant geographic market for the supply of trade processing services is global, given that the Parties and their competitors provide their services to customers across the world. The Notifying Parties did not submit a specific view with respect to FX PB give-up management services.

4.6.3.3. Commission's assessment

(106) The Commission asked customers of FX PB give-up management services in the market investigation whether they compare offers of service providers at worldwide, EEA, national or other geographic level and whether the same suppliers are active on these levels. In both cases, customers answered practically unanimously that they compared offers at worldwide level and that suppliers are active worldwide.[84]

(107) Suppliers of FX PB give-up management offer their services to customers worldwide and there are no physical barriers to the provision of services.

4.6.3.4. Conclusion

(108) In light of the foregoing, for the purposes of this decision, the Commission considers the geographic market of FX PB give-up management services to be worldwide.

4.7. NOE messaging services

4.7.1. Introduction and Parties' services

(109) Notice of execution ('NOE') messaging services involve sending NOEs from brokers or venues to customers to feed customers internal risk management systems. A notice of execution message is an electronic message sent by brokers or liquidity providers

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83 Commission decision of 1 February 2012 in Case M.6166 – *Deutsche Börse/NYSE Euronext*, paragraphs 450, 460 and 462.

84 Replies to question 14 and 27 of Questionnaire 3.

to their clients to notify them of the fact that a trade has been executed and of the terms of that trade. It enables counterparties to check the terms of the trade and (for bilateral trades) to enter it in their risk management system. MarkitSERV provides bilateral NOE messaging services for trades in several asset classes (credit, equities, FX and interest rate derivatives). Traiana provides bilateral NOE messaging in FX, cash equities and exchange traded derivatives. Hence, a horizontal overlap arises in bilateral FX NOE messaging services. In addition, MarkitSERV and Traiana provide tri-party NOE messaging services. While for Traiana this service is an integral part of its PB give-up management services offering, MarkitSERV is only active as a marginal player in tri-party FX NOE messaging.

4.7.2. Relevant product market definition

4.7.2.1. Commission's previous decisions

(110) The Commission has not previously considered the NOE messaging services market. However, the Commission has considered the related market of trading services for derivative contracts and considered in past decisions that the market can be segmented based on underlying asset classes, execution environment, and types of contracts.[85]

4.7.2.2. Notifying Parties' view

(111) The Notifying Parties' views with respect to the general segmentation in trade processing services markets (by asset class and trade type) applies also to NOE messaging services (see chapter 4.5.2.2).

(112) The Notifying Parties consider that FX NOE messaging services can be distinguished by trade type (bilateral, tri-party). While the Notifying Parties agree that there is some supply-side substitutability between bilateral FX NOE messaging and tri-party FX PB give-up messaging from a technical perspective, they consider that there are other barriers that make it difficult to expand from being a provider of FX NOE messaging services to FX PB give-up messaging and vice versa. A provider would have to build new workflows and new relationships with individuals in customers' organizations, since different divisions in customers' organizations handle FX NOE messaging and FX PB give-up messaging.

(113) The Notifying Parties do not consider that there are separate markets for FX NOE messaging by type of contract (e.g. non-deliverable forwards, options, etc.). According to the Notifying Parties, there is supply-side substitution, as NOE messaging is substantially the same across different types of derivatives with only limited differences in the data fields.[86] However, there is no demand-side substitution between different types of contracts.

(114) Regarding independent provision versus a captive provision of FX NOE messaging services, the Notifying Parties consider this not to be a plausible distinction. The Notifying Parties consider that suppliers that provide FX NOE messaging services in an ancillary capacity (captive providers) compete with suppliers that provide FX

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85 Commission decision of 29 March 2017 in Case M.7995 - *Deutsche Börse/London Stock Exchange Group*, paragraph 727.

86 Notifying Parties' response to question 4 in RFI 13.

NOE messaging services as their core service and without being vertically integrated (independent providers). These other providers are for example risk management system providers (Murex, OpenLink, Finastra), post-trade messaging vendors such as Refinitiv or Broadridge or trading platforms like EBS, Refinitiv Matching, Hotspot (CBOE), FX all and Currenex. While the Notifying Parties recognise that there are some trading venues that only provide FX NOE messaging in relation to trades executed on their venue, there is competition with respect to FX NOE messaging even for those trades. Third party providers (such as Refinitiv and MarkitSERV) are commonly used for FX NOE messaging services and hence, trades on these venues cannot be considered captive.

4.7.2.3. Commission's assessment

(115) The results of the market investigation indicate that it is appropriate to consider NOE messaging services as a separate product market from other trade processing services. Furthermore, the market investigation supports the conclusion that there are separate NOE messaging markets by asset class and trade type.

(116) Regarding distinctions based on type of contract and execution environment, it is possible that there may be separate markets with respect to NOE messaging services in other asset classes or trade types. However, in the present case, affected markets only arise with respect to FX NOE messaging, and within FX a further separation by type of contract or execution environment is not relevant.

(117) Regarding distinctions based on trading channel (electronic or bilateral/voice execution) and independent versus captive provision of services, the market definition can be left open as no serious doubts as to the Transaction's compatibility with the internal market arise regardless of whether a broader market (including both) or separate markets are concerned. The below sets out in more detail the Commission's considerations.

(118) Regarding a distinction by asset class, the Commission's market investigation provided no evidence that NOE messaging services are contracted across asset classes. Respondents procure trade processing services together, where it makes technical and commercial sense, though a majority indicates that this is often the case within the same asset class.[87] Clients of trade processing services are organized internally by asset class and often source these services accordingly. One customer explains: *"This is negotiated at the FX business level."*[88]

(119) From a supply-side perspective, there may be some substitutability across asset classes. However, it would not seem to be the case that suppliers are easily able to switch their messaging product to other asset classes[89], as this requires connections to different venues and brokers (which operate segmented by asset class too). Hence, separate markets by asset class seem to be plausible.

(120) With respect to the trade type, there is some supply-side substitutability in NOE messaging services across bilateral and tri-party trade flows, as evidenced by the fact

87 Reply to question 7 of Questionnaire 3.

88 Reply to question 7.1.3 of Questionnaire 3.

89 Commission Notice on the definition of relevant market for the purposes of Community competition law (97/C 372/03), para. 20.

that MarkitSERV and Traiana offer both types of messaging services. However, the mere presence of the Parties in the respective markets alone does not indicate that the messaging market is one market across bilateral and tri-party messaging services. From a demand-side perspective, customers do not consider Traiana and MarkitSERV as potential substitutes in FX NOE messaging.[90] One customer notes: *"The FXPB business does not procure FX NOE messaging services from MarkitSERV. The FX Options business procures FX NOE messaging services from MarkitSERV*."[91] While MarkitSERV is considered a competitor to Traiana in FX NOE messaging[92], the closer competitor to Traiana's offering (which is broader than messaging) is considered to be a recent entrant, Cobalt.[93]

(121) Asked whether customers consider it important that their FX NOE messaging provider is also able to provide other messaging services (FX PB give-up messaging services), answers are mixed.[94] One customer that is active as a prime broker and as an executing broker (and hence has bilateral and tri-party trade flows) comments: *"We do not consider there to be obvious efficiencies to be gained across these types of messaging products."*[95] Another customer in the same situation mentioned the following: *"As we are a PB we require access to NOE messages, Traiana is the largest provider and therefore it is critical we can access as a PB and EB."*[96] A third customer mentions: *"Harmony [Traiana's trade processing services suite] is not used in the bilateral FX space, where SWIFT and CLS are the main providers."*[97]

(122) While there seems to be some supply-side substitutability between bilateral and tri-party messaging services, the majority of responding market participants do not consider the Parties' activities to be substitutable.[98] This is not surprising as messaging services are only a part of the suite of products that are included in PB give-up management services. When asked about competitors in FX PB give-up management services that provide these services as a core offering, the only two companies consistently mentioned are Traiana and Cobalt, not MarkitSERV.[99]

(123) The Parties provide, and some customers use, the messaging services of one Party for both bilateral and tri-party messaging (see recital (109)). However, given that only very few customers use the services of the Parties interchangeably indicates that for the large majority of customers they do not seem to be alternatives or there is no perceived benefit in sourcing the services from the same provider. Another aspect to consider is that bilateral NOE messages are sent from brokers or venues to customers "pre-risk", i.e. before the trade is entered into the customers risk management systems. The messages therefore need to be sent in real time to be of use for customers. PB give-up management services are, however, provided "post-risk", i.e.

90 Reply to question 20 of Questionnaire 3.
91 Reply to question 20 of Questionnaire 3.
92 Reply to question 17 of Questionnaire 3.
93 Reply to question 30 of Questionnaire 3.
94 Reply to question 13 of Questionnaire 3.
95 Reply to question 13.1 of Questionnaire 3.
96 Reply to question 13.1 of Questionnaire 3.
97 Minutes of a call with a market participant on 4 May 2021, 11:00 CET.
98 Reply to question 30 of Questionnaire 3.
99 Reply to question 31 of Questionnaire 3.

after the trade is entered into the customers risk management system. For this use case, the speed does not matter as much as it does for "pre-risk" messages.[100]

(124) In conclusion, there seem to be different views on whether there is a benefit in procuring bilateral and tri-party FX NOE messaging services from the same or different providers, depending on the customer's business activities. However, even where customers are active as a prime broker and an executing broker, this does not necessarily mean they source related trade processing services from the same provider (see quotes in recitals (120) and (121)).

(125) In terms of execution environment (exchange-traded versus OTC execution), the distinction between whether a trade is executed on exchange or OTC is not relevant for the markets in the present case, as the Parties only offer trade processing services in the affected markets for OTC derivatives.[101] Hence, this distinction is not further assessed for the purposes of this decision.

(126) In terms of type of contract, FX NOE messaging services do not provide for any distinction by type of contract.[102] The market investigation did not reveal any such distinction as being relevant in FX NOE messaging services. NOE messaging is substantially the same across different types of derivatives with only limited differences in the data fields. MarkitSERV, for example, charges the same fee for NOE messaging irrespective of the type of derivative. While some types of contracts may require several NOE messages for different "legs" of the contract (and therefore, they are more expensive from a NOE messaging cost perspective than others), this is unlikely to be a meaningful distinguishing factor for either demand or supply side, given that the overall cost of NOE messaging services compared to other trading costs is very small.[103] The Commission therefore considers that there is no need to conclude on such a distinction as this is not relevant for the purposes of the present decision.

(127) As regards a distinction by trading channel (electronic versus bilateral/voice execution), trades are submitted to the NOE messaging provider either by the electronic trading venue when the trade is executed electronically, or by the parties to the trade themselves, when the trade is executed bilaterally, e.g. by phone. In FX markets in particular, the majority of trading has moved to electronic venues in recent years, though ca. 30% of trading volume is still executed bilaterally/via voice.[104] Most electronic FX trading venue competitors were of the opinion that the market is split into electronic FX trading and bilateral/voice trading.[105] However, this may be different from a demand-side perspective. In any case, there is no need to conclude on whether there are separate FX NOE messaging services markets for trades executed on electronic venues or bilaterally/via voice, as the distinction would not change the Commission's assessment in the present case.

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100 Form CO, paragraph 700.

101 Notifying Parties' response to question 3 in RFI 19: While Traiana provides a limited amount of FX NOE messaging for ETDs, there is no overlap with MarkitSERV (as MarkitSERV does not currently process trades in relation to the same assets).

102 Notifying Parties' response to question 4 in RFI 19.

103 Notifying Parties' response to RFI 15.

104 https://www.euromoney.com/Media/documents/euromoney/pdf/FX-2019-Results-Presentation.pdf, slide 5, accessed on 11 July.

105 Reply to question 4 of Questionnaire 5.

(128) In addition, the Commission considered whether there could be separate FX NOE messaging services markets based on an independent provision of services ("independent") versus a vertically integrated provision of services ("captive"). This is a plausible distinction given that trading venues and brokers (as well as other providers), offer messaging services as an ancillary part of their trading/intermediation services, i.e. they provide trade messaging for the trades executed on their venues/through their intermediation. However, for example MarkitSERV also processes trades executed on various third party trading platforms, which may have their own captive messaging services that they provide to their clients.

(129) *First,* the line between independent and captive providers is somewhat blurred. While MarkitSERV and Traiana's messaging services are considered independent of any trading venue[106], some FX trading venue providers also provide NOE messaging services to third party venues. In particular, Refinitiv, which operates an FX trading platform and is according to the Notifying Parties the largest provider of FX NOE messaging services, is active as an independent provider to third party venues, in that its customers can use messaging services for trades executed on the Refinitiv trade platform or on other, third party trade platforms.

(130) *Second,* one competitor is of the view that customers prefer a provider that connects to several venues for efficiency reasons: *"The benefit of using IHSM or Traiana's service, as opposed to a drop copy from a trading venue for example, is operational efficiency – clients do not need to use multiple different messaging systems across their trading platforms and so can avoid the development time and effort needed to make their systems work with different platform's messaging services."*[107] However, this contrasts with other evidence available to the Commission. The market investigation indicated that in most cases customers consider independent and captive providers' services to be substitutable. Historically, switching is not common among customers,[108] which one customer explained was because "[*w]hile it is not difficult to change provider…, there would need to be a good reason to justify the cost and time involved*", noting that its current providers' offering has worked well and so it has not had reason to consider changing.[109] However, customers' replies to the market investigation suggested that should a need to switch arise, captive providers (which can be trading venues, brokers or risk management system providers) would be an alternative to independent ones. Even though it could be argued that captive providers only ever provide a partial replacement for an independent provider that connects to several venues, it is conceivable that those providers would be able to develop a wider solution (like Refinitiv). In particular, large customers could sponsor such entry as has been demonstrated in past cases[110]. In any case, a large majority of customers (70%) indicated that they would be able to fully or at least partially replace

106 Despite the fact Traiana's parent company CME also owns FX trading venue EBS.

107 Minutes of a call with a competitor on 24 July at 14:00 CET.

108 Reply to question 22 of Questionnaire 3.

109 Minutes of a call with a market participant on 28 April 2021 at 10:00 CET.

110 For example, recent entrant Cobalt in FX PB give-up management services is supported by several of Traiana's main customers in an effort to introduce more competition in that market.

the FX NOE messaging service they currently procure with an alternative service.[111] One customer notes: *"We could direct connect to platforms."*[112]

(131) The ability to switch by customers is further confirmed by win-loss analyses of both Parties' FX NOE messaging services between 2016 and 2021. During the last 5 years, MarkitSERV lost […] clients, […] of which replaced MarkitSERV's services with an in-house solution and […] of which changed to a competitor.[113] The Commission notes that in this context an 'in-house solution' likely refers to a solution whereby the customer switches to the messaging services offered by trading venues (i.e. the customer conducts internal development so as to build a solution that enables it to effectively use these services of trading venues). Traiana's bilateral FX NOE messaging service lost […] clients during the same time, […] of which no longer needed the service, […] of which built in-house connectivity and […] of which possibly moved to a competitor (no names known), while […] provided no reason.[114]

(132) *Third*, the market investigation revealed that customers consider captive providers to have similar competitive strength in the market for FX NOE messaging[115] as the main independent suppliers (MarkitSERV, Traiana and Refinitiv). The fact that several captive providers are considered to have similar competitive strength as the main independent suppliers further indicates that customers consider these providers to offer substitutable services. In addition, some captive providers, like credit monitoring vendors and order management system providers (as well as FX aggregators) market connectivity to multiple trading venues for the purpose of execution and can and do provide multi-venue NOE messaging to their clients.[116]

(133) *Fourth*, certain providers have a "hybrid" model. Both Traiana and Refinitiv act as "independent" provider, i.e. offering services to competing trading venues, but also as a "captive" provider, given that they both own (or their respective parent company also owns) FX trading venues (Traiana's parent CME owns FX trading venue EBS and Refinitiv owns FX all and Matching, two FX trading venues). Furthermore, an independent provider like MarkitSERV provides FX NOE messaging services to a number of customers trading on Refinitiv's venues, even though Refinitiv has its own FX NOE messaging service, further illustrating MarkitSERV and Refinitiv's products would be substitutable.

(134) In summary, the market investigation confirms that customers generally consider that the FX NOE messaging services provided by independent and captive providers would be substitutable to a large extent, with captive providers being considered possible substitutes of independent providers. Furthermore, most "independent" providers including Traiana are not actually independent in the sense that they are owned by parents that also own FX trading venues. In any case, the Commission considers that a conclusion on the question whether there are separate markets for independent provision of FX NOE messaging services and captive provision of FX NOE messaging services (including a narrower definition of captive provision of FX

111 Reply to question 9 of Questionnaire 3.
112 Reply to question 9.1 of Questionnaire 3.
113 Notifying Parties' response to RFI 10, Annex 145.
114 Notifying Parties' response to RFI 10, Annex 146.
115 Reply to question 15 of Questionnaire 3. Specifically, Broadridge, SmartTrade, Fluent Trade Technologies, Murex and CBOE FX.
116 Notifying Parties' response to question 7 in RFI 19.

NOE messaging services for each venue) or one market including both is not necessary, as the Transaction does not give rise to serious doubts as to its compatibility with the internal market on the basis of either market definition.

4.7.2.4. Conclusion

(135) Based on the results of the market investigation and the evidence available to it, the Commission considers that NOE messaging services are a separate relevant product market from other trade processing services, and that it is appropriate to distinguish the market for NOE messaging services by asset class and trade type. A further distinction by type of contract and execution environment is not relevant in the present case, where overlaps exist only with respect to FX NOE messaging. The conclusion on whether electronic vs. bilateral/voice execution channels and independent versus captive service provision are separate markets can be left open, as the Transaction does not give rise to serious doubts as to its compatibility with the internal market irrespective of such a distinction. Concretely, the Transaction leads to a horizontal overlap with respect to bilateral FX NOE messaging (see Section 5.4), the assessment of which does not change depending on the above further plausible distinctions.

4.7.3. Relevant geographic market definition

4.7.3.1. Commission's previous decisions

(136) The Commission has not previously considered the relevant geographic market definition for bilateral FX NOE messaging services. However, relevant geographic market definitions in related markets like derivative trading and clearing have generally been at least EEA-wide or global.[117]

4.7.3.2. Notifying Parties' view

(137) The Notifying Parties submit that the relevant geographic market for the supply of trade processing services, including bilateral FX NOE messaging services, is global, given that the Parties and their competitors provide their services to customers across the world.

4.7.3.3. Commission's assessment

(138) The Commission asked customers of bilateral FX NOE messaging services in the market investigation whether they compare offers of service providers at worldwide, EEA, national or any other geographic level and whether the same suppliers are active on these levels. In both cases, customers answered practically unanimously that they compared offers at worldwide level and that suppliers are active worldwide.[118]

[117] Commission decision of 1 February 2012 in Case M.6166 – *Deutsche Börse/NYSE Euronext*, paragraphs 450, 460 and 462.

[118] Replies to question 14 of Questionnaire 3.

(139) Competitors in this space did not mention any geographically narrower basis on which they compete.[119]

4.7.3.4. Conclusion

(140) Therefore, for the purposes of this decision, the Commission considers the geographic market of bilateral FX NOE messaging services to be worldwide.

4.8. CCP connectivity

4.8.1. Introduction and Parties' services

(141) CCP connectivity services consist in sending details of trades executed on a venue or bilaterally to a central counterparty ('CCP') for clearing. CCP connectivity services are also referred to as 'middleware' and are closely linked to derivatives trading services (as it can be a source of trades to be sent to clearing) and clearing services (the destination of the trade).

(142) MarkitSERV provides CCP connectivity for CDS, FX and IRDs.

(143) Traiana is mainly active in the provision of CCP connectivity in the equities asset class, which represents the vast majority ([80-90]%) of its CCP connectivity revenues. Traiana is also active, to a much lesser extent, in the FX and IRD asset classes for CCP connectivity.[120]

4.8.2. Relevant product market definition

4.8.2.1. Commission's previous decisions

(144) The Commission has not previously considered the relevant product market for CCP connectivity services. However, the Commission has considered the related market of trading services for derivative contracts and considered in past decisions that there are separate relevant product markets based on the underlying asset classes, execution environment, and types of contracts.[121] Similarly, the Commission has previously assessed the relevant product market for the clearing of derivatives, and considered separate product markets for the clearing of derivatives by underlying asset class, execution environment, type of customer and type of contract.[122]

4.8.2.2. Notifying Parties' view

(145) The Notifying Parties' views with respect to the general approach to market definition in trade processing services markets (namely that there are separate

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119 Minutes of calls with competitors on 24 June 2021, 14:00 CET, 11 May 2021, 16:00 CET and 12 May 2021, 11:00 CET.

120 For completeness, the Notifying Parties indicated that Traiana also provides certain, limited connectivity services in the IRD and CDS asset classes. However, it submits that these services serve a different function from, and are not substitutable with, CCP connectivity services, as explained in Section 5.3 below.

121 Commission decision of 29 March 2017 in Case M.7995 - *Deutsche Börse/London Stock Exchange Group*, paragraph 727.

122 Commission decision of 1 February 2012 in Case M.6166 - *Deutsche Börse/NYSE Euronext*, paragraph 444 and Commission decision of 29 March 2017 in Case M.7995 - *Deutsche Börse/London Stock Exchange Group*, paragraph 748, 750.

product markets by asset class and trade type, see Section 4.5.2) apply also to CCP connectivity services, although the Notifying Parties did not detail why they considered this would be the case.

(146) The Notifying Parties further submit that there is limited supply-side substitutability between the different asset classes for CCP connectivity. This is due to the different functionality and impact of regulatory requirements for trade processing services (such as CCP connectivity) in different asset classes, and the fact that in customer organisations different divisions, desks and individuals are responsible for procuring trade processing services, such as CCP connectivity. Therefore, the Notifying Parties submit that expanding a CCP connectivity service from one asset class to another would require investment in new systems, knowledge of new products and workflows, and to build new client relationships.[123]

4.8.2.3. Commission's assessment

(147) The results of the market investigation indicate that it is appropriate to consider CCP connectivity as a separate product market from other trade processing services and are consistent with the Notifying Parties' submissions that there is limited supply-side substitutability between different asset classes.

(148) First, while most customers of CCP connectivity indicated that they do buy some other trade processing products from their CCP connectivity provider, the majority of customers also confirmed that these products are negotiated and procured separately (i.e. as part of separate procurement processes).[124] Customers noted that trade processing services are "*distinct per services and asset class*" and explained that CCP connectivity serves a distinct purpose and so is procured for a different reason than other services.[125]

(149) Second, customers indicated that it is not important to procure CCP connectivity services together from the same company from which customers receive other trade processing services.[126] Ultimately, customers explained that their choice of CCP connectivity provider (and trade processing provider more generally) is primarily driven by their particular needs for the specific service in question, as the decision of which supplier to procure from is "*reviewed based on business requirements, product offering, commercial terms and vendor risk on a case by case basis*".[127] There can, however, be some operational efficiencies to procuring products from one supplier, as this reduces complexity.

(150) Third, regarding the appropriateness of defining narrower CCP connectivity service markets on the basis of asset class, customers responding to the investigation indicated that this distinction reflects how they procure CCP connectivity (and trade processing more generally).[128] Moreover, the competitive landscape varies considerably across the different asset class segments of CCP connectivity (for instance, MarkitSERV holds a market share [90-100]% in relation to FX, whereas its

123 Notifying Parties' response to RFI 4, paragraph 2.5-2.6.
124 Replies to questions 11.1.1-11.1.3 and 11.2 of Questionnaire 1.
125 Replies to question 11.2 of Questionnaire 1.
126 Replies to question 12.2 of Questionnaire 1.
127 Replies to question 11.1 of Questionnaire 1.
128 Replies to question 11.2 of Questionnaire 1.

market share is only [5-10]% for CDS CCP connectivity and it is not active in relation to equities). Certain customers explained that CCP connectivity "*service providers do not provide all services across all asset classes*", which indicates that supply-side substitutability is limited.[129]

(151) A CCP suggested that there might be a distinction between "platform-agnostic" CCP connectivity services, such as those of MarkitSERV and Traiana, as opposed to the "direct" service provided by trading venues that offer customers the ability to send their trades to clearing without the need for a middleware provider.[130] However, the results of the market investigation suggest that customers consider CCP connectivity provided by trading venues to compete with MarkitSERV/Traiana's CCP connectivity businesses, a view that was shared by a number of CCPs.[131] Indeed, several customers indicated that trading venues are close competitors in certain asset segments (such as CDS and IRD in particular),[132] and that it is possible to switch from their current (MarkitSERV or Traiana) CCP connectivity offering to a direct CCP connectivity service provided by trading venues (noting, however, that "*there is only a limited number of trading venues offering direct clearing connectivity services*").[133] In light of this, a separate product market for platform-agnostic CCP connectivity services does not appear appropriate.

(152) Fourth, there are indications that it would be appropriate to define a separate product market for CCP connectivity with respect to the execution environment, i.e. provided in respect of OTC derivatives (as opposed to exchange traded derivatives). The CCP connectivity service is the 'middleware' service that sends OTC trades intended to be cleared that have been executed on a venue or bilaterally to a CCP for clearing. With respect to this distinction, the Commission notes that the European Securities and Markets Authority authorizes CCPs based on the distinction of whether they clear ETDs and/or OTC derivatives.[134]

(153) The Commission has in previous cases found that there are separate relevant product markets for OTC derivatives trading and OTC derivatives clearing.[135] MarkitSERV only provides CCP connectivity services for OTC trades and does not provide such services for exchange traded derivatives. The Transaction only gives rise to horizontal overlaps or vertical links in relation to OTC CCP connectivity and so the question of whether there are separate OTC CCP connectivity and ETD CCP connectivity markets can be left open as the Transaction would not give rise to serious doubts as to its compatibility with the internal market even on a wider market also including CCP connectivity for exchange traded derivatives.

(154) Finally, as regards type of trade, the results of the market investigation were inconclusive as to whether it would be appropriate to define markets for CCP connectivity on the basis of bilateral and trilateral trades. In any event, the Commission notes that MarkitSERV exclusively provides CCP connectivity services

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129 Replies to question 11.1 of Questionnaire 1.

130 Minutes of a call with a market participant on 12 May 2021 at 11:00 CET.

131 Replies to question 13 of Questionnaire 1 and to questions 14.2 and 15 of Questionnaire 2.

132 Replies to question 20 of Questionnaire 1.

133 Replies to question 24 of Questionnaire 1.

134 List of Central Counterparties authorised to offer services and activities in the Union, last updated 4 January 2021: https://www.esma.europa.eu/sites/default/files/library/ccps_authorised_under_emir.pdf

135 See cases referred to in footnote 122.

for bilateral services, whereas Traiana mainly focuses on trilateral (prime broker) trades. In view of the finding that there are separate relevant product markets for CCP connectivity services by asset class, MarkitSERV and Traiana only overlap in relation to bilateral CCP connectivity services for FX and IRD.[136] For FX and IRD, the Transaction does not give rise to serious doubts as to its compatibility with the internal market regardless of whether or not Traiana's trilateral (prime broker) CCP connectivity services are considered to be part of the relevant product market. Accordingly, the question of whether narrower CCP connectivity markets should be defined based on trade type can be left open.

4.8.2.4. Conclusion

(155) In light of the foregoing, the Commission considers that CCP connectivity services are a separate relevant product market from other trade processing services, and that it is appropriate to define separate relevant product markets for CCP connectivity services by asset class. It can be left open whether a narrower product market delineated by type of trade or only for OTC traded derivatives would be appropriate, as a conclusion on this issue does not affect the outcome of the Commission's assessment in the present case.

(156) Accordingly, the Commission will assess the horizontal overlap between the businesses contributed to the JV in FX CCP connectivity and IRD CCP connectivity. It will also assess the vertical links between CME's clearing services and the JV's FX CCP connectivity and IRD CCP connectivity services and CME's OTC FX trading services and the JV's FX CCP connectivity services. In each case, the Commission's assessment will focus on OTC CCP connectivity, given that MarkitSERV's CCP connectivity service is only offered for OTC derivatives and so the relevant horizontal and vertical links only arise in relation to OTC derivatives.

4.8.3. Relevant geographic market definition

4.8.3.1. Commission's previous decisions

(157) The Commission has not previously considered the relevant geographic market definition for markets concerning CCP connectivity services. However, relevant geographic market definitions in related markets such as derivative trading and clearing have generally been considered as being at least EEA-wide or global.[137]

4.8.3.2. Notifying Parties' view

(158) The Notifying Parties submit that the relevant geographic market for the supply of trade processing services is global, given that the Parties and their competitors provide their services to customers across the world.[138] The Notifying Parties did not submit a specific view with respect to CCP connectivity services, but provided market share estimates on a worldwide basis.

136 Form CO, paragraph 414 and Figure 6.6.

137 Commission decision of 1 February 2012 in Case M.6166 – *Deutsche Börse/NYSE Euronext*, paragraphs 450, 460 and 462.

138 Form CO, paragraph 384.

4.8.3.3. Commission's assessment

(159) The results of the market investigation indicate that the relevant geographic market for CCP connectivity is likely worldwide. When asked to indicate the main factors for choosing a CCP connectivity provider, customers did not indicate that location was an important element for them.[139] Rather, the vast majority of customers confirmed that their CCP connectivity services are purchased by comparing offers from providers worldwide.[140] Moreover, the Parties are active worldwide without differentiating their CCP connectivity services by geography. The market investigation did not indicate any other reasons to consider that a narrower geographic market definition would be appropriate.

4.8.3.4. Conclusion

(160) Based on the results of the market investigation, the Commission considers that the relevant geographic market for CCP connectivity services is worldwide.

4.9. Credit limit management for OTC derivatives

4.9.1. Introduction and Parties' services

(161) Credit limit management and checking services are services provided to executing brokers, prime brokers and buy-side clients with the aim of managing credit risk by monitoring clients' exposure and use of their available credit limits. These services are part of the wider market of PB give-up management services.

(162) Credit limit management services consist of credit checks pre-trade (to ensure that the counterparty has sufficient credit to enter into a transaction) and post-trade (so that executing and prime brokers can monitor and manage how much credit they have extended to their buy-side counterparties). Traiana provides OTC pre- and post-trade credit limit checking and management services ("credit limit management for OTC derivatives") for IRD, CDS and FX trades through its LimitHub and ClientHub products.[141] While some brokers have in-house solutions for credit limit management for OTC derivatives, Traiana is the only third party provider worldwide of credit limit management for OTC derivatives.

4.9.2. Relevant product market definition

4.9.2.1. Commission's previous decisions

(163) The Commission has not previously considered the relevant product market definition for credit limit management for OTC derivatives.

4.9.2.2. Notifying Parties' view

(164) The Notifying Parties submit that the question of market definition in the market for credit limit management for OTC derivatives can be left open as no serious doubts as

139 Replies to question 14.1 of Questionnaire 1.

140 Replies to question 15 of Questionnaire 1.

141 Traiana provides post-trade credit services for OTC FX trades and pre-trade credit services primarily for OTC CDS and IRD trades, see Notifying Parties' response to question 1 in RFI 19.

to the Transaction's compatibility with the internal market arise irrespective of how the market is defined. However, in their submissions, the Notifying Parties have considered that the relevant market for the provision of credit limit management for OTC derivatives would include only third party services, and would include both pre- and post-trade limit management and limit checking services.[142]

4.9.2.3. Commission's assessment

(165) While the Commission has not previously considered credit limit management services directly, the results of the market investigation indicate that trade processing service markets may be distinguished by asset class, trade type and service type (see Section 4.5.2), as proposed by the Notifying Parties. Credit limit management services could be a separate product market (being a separate service type within PB give-up management services markets).

(166) Within a plausible separate market for credit limit management services, a further distinction by asset class and provision by third party services only is considered below.

(167) Regarding a distinction by asset class, customers responded in the market investigation that they consider trade processing services (including credit limit management services) for different asset classes as separate markets.[143] From a supply-side perspective, there may be some substitutability across asset classes. However, it would not seem to be the case that suppliers are easily able to switch and supply their trade processing services for other asset classes[144], as this requires connections to different market participants (which generally operate segmented by asset class too). Hence, separate markets by asset class seem to be plausible. However, whether separate markets by asset class exist for credit limit management services can be left open, as the Transaction does not give rise to serious doubts as to its compatibility with the internal market irrespective of such a distinction.

(168) Regarding a separate plausible market for the provision of third party credit limit management services, the market investigation did not examine this particular distinction. However, Traiana is the only third party supplier of credit limit management services globally, and for trades for which no credit limit management is provided by Traiana, the trading parties are managing this bilaterally. As the Transaction would not give rise to serious doubts as to its compatibility with the internal market on the narrowest plausible basis (where Traiana's market share would be 100% for third party credit limit management services in the asset classes in which it is active, namely IRD, CDS and FX), this question can be left open as it would not affect the outcome of the Commission's assessment.

(169) Regarding a plausible distinction between pre- and post-trade credit limit management services, the Commission notes that the Parties themselves distinguish between pre- and post-trade in their submission.[145] However, a description of the

142 Notifying Parties' response to RFI 5, paragraphs 3.8ff.

143 Reply to question 6 of Questionnaire 3.

144 Commission Notice on the definition of relevant market for the purposes of Community competition law (97/C 372/03), para. 20.

145 Form CO, paragraph 112.

services[146] would suggest that whoever procures pre-trade credit limit management services would generally also be interested in post-trade credit limit management services. Hence, it is likely that, within the same asset class, pre- and post-trade services are not separate markets when considering the market for credit limit management services. However, whether separate markets by pre- and post-trade provision of credit limit management services exist can be left open, as the Transaction does not give rise to serious doubts as to its compatibility with the internal market irrespective of such a distinction.

4.9.2.4. Conclusion

(170) Based on the results of the market investigation and the evidence available to it, the Commission considers that credit limit management services are a separate relevant product market from other trade processing services. It is possible that it may be appropriate to distinguish the market for credit limit management services by asset class, pre- and post-trade provision and third party provision only. The conclusion on whether these constitute separate markets can be left open however, as the Transaction does not give rise to serious doubts as to its compatibility with the internal market irrespective of such a distinction.

4.9.3. Relevant geographic market definition

4.9.3.1. Commission's previous decisions

(171) The Commission has not previously considered the relevant geographic market definition for credit limit management for OTC derivatives.

4.9.3.2. Notifying Parties' view

(172) The Notifying Parties submit that the relevant geographic market for the supply of credit limit management services is global without providing reasons for this view.[147]

4.9.3.3. Commission's assessment

(173) The Commission notes that Traiana's credit limit management for OTC derivatives services are used by […] CCPs, […] regulated venues and more than […] end clients worldwide.[148] The product is the same worldwide. During the market investigation customers indicated that they compare offers of trade processing service providers in general on a worldwide basis and that the suppliers are the same on worldwide and narrower bases.[149] The results of the market investigation did not indicate that the

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146 "*Credit risk management services are provided at two main points in the OTC trading lifecycle: (a) pre-trade, credit checks are carried out to check that counterparties' credit limits have not been exceeded; and (b) post-trade, prime and executing brokers use credit risk management services to monitor and actively manage how much credit they have extended to their buy-side clients and across trading venues, and to establish, monitor, amend and terminate the legal documentation required. In addition, "kill switches" enable credit providers to disable clients from executing trades in real time*." See Form CO, paragraph 112.

147 Notifying Parties' response to RFI 5, paragraphs 3.8ff.

148 https://www.cmegroup.com/services/files/traiana-credit-risk-services.pdf last accessed on 5 July 2021.

situation would be any different with regard to credit limit management services specifically.

4.9.3.4. Conclusion

(174) In light of the foregoing, for the purposes of this decision, the Commission considers the geographic scope of the market for credit limit management for OTC derivatives to be worldwide. In any event, given that Traiana is the only third party provider of credit limit management for OTC derivatives globally, the competitive assessment would not change even on a narrower geographic market definition.

4.10. Trade confirmation

4.10.1. Introduction and Parties' services

(175) Trade confirmations are a service provided to buy-side clients and brokers in conjunction with the trade allocations service[150] to confirm that each individual trade allocation has been booked by the executing broker/prime broker in their respective internal systems. The trade confirmation provider compares the allocations specified by the client against the messages sent by the counterparty executing broker/prime broker indicating how the trade allocation has been booked. Once the provider is satisfied that these match, both the client and the executing broker/prime broker receive notification of the confirmation.

(176) MarkitSERV is the only third party provider of confirmation services in relation to OTC IRD, CDS and equity derivative trades, but does not provide confirmation services in relation to FX or commodities trades. Any trades not confirmed by MarkitSERV are confirmed directly between the trading parties.[151] Traiana does not provide trade confirmation services.

4.10.2. Relevant product market definition

4.10.2.1. Commission's previous decisions

(177) The Commission has not previously considered the relevant product market for trade confirmations.

4.10.2.2. Notifying Parties' view

(178) The Notifying Parties submit that the question of market definition for trade confirmation services can be left open as no serious doubts as to the Transaction's compatibility with the internal market arise irrespective of how the market is defined. However, the Notifying Parties have assessed separate relevant product markets for trade confirmations delineated by asset type.[152]

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150 Once a trade has been executed bilaterally between two counterparties or via a tri-party relationship, the client can provide allocation details to the executing broker or prime broker on how the trade should be split amongst the client's accounts or funds.

151 Notifying Parties' response to RFI 9, paragraph 7.3.

152 Notifying Parties' response to RFI 9, paragraphs 7.1ff.

4.10.2.3. Commission's assessment

(179) In line with the general finding outlined above that different trade processing services are different product markets, the market investigation indicated that trade confirmations are a separate product market. In particular, the responses of certain suppliers suggested that they consider trade confirmation to be a separate service[153] and customers noted that trade confirmations are offered as a separate product.[154] While customers do sometimes procure trade confirmations from the same supplier as other services they receive, such as CCP connectivity, they indicated that it is generally not important for them to procure these services from the same source.[155]

(180) Regarding potential separate markets by asset class, there are indications that it is appropriate to consider this a separate product market. Some respondents to the market investigation indicated that they only procure MarkitSERV's confirmation service in certain asset classes (even though they are active in, and procure other trade processing services from MarkitSERV in, other asset classes).[156] Moreover, MarkitSERV's trade confirmation service is only active in certain asset classes (IRDs, CDS and equity derivatives, but not FX or commodities trades). However, as the Transaction does not give rise to serious doubts as to its compatibility with the internal market on the narrowest plausible basis (i.e. if there were separate product markets by asset class, noting that MarkitSERV's share would be lower on an overall market for trade confirmations given that it is not active in several asset classes), it is not necessary to reach a conclusion on this question.

(181) Regarding the question of whether it is appropriate to define a separate product market for the third party provision of trade confirmation services (as opposed to self-supply), the market investigation did not provide any evidence to reach a conclusion on this. However, MarkitSERV is the only third party supplier of trade confirmation services, and all trades that are not confirmed by MarkitSERV are confirmed directly between the trading parties.[157] As the Transaction would not give rise to serious doubts as to its compatibility with the internal market on the narrowest plausible basis (where MarkitSERV's market share would be 100% for third party supply in particular asset classes), this question can be left open as it would not affect the outcome of the Commission's assessment.

4.10.2.4. Conclusion

(182) In light of the foregoing, for the purposes of this decision, the Commission considers the relevant product market is the provision of trade confirmations. It can be left open whether there would be a separate relevant product market by asset class (which in this case would be relevant only for the IRD, CDS and equity derivatives asset classes) or for third party provision of trade confirmations, as a conclusion on this issue does not affect the outcome of the Commission's assessment in the present case. The Commission's assessment of the risk of foreclosure in Section 5.8 will focus on the narrowest plausible market definition in view of the fact that MarkitSERV is only active in certain asset classes and is the only provider of third

153 Replies to questions 6.1 and 7.1 of Questionnaire 4.
154 Replies to question 18 of Questionnaire 6.
155 Replies to question 12 and 12.2 of Questionnaire 1.
156 Replies to question 13 of Questionnaire 1.
157 Response to RFI 9, paragraph 7.3.

party trade confirmations (and that on a wider market MarkitSERV's market share would be lower).

4.10.3. Relevant geographic market definition

4.10.3.1. Commission's previous decisions

(183) The Commission has not previously considered the relevant geographic market for trade confirmations.

4.10.3.2. Notifying Parties' view

(184) The Notifying Parties submit that the relevant geographic market for this potential product market is global, although the Notifying Parties did not detail why this would be the case.[158]

4.10.3.3. Commission's assessment

(185) The market investigation indicated that the relevant geographic market is worldwide. On the supply-side, there is only one provider of third party trade confirmations (MarkitSERV), which is active at worldwide level in all of the asset classes where it is present and does not alter its product offering depending on the place where they are supplied. On the demand-side, the customers who indicated that they procure MarkitSERV's trade confirmation services are global banks, including some which are headquartered in the EEA and others with headquarters outside of the EEA (for example, the US). When describing their procurement practices, none of the respondents suggested that their practices regarding trade confirmation services would vary in different geographies (regardless of asset class).[159]

4.10.3.4. Conclusion

(186) Therefore, for the purposes of this decision, the Commission considers the geographic market of the market of trade confirmations to be worldwide, both for the overall market and if narrower markets by asset class or for third party provision were defined.

4.11. Trade optimization

4.11.1. Introduction and Parties' services

(187) 'Trade optimization' refers to a broad range of services provided throughout the trading lifecycle (from the pre-trade stage through to after settlement) that aim to help customers more effectively manage their risk and optimise their trading portfolios. TriOptima and Reset provide a number of trade optimization products, as set out below.

(188) Portfolio compression is the process through which market participants reduce notional amounts outstanding and line items at a CCP by replacing (netting) multiple offsetting derivative contracts with fewer transactions of the same net risk.

158 Notifying Parties' response to RFI 9, paragraphs 7.1ff.
159 Replies to question 12-12.2 of Questionnaire 1.

Compression services can be multilateral (i.e. involving multiple parties in a single compression run), bilateral (through which two parties compress their portfolios) or unilateral (where a single client compresses its cleared positions). This process is important for regulatory capital requirements, which are driven by a market participant's gross notional outstanding exposure. TriOptima is active worldwide in the provision of portfolio compression through its triReduce service, which provides portfolio compression services across the IRD, FX and CDS asset classes. This product is described in more detail in Section 5.8.

(189) Portfolio reconciliation is the process of comparing two counterparties' position records of bilateral OTC trades as at a given business date to ensure that the two organisations have one consistent record for a defined portfolio (or group of portfolios). It is a means of ensuring that counterparties' books and records remain synchronised and that the effects of trade events, such as novations, amendments and other activities, are accurately captured. Portfolio reconciliation is a regulatory requirement in a number of jurisdictions (including the EU). TriOptima is active worldwide in the provision of portfolio reconciliation through its triResolve service, which provides portfolio reconciliation for OTC derivatives across all five asset classes (IRD, FX, CDS, equity derivatives and commodities). This product is described in more detail in Section 5.8.

(190) Margin management (also referred to as margin optimization, collateral management) consists of managing and optimising the use of securities or other assets provided as collateral. CCPs perform a daily mark-to-market valuation[160] of cleared trades and impose margin requirements on trade participants. Alternatively, for uncleared bilaterally managed trades, the two counterparties make 'margin calls' to each other based on the mark-to-market valuation of their trades as per the pre-agreed terms. Margin is collateral that the holder of a financial instrument has to deposit with a counterparty (e.g. a broker, exchange, custody service provider or CSD) to cover some or all of the credit risk the holder poses for the counterparty. It generally consists of initial margin, the amount of collateral required by the CCP or trade counterparty to initiate a position, and maintenance or variation margin, the minimum amount of collateral that must be maintained at the CCP (or sent to the counterparty, in case of uncleared bilateral trades). Participants must monitor these margin requirements and process payments to and from the CCP/counterparty. Margin management services encompass the selection of collateral, matching of transaction details, valuation and safekeeping of the securities held as collateral and their monitoring, as well as optimization, substitution, settlement, and custody services. TriOptima is active worldwide in the provision of margin management services across all five asset classes (IRD, FX, CDS, equity derivatives and commodities), through a number of products. These products are described in more detail in Section 5.8.

(191) Portfolio rebalancing is the general term for the process of buying or selling assets or trading derivatives to maintain an original or desired level of risk in a portfolio. Portfolio rebalancing can be multilateral (facilitating offsetting trades between

160 Mark-to-market accounting refers to an accounting method aimed to determine the 'fair value' of an asset based on the current market price for that asset or similar ones (in contrast with some other methodologies that look at the past transaction value of assets without taking into account subsequent changes in market conditions).

multiple clients), or unilateral (specific to each client's portfolio), and may target different types of risk (e.g. fixing risk or basis risk for interest rates, strike risk for options, etc.) Risk mitigation services are supplied by third parties to assist companies in portfolio rebalancing. More specifically, one form of portfolio rebalancing is basis risk mitigation. Basis risk refers to the risk of loss arising from the difference between the economic or legal terms of two derivative transactions that are intended to hedge each other. Basis risk mitigation services provide customers with a way to reduce basis risk. The only type of portfolio rebalancing service in which the Parties are active is basis risk mitigation, in which Reset is a basis risk mitigation product for IRD and FX derivatives. In view of the fact that basis risk mitigation is the only relevant portfolio rebalancing service involved in the Transaction, and so the Transaction would not give rise to serious doubts as to its compatibility with the internal market even if a broader product market including other portfolio rebalancing products were considered relevant, the Commission's assessment below will be limited basis risk mitigation.

4.11.2. Relevant product market definition

4.11.2.1. Commission's previous decisions

(192) The Commission has not previously considered the relevant product market for portfolio compression, portfolio reconciliation, margin management or basis risk mitigation.

4.11.2.2. Notifying Parties' view

(193) The Notifying Parties submit that the question of the market definition in trade optimization services can be left open as no serious doubts as to the Transaction's compatibility with the internal market arise irrespective of how the market is defined. With respect to portfolio compression the Notifying Parties argue that there are various compression tools customers can use and estimate that out of the total portfolio compression market, CCPs cover approximately 60-70% of the overall portfolio compression activity with the remaining 30-40% covered by third party providers such as triReduce.[161]

(194) However, the Notifying Parties have considered a distinction within trade optimization by type of services, as well as by asset classes. More specifically, the Notifying Parties defined plausible markets as the (i) provision of portfolio compression services for OTC derivatives by third party providers (non-CCPs), (ii) the provision of portfolio reconciliation services for OTC derivative trades, (iii) the provision of margin management services for OTC derivatives, and (iv) the provision of basis risk mitigation services for OTC interest rate derivatives.

4.11.2.3. Commission's assessment

(195) As detailed below, the Commission investigated whether trade optimization services (i) are separate product markets from other trade processing services, and/or (ii) are separate product markets (a) by service type , (b) by asset class and/or (c) by type of provider, i.e. between services provided by CCPs or by independent third parties.

[161] Notifying Parties' response to RFI 7, paragraph 3.2.

(196) *First*, according to all responding competitors, the majority of customers buy trade optimization services separately from other trade processing products (indicating that it would not be appropriate to consider these trade optimization services as falling within the same relevant product market as one or more trade processing products).[162] Moreover, very few trade optimization suppliers offer additional trade processing services.[163] Most customers also consider trade optimization services to be separate from other trade processing services.[164] One customer summarizes, "[trade processing and trade optimization have] *separate vendors with separate pricing. Trade processing is core to business, optimization allows for cost saves (nice to have).*"[165] As such, and in line with the conclusions for the other trade processing services, the Commission concludes that trade optimization services are not part of the same market as other trade processing services.

(197) *Second*, the market investigation indicated that there are separate relevant product markets for each different trade optimization service (namely, portfolio compression, portfolio reconciliation, margin management, basis risk mitigation. There appears to be limited demand-side substitutability across these trade optimization services. In fact, most customers consider that these different trade optimization services should constitute separate markets[166] and the majority of customers say they purchase the various trade optimization services separately.[167] Indeed, the vast majority of suppliers agree that these optimization services should be considered separate product markets. They confirm that while most customers purchase several trade optimization services from the same suppliers, the end users and functions at the customers may be different (e.g. front office users for compression services vs. back office users for reconciliation services).[168] This is confirmed by a customer, *"Some of the services are purchased from the same supplier but they are individual purchasing decisions, with separate fee schedules for supporting activities in different parts of the bank.* [we are] *generally able to purchase services from different providers and mix-and-match the services that we purchase from different providers*"[169] There also appears to be limited supply-side substitutability; the same suppliers are not always active across all services. This is confirmed by a customer, "*We see different providers across the optimisation, compression and reconciliation spaces*."[170]

(198) *Third*, the market investigation indicated that it is appropriate to consider separate relevant product markets by asset class for the aforementioned products (portfolio compression, margin management, portfolio reconciliation, basis risk mitigation). From the supply-side, it is technically difficult to provide these services across asset classes due to the nature of the financial instruments; they can only be applied to a portfolio of the same asset class (IRDs, FX, CDS). The limitations to supply-side substitution are illustrated by the fact that TriOptima and Reset are not active across all asset classes for all services; for example, they are only active in some asset classes for portfolio compression (IRD, FX, CDS, equity derivatives) and basis risk

162 Reply to question 4 of Questionnaire 4.
163 Reply to question 6 of Questionnaire 4.
164 Reply to question 7 of Questionnaire 6.
165 Reply to question 7.1 of Questionnaire 6.
166 Reply to question 7 of Questionnaire 6.
167 Reply to question 4 of Questionnaire 6.
168 Reply to question 7 of Questionnaire 4.
169 Replies to question 4.2.1 of Questionnaire 6.
170 Replies to question 7.1 of Questionnaire 6.

mitigation (IRD, FX). Moreover, their offerings are in some cases differentiated across asset classes, as can be seen in how TriOptima positions its offering. For example, it offers and advertises separate portfolio compression products for each of IRD, FX and CDS.[171] There are also differences as to the competitive landscape across asset classes, as TriOptima and Reset's market share can vary between asset classes (for example, in portfolio compression TriOptima is […] for CDS but has a [50-60]% market share in FX; likewise in basis risk mitigation Reset's market share is [40-50]% in FX but up to [60-70]% in IRD), reflecting the different competitive focus, strengths and presence of rival suppliers. Most suppliers responding to the market investigation confirmed that they were not active in each asset class and that the extent of their presence in each class varies.[172] From the demand-side, customers also indicate that these services should be considered separate product markets by asset class, explaining that these portfolio optimization services are "*segregated per asset class as different optimisation requirements/opportunities*"[173] and "*Vendors* [are] *selected on the strength of performance & cost effectiveness in each individual asset class per service*."[174] Another customer adds that "[*e*]*ach optimisation/compression service uses different forms of processing dependent on asset class and type of optimisation. For example, for Rates cleared compression we do not use MarkitWire, for uncleared we do. For Rates Optimisation, we use MarkitWire, for FX we do not.*"[175]

(199) *Fourth*, the Commission also considered whether the aforementioned trade optimization services (portfolio compression, margin management, portfolio reconciliation, basis risk mitigation) supplied by CCPs compete in the same relevant product market as third party trade optimization providers. The market investigation indicated that customers and competitors consider that TriOptima and Reset's closest competitors are other third party provides and that CCPs are not close competitors to them.[176] However, the results of the market investigation did not provide sufficient information to conclude whether CCPs would fall outside of the relevant product market entirely. In any event, in a wider market that includes the services provided by CCPs, TriOptima and Reset's market share would be lower, and so this question can be left open given that the Transaction would not give rise to serious doubts as to its compatibility with the internal market even on the narrowest plausible basis.

4.11.2.4. Conclusion

(200) In view of the above, the Commission concludes that trade optimization services should not be considered to be within the same product market as trade processing services. More specifically, the Commission concludes that there are separate product markets for portfolio compression, margin management, portfolio reconciliation and basis risk management services – in each case, these product markets are split by asset class. The question of whether there would be separate product markets for the supply of the aforementioned services by third party providers (as opposed to supply by CCPs) can be left open, as TriOptima and Reset are only active as third party

171 https://www.cmegroup.com/services/trioptima/trireduce-portfolio-compression.html#overview
172 Replies to question 5 of Questionnaire 6.
173 Reply to question 7.1 of Questionnaire 6.
174 Reply to question 7.1 of Questionnaire 6.
175 Reply to question 7.1 of Questionnaire 6.
176 Replies to questions 10-13 of Questionnaire 4 and 9-12 of Questionnaire 6.

providers and the Transaction would not give rise to serious doubts as to its compatibility with the internal market on either basis.

4.11.3. Relevant geographic market definition

4.11.3.1. Commission's previous decisions

(201) The Commission has not previously considered the relevant geographic market for portfolio compression, portfolio reconciliation, margin management or basis risk mitigation.

4.11.3.2. Notifying Parties' view

(202) The Notifying Parties submit that the relevant geographic market for each of these potential markets is global, although the Notifying Parties did not detail why they considered this would be the case.

4.11.3.3. Commission's assessment

(203) The results of the market investigation indicate that it would be appropriate to consider the relevant geographic market for portfolio compression, portfolio reconciliation, margin management and basis risk mitigation to be worldwide (across all asset classes and regardless of whether CCP services are considered part of the relevant product market).

(204) On the supply-side, the main providers of each of these trade optimization services are active globally. All suppliers who responded to the market investigation stated that they offer these trade optimization services to customers at the worldwide level. They indicated further that their competitors are active on the worldwide level, and that fees for their trade optimization services are set at the worldwide level. One supplier summarizes, "[*a*]*ll clients trade with counterparties from multiple geographic regions and so a multilateral optimisation services needs to build a network of clients from all relevant regions.*"[177] On the demand-side, the majority of customers indicated that they purchase trade optimization services at the worldwide level and all confirmed that suppliers are active at the worldwide level.[178] Neither suppliers nor customers indicated any reasons to consider that these elements would vary by asset class or if the market were also to include CCPs providing these services.

4.11.3.4. Conclusion

(205) On the basis of the market investigation results and for the reasons detailed above, the Commission concludes that the geographic market for portfolio compression, portfolio reconciliation, margin management and basis risk mitigation is global, regardless of asset class or whether CCPs are considered to be part of the relevant product market.

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177 Replies to questions 9 and 9.1 of Questionnaire 4.

178 Replies to questions 8 and 8.1 of Questionnaire 6.

4.12. RED codes

4.12.1. Introduction and the Parties' services

(206) An identifier (or security identifier, if referring to equities and bonds in particular) is an alphanumeric code, which can be used to identify a specific financial instrument, entity or obligation. Within financial information, identifiers may be considered a type of reference data as they are used to identify or retrieve certain information about a financial instrument.

(207) IHSM is active in this area via its RED codes, which are relevant only for the credit derivative asset class. A Reference Entity Data ('RED') identifier is used in a CDS context to confirm the relationship between a reference entity and a reference obligation, each of which is assigned a unique (RED) code. RED codes are therefore principally used to support pre- and post-trade certainty on credit derivative markets. They are used to confirm the relationship between a reference entity and a credit derivative, as well as corporate actions, CDS succession events and credit events.[179]

4.12.2. Relevant product market definition

4.12.2.1. Commission's previous decisions

(208) In *Thomson Corporation/Reuters Group*,[180] the Commission did not definitively conclude on the relevant product market for security identifiers (referred to as "instrument codes" in that decision), however, it assessed separate plausible relevant product markets for each security identifier. The decision assessed codes provided by data vendors like Reuters' RICs for purposes of identification within the vendors' own systems and industry-wide codes provided on a stand-alone basis like SEDOLs, ISINs and FIGIs.

(209) In *Standard & Poor's*,[181] the Commission considered security identifiers (in that case the relevant identifier being ISINs) as serving different purposes from other financial information, and particularly being used to identify a security rather than to monitor the markets or evaluate an investment opportunity, and found their distribution distinct from the distribution of other financial information. In that case, the Commission considered ISINs to be a separate market from other identifiers and distinguished further by nationality ('US ISINs'), first-hand distribution versus redistribution, and distribution method (data feed, manual "look up" service).

4.12.2.2. Notifying Parties' view

(210) The Notifying Parties submit that there are a range of alternative identifier systems available as potential substitutes for RED codes, which include both self-supply and the use of legal entity identifiers ('LEIs') and bond International Security Identifier Numbers ('ISINs') to identify entities and reference obligations. Although the existence of alternative identifier systems indicates that definition of a wider market may be appropriate, at its narrowest a plausible market could comprise the supply of RED codes alone, in which IHSM would be the sole supplier. The Notifying Parties

179 Form CO, paragraph 544.
180 Commission decision of 19 February 2008 in Case M.4726, *Thomson/Reuters*, paragraph 71.
181 Commission decision of 15 November 2011 in Case COMP/39.592, paragraphs 19-21.

submit that the question of market definition can be left open as no serious doubts as to the Transaction's compatibility with the internal market arise irrespective of how the market is defined.[182]

4.12.2.3. Commission's assessment

(211) The market investigation results indicate that RED codes likely are a separate market. When asked whether competitors use RED codes as an input, answers are mixed between the options "Yes, we use RED codes in our business and they are essential" and "No we don't use RED codes in our business". However, no competitor chose the option "Yes we use RED codes in our business but they are not essential (e.g. we have alternative solutions)".[183] The market investigation did not provide sufficient evidence to reach a conclusion regarding whether RED codes constitute a separate product market, or could have substitutes, leading to a wider market definition.

4.12.2.4. Conclusion

(212) In any event, the product market definition in relation to RED codes, and in particular whether RED codes form a distinct market or are part of a larger market comprising other identifiers such as LEIs paired with ISINs can be left open as the Transaction does not give rise to serious doubts as to its compatibility with the internal market even on the narrowest plausible basis.

4.12.3. Relevant geographic market definition

4.12.3.1. Commission's previous decisions

(213) In *Thomson Corporation/Reuters Group*,[184] the Commission considered the geographic scope of instrument codes to be at least EEA-wide and probably global.

(214) In *Standard & Poor's*,[185] the Commission considered the market for first-hand electronic distribution and licensing of US ISINs (records and numbers) via data feeds to be global for the purposes of that decision.

4.12.3.2. Notifying Parties' view

(215) The Notifying Parties submit that the relevant geographic market for RED codes is worldwide without providing a reason.[186]

4.12.3.3. Commission's assessment

4.12.3.4. The market investigation indicated that the relevant geographic market is likely to be worldwide. On the supply-side, there is only one provider of RED codes (IHSM), which is active at worldwide level and does not alter its product offering depending on the place of supply. On the demand-side, the customers who indicated that they procure RED codes are companies that are active on a global level. When

182 Notifying Parties' response to RFI 5, paragraphs 3.1-3.5.
183 Reply to question 18 of Questionnaire 4.
184 Commission decision of 19 February 2008 in Case M.4726, *Thomson/Reuters*, paragraph 106.
185 Commission decision of 15 November 2011 in Case COMP/39.592, paragraph 22.
186 Notifying Parties' response to RFI 5, paragraph 3.5.

describing at which level they offer their services (which use RED codes as an input) and compete, the respondents suggested that their activities took place on a worldwide level.[187]

4.12.3.5. Conclusion

(216) Thus, the Commission considers the geographic market of the market of RED codes to be worldwide for the purpose of this decision. The geographic market definition in a wider market comprising other identifiers that would be able to substitute RED codes, would likely also be global given that market participants using these kinds of identifiers as an input are active on a global basis.

5. COMPETITIVE ASSESSMENT

5.1. Analytical framework

(217) Under Article 2(2) and (3) of the Merger Regulation, the Commission must assess whether a proposed concentration would significantly impede effective competition in the internal market or in a substantial part of it.

(218) In this respect, a concentration may entail horizontal and/or non-horizontal (namely, vertical or conglomerate) effects. Horizontal effects are those deriving from a concentration where the undertakings concerned are actual or potential competitors of each other in one or more of the relevant markets concerned. Vertical effects are those deriving from a concentration where the undertakings concerned are active on different or multiple levels of the supply chain. Conglomerate effects are those deriving from a concentration where the undertakings concerned are in a relationship which is neither horizontal nor vertical, but are active on closely related markets. A concentration may involve all three types of effects. In such a case, the Commission will appraise horizontal and non-horizontal effects in accordance with the guidance set out in the relevant notices, that is to say the Horizontal Merger Guidelines[188] and the Non-Horizontal Merger Guidelines.[189]

5.1.1. Horizontal non-coordinated effects

(219) The Horizontal Merger Guidelines list a number of factors which may influence whether or not significant horizontal non-coordinated effects are likely to result from a concentration, such as the large market shares of the firms, the fact that the firms are close competitors, the limited possibilities for customers to switch suppliers, or the fact that the concentration would eliminate an important competitive force. Not all of these factors need to be present to make significant non-coordinated effects likely and it is not an exhaustive list. Finally, the Horizontal Merger Guidelines describe a number of factors, which could counteract the harmful effects of the concentration on competition, including the likelihood of countervailing buyer power, the entry of new competitors on the market, and efficiencies.

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187 Reply to question 9 of Questionnaire 4.

188 Guidelines on the assessment of horizontal mergers under the Council Regulation on the control of concentrations between undertakings ("Horizontal Merger Guidelines"), OJ C31, 5.2.2004, paragraph 5.

189 Guidelines on the assessment of non-horizontal mergers under the Council Regulation on the control of concentrations between undertakings ("Non-Horizontal Merger Guidelines"), OJ C265, 18.10.2008.

5.1.2. Non-horizontal non-coordinated effects

(220) A concentration between companies which operate at different levels of the supply chain may significantly impede effective competition if it gives rise to foreclosure.[190] Foreclosure occurs where actual or potential competitors' access to supplies or markets is hampered or eliminated as a result of the concentration, thereby reducing those companies' ability and/or incentive to compete. Such foreclosure may discourage entry or expansion of competitors or encourage their exit.

(221) The Non-Horizontal Merger Guidelines distinguish between two forms of foreclosure. Input foreclosure occurs where the concentration is likely to raise the costs of downstream competitors by restricting their access to an important input. Customer foreclosure occurs where the concentration is likely to foreclose upstream competitors by restricting their access to a sufficient customer base.

(222) In assessing the likelihood of an anticompetitive input/customer foreclosure scenario, the Commission examines, first, whether the merged entity would have, post-merger, the ability to substantially foreclose access to inputs/customer base, second, whether it would have the incentive to do so, and third, whether a foreclosure strategy would have a significant detrimental impact on competition downstream/upstream.

5.2. Overview of affected markets

(223) The Transaction leads to horizontally affected markets in:

(a) FX and IRD CCP connectivity services worldwide (Section 5.3),

(b) FX NOE messaging services worldwide (Section 5.4), and

(c) FX PB give-up messaging services worldwide (Section 5.5).

(224) In addition, the following vertically affected markets arise between the JV and the parents ((a) to (c)) or between the activities contributed to the JV ((d)):

(a) FX and IRD CCP connectivity services worldwide (upstream) on the one hand, and OTC FX and IRD clearing services worldwide or in the EEA (downstream) on the other hand – Section 5.6;

(b) OTC FX trading services worldwide or in the EEA (upstream) on the one hand, and FX CCP connectivity services worldwide or in the EEA (downstream) on the other hand – Section 5.7.1;

(c) RED identifiers for CDS worldwide (upstream) on the one hand, and certain trade optimization services worldwide, namely: portfolio compression for CDS, portfolio reconciliation for CDS and margin management for CDS worldwide (downstream)[191] on the other hand – Section 5.8.1; and

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190 Non-Horizontal Merger Guidelines, paragraphs 17-18.

191 For completeness there is no vertical link with basis risk mitigation services, as CME is not active CDS (and RED identifiers are only used in relation to CDS). There is also a vertical overlap between IHSM's RED codes upstream and Traiana's credit risk management services downstream. Traiana LimitHub uses RED codes as part of its limit management and limit checking functions for CDS trades,

(d) Trade optimization services, namely portfolio compression for IRD and CDS, portfolio reconciliation for IRD, CDS and equity derivatives, margin management for IRD, CDS and equity derivatives, and basis risk mitigation for IRD worldwide on the one hand, and trade confirmation services for IRD, CDS, and equity derivatives worldwide on the other hand (there is a vertical relationship in both directions) – Sections 5.8.2 and 5.8.3.

(225) All markets assessed in the following Sections are considered global for the purposes of this decision (for those markets where possible narrower geographic markets are plausible, an assessment carried out on that basis would not alter the Commission's conclusions).

(226) Each of these horizontally affected markets and vertically affected links are assessed in turn below. The Commission also considers for completeness the risk that the JV may seek to foreclose rival providers by bundling certain of its services together. See Section 5.9.

5.3. FX and IRD CCP connectivity services worldwide[192]

(227) MarkitSERV provides CCP connectivity for CDS, FX and IRD trades worldwide. Globally, it is the market leader in FX and IRDs, processing the vast majority of trades in these CCP connectivity markets, whereas it has a much smaller offering in relation to CDS.

(228) Traiana is mainly active in the worldwide provision of CCP connectivity in equities, which represents the vast majority ([80-90]%) of its CCP connectivity revenues. Traiana is also active, albeit to a much lesser extent, in FX and IRD CCP connectivity worldwide.

(229) Table 2 below sets out the Notifying Parties' estimates of the JV's and their main competitors' market shares in the supply of CCP connectivity services, on the basis of the number of trades processed. In line with the relevant market definition outlined in Section 4.8 above, the market shares are presented separately for each asset class on a global basis.

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enabling it to manage limits by rejecting and approving groups of CDS trades which share similar characteristics or specific individual CDS trades. The same reasons regarding lack of ability and incentive as presented in Section 5.8.1 apply to this vertical overlap. In any case, as each Party already has 100% in both the putative upstream and downstream markets, the Transaction will not create a significant impediment to effective competition in either market.

192 The Commission's assessment will focus on OTC CCP connectivity, given that MarkitSERV's CCP connectivity service is only offered for OTC derivatives and so the Transaction would not give rise to serious doubts as to its compatibility with the internal market even if exchange traded derivatives were considered part of the relevant product market, as (i) the Parties' market shares would be lower on each of these segments on such a wider market, and (ii) the relevant vertical link only arises in relation to OTC CCP connectivity (with trading and clearing services). References in the competitive assessment to CCP connectivity are to OTC CCP connectivity.

Table 2: CCP connectivity market shares by asset class based on the number of trades processed, 2019[193]

Asset class	MarkitSERV (# of trades)	MarkitSERV (%)	Traiana (# of trades)	Traiana (%)	Main competitors (%)
CDS	[…]	[5-10]%	n.a.	n.a.	ICE Link (90-95%) Trading venues (0-5%)
FX	[…]	[90-100]%	[…]	[0-5]%	Bloomberg (0-5%) FX Connect (0-5%)
IRD	[…]	[80-90]%	[…]	[0-5]%	Tradeweb (5-10%) Bloomberg (5-10%) LCH (0-5%)
Equities	n.a.	n.a.	[…]	100%	No other providers identified[194]

Source: Form CO, Tables 6.9-6.11, paragraph 517 and RFI 19 Table 12.1. Notifying Parties' best estimates based on DTCC TIW data, LCH SwapClear volume data.

(230) The Notifying Parties submit that the JV only gives rise to a horizontal overlap in the provision of FX CCP connectivity services. However, the Notifying Parties explain that Traiana has some limited connectivity activities in IRD, which would give rise to a horizontally affected market if they were considered to overlap with MarkitSERV's service. The Notifying Parties argue that this should not be considered a horizontal overlap as Traiana does not offer a true CCP connectivity service, for the reasons described in recital (237) below. For completeness, the Commission also investigated this plausible overlap, as described below.[195]

193 In terms of a potential narrower product market by trade type, MarkitSERV exclusively provides CCP connectivity for bilateral trades whereas Traiana focuses on trilateral trades. MarkitSERV and Traiana's market shares would not be materially different from those presented in Table 2 if a separate, narrower product market were defined for CCP connectivity delineating by type of trade (RFI 17, Notifying Parties' response to question 1). In light of this, and the assessment conducted below, the Commission considers that the Transaction would not give rise to serious doubts as to its compatibility with the internal market even on such a narrower market definition.

194 The Notifying Parties explain that they are not aware of any other vendor offering CCP connectivity for equities in the same way that Traiana processes the cash leg of equity swap trades. Form CO, paragraph 517.

195 Traiana is also active in the CDS asset class. The Notifying Parties consider that Traiana's service does not compete with MarkitSERV in the CDS asset class, as their services are fundamentally different. Traiana's service is only used to process and perform client limit checking of voice trades *after* a trade has been submitted to a CCP for clearing. In contrast, the primary aim of MarkitSERV's CCP connectivity service is the submission of trades to clearing. As such, the Notifying party submits that Traiana's service is not a substitute for MarkitSERV's offering. In any event, even if Traiana's service were considered a form of CCP connectivity, the Parties' combined market shares would be less than [20-30]% for CDS worldwide and so the Transaction would not give rise to serious doubts as to its compatibility with the internal market.

5.3.1. Notifying Parties' view

FX

(231) The Notifying Parties submit that the Transaction does not give rise to horizontal non-coordinated effects in relation to the supply of CCP connectivity in the FX asset class, for the following reasons.

(232) First, the Notifying Parties argue that Traiana's FX CCP connectivity service is negligible. In total, Traiana sends fewer than […] FX trades to CCPs each year, out of a total of more than 1.35 million FX trades which are sent to CCPs each year. This represents a market share of less than [0-5]%.[196]

(233) Second, the Notifying Parties point out that Traiana's CCP connectivity offering in FX is limited to two services, and argues that these do not compete with MarkitSERV:

(a) The first service consists of sending a very small volume of non-deliverable forwards from […] to MarkitSERV, for matching prior to being sent on to clearing. Traiana itself does not submit trades directly to the CCP – it is MarkitSERV which provides this connectivity. Therefore, the Notifying Parties consider that this aspect of Traiana's service does not compete with MarkitSERV to provide CCP connectivity to clients.[197]

(b) The second service consists of sending a very small volume of deliverable FX forwards and swaps to the Hong Kong Exchange ('HKEX') (only). Traiana sends fewer than […] FX trades to HKEX each year. This implies that Traiana is not a competitor to MarkitSERV, given the former's negligible scope.[198]

(234) Third, the Notifying Parties argue that MarkitSERV and Traiana's FX CCP connectivity services are differentiated, as they are focused on different types of trades. MarkitSERV provides CCP connectivity for bilateral FX trades. In contrast, Traiana's FX CCP connectivity service primarily relates to trilateral trades. Notably, Traiana's service consists of acting as a clearing broker, i.e. sending prime brokerage trades to CCPs, with the aim of ensuring the smooth functioning of the clearing process for the client. This service is not provided by MarkitSERV as part of its FX CCP connectivity service, so the Parties are not close competitors.[199]

(235) Fourth, the Notifying Parties submit that the JV would face competition from a range of competitors, including in particular trading venues who enable customers to send their trades directly to clearing without the intermediation of a middleware provider (such as MarkitSERV).

IRD

(236) In relation to the IRD asset class, the Notifying Parties consider that the Transaction does not give rise to a horizontal overlap, and argue that even if it did the Transaction

196 Form CO, paragraph 430(b).
197 Form CO, paragraphs 489 and 491(b).
198 Form CO, paragraph 430(b).
199 Form CO, paragraph 429.

would not give rise to serious doubts as to its compatibility with the internal market for the following reasons.

(237) First, the Notifying Parties argue that Traiana's service does not compete with MarkitSERV in IRDs, as their services are fundamentally different. MarkitSERV's CCP connectivity service provides clients with the ability to send their executed trades (of various types) to a CCP. In contrast, in the IRD asset class, Traiana's service only relates to the submission of bunched order allocations to clearing. Bunched orders are a specific type of trading arrangement used in circumstances where an asset manager does not yet know to which funds a block trade will be allocated when the trade is made. This very limited use implies that Traiana's service is not able to compete for the vast majority of MarkitSERV's business in IRD CCP connectivity ([0-5]% of MarkitSERV's business is for bunched order allocations).[200]

(238) Second, the Notifying Parties argue that, even if it is considered that there is a horizontal overlap, Traiana is a negligible player in CCP connectivity in IRDs, generating revenues of less than […] annually (which represents Traiana's revenues in both IRDs and CDS). Traiana's IRD CCP connectivity service is currently only provided to […].[201] It only processes around […] trades out of a total market of 6.25 million trades, giving it a market share of just [0-5]%.[202]

5.3.2. Commission's assessment

FX

(239) The provision of FX CCP connectivity is a horizontally affected market on the basis that MarkitSERV has a market share of [90-100]% and Traiana brings an increment of [0-5]%. Traiana's activities in the provision of CCP connectivity are limited, as it only directly submits […] to one CCP (HKEX) each year, out of a total market of 1.35 million trades. The Commission investigated the Notifying Parties' market share estimates to verify whether they are accurate. According to well-established case law, very large market shares of 50% or more may in themselves be evidence of the existence of a dominant position;[203] in view of MarkitSERV's very high market share a dominant position can therefore be presumed.

(240) In this regard, the market investigation indicated that the Notifying Parties' market share estimates and views on competitors are credible for FX. Customers and competitors confirmed that MarkitSERV is the clear market leader for CCP connectivity in FX.[204] CCPs strongly consider MarkitSERV to be an important source of FX trades for them, whereas generally this is not true of Traiana, with one explaining: "*[w]e do not currently consider Traiana to be an important partner*".[205]

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200 Form CO, paragraph 430(c)(i). RFI 14 question 4.1.

201 Form CO, paragraph 430(c).

202 Commission computation based on data in RFI 9 Table 12.1.

203 Case T-221/95, *Endemol*, para. 234 and Case T-102/96, *Gencor*, para. 205. See also Horizontal Merger Guidelines, para. 17.

204 Replies to questions 13 and 20 of Questionnaire 1 and to question 15 of Questionnaire 2.

205 Replies to questions 14.2 and 14.3 of Questionnaire 1.

This was also reflected in the data submitted by CCPs regarding the source of FX trades sent to them for clearing.[206]

(241) Moreover, the market investigation indicated that MarkitSERV's FX CCP connectivity offering faces competition from trading venues, which provide customers with the ability to send trades executed on their venue directly to clearing. Customers considered that such direct connectivity providers can be an alternative to MarkitSERV.[207] A number of CCPs supported this view, highlighting that "*trading venues, such as Bloomberg, offer the choice to submitting trades directly to the CCPs*".[208] Customers and competitors identified alternative providers of CCP connectivity in FX as including Bloomberg, FX All, Clearvision and direct connectivity from other trading venues.[209]

(242) Therefore, the market investigation did not give any reason to doubt MarkitSERV's market share estimates, according to which MarkitSERV would hold a dominant position through its market share of [90-100]% in FX, and Traiana's share would be minimal ([0-5]%).

(243) Notwithstanding MarkitSERV's high market shares, the Commission considers that the Transaction is unlikely to give rise to serious doubts as to its compatibility with the internal market for CCP connectivity in the FX asset class, as it would not result in a strengthening of MarkitSERV's dominant position, for the following reasons.

(244) First, the market investigation supported the Notifying Parties' argument that there is considerable doubt as to whether Traiana's service competes with MarkitSERV at all – indicating that the Transaction would not lead to a strengthening of MarkitSERV's dominant position. The vast majority of MarkitSERV's FX customers indicated that it was either not possible for them to replace MarkitSERV with Traiana or at best unclear whether they could do so. Traiana offers a niche service in respect of a small number of trades where it acts as a clearing broker (a service which MarkitSERV does not provide as part of its CCP connectivity offering).[210] One customer indicated that it did not consider MarkitSERV and Traiana to be alternatives, and explained that Traiana "*offer[s] a unique service which is not interchangeable with another provider.*"[211] A customer of MarkitSERV explained that it considers there is a "*lack of availability of alternative offerings"* to MarkitSERV, and did not consider Traiana to be an alternative that it could switch to.[212] No customers responding to the market investigation indicated that they have switched between MarkitSERV and Traiana in the last three years.[213]

(245) As well as there being uncertainties as to whether Traiana provides the same type of service to that of MarkitSERV, customers indicated that Traiana lacks the necessary critical mass for it to be an effective competitor.[214] Dealer and broker banks

206 Replies to question 14 of Questionnaire 1.
207 Replies to questions 24 and 20 of Questionnaire 1.
208 Replies to questions 14.2 and 15 of Questionnaire 1
209 Replies to questions 13 and 20 of Questionnaire 1 and to question 15 of Questionnaire 2.
210 Reply to RFI 19 paragraph 11.1.
211 Replies to question 19 of Questionnaire 1.
212 Replies to questions 23 and 23.1 of Questionnaire 1.
213 Replies to question 25 of Questionnaire 1.
214 Replies to question 23.2 of Questionnaire 1.

explained that the key factor driving the choice of CCP connectivity provider is the preference of the trading counterparty.[215] Given that Traiana only submits […] FX trades to clearing (at one CCP), it was generally not considered realistic to switch to Traiana. Moreover, the vast majority of customers considered that, even if Traiana does provide the service they need, it is challenging or even impossible to switch CCP connectivity provider from MarkitSERV to Traiana, noting that this would be time consuming and costly.[216] Accordingly, it is unclear if pre-Transaction Traiana could be considered as a credible alternative to MarkitSERV.

(246) Second, the market investigation supported the Notifying Parties' claim that Traiana is not a particularly close competitor and so it is unlikely that the Transaction would strengthen MarkitSERV's dominant position. The majority of customers did not identify Traiana as a close competitor of MarkitSERV, and no customers considered that MarkitSERV competes closely with Traiana.[217] Customers explained that this is because while both MarkitSERV and Traiana are active in CCP connectivity (more generally), "*Traiana and MarkitSERV serve different asset classes".*[218] The fact that the MarkitSERV and Traiana do not compete closely is also reflected by how they are used by customers in practice. The Commission notes that virtually all of MarkitSERV's FX trades ([…]) were sent to LCH for clearing, with the remainder being sent to CME. MarkitSERV did not send any trades to HKEX. In contrast, Traiana submitted […] FX trades to LCH and Traiana's only activity was to submit […] FX trades each year to the HKEX.[219] As such, customers use Traiana and MarkitSERV for different purposes.

(247) Third, the addition of Traiana to MarkitSERV does not strengthen MarkitSERV's dominant position, because Traiana has in recent history been, is currently, and will continue to be, a negligible player in the FX CCP connectivity market. Traiana is not a new entrant nor a disruptive market participant, and it does not constitute an important competitive constraint on MarkitSERV. MarkitSERV has been active in FX CCP connectivity since 2010, and has consistently been the market leader (only in recent years has its position started to be eroded through increased use of direct connectivity from trading venues, in particular). Traiana has also been active in the provision of FX CCP connectivity since 2011. Yet despite being active on the market for ten years, Traiana has not grown into a constraint on MarkitSERV, as it holds a market share of just [0-5]% ([…]), is not seen as a close competitor and no MarkitSERV customers responding to the market investigation indicated that they switched to Traiana in the last three years. This reflects the different focus of the Parties and negligible presence of Traiana in this market.

(248) Traiana is expected to remain a marginal player in the coming years. While the market investigation showed that the progressive phase-in of the Uncleared Margin Rules[220] is expected to lead to more FX trades being sent to clearing in the next three

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215 Replies to question 14 of Questionnaire 1.

216 Replies to question 23 of Questionnaire 1.

217 Replies to question 20 of Questionnaire 1.

218 Replies to question 23.2 of Questionnaire 1.

219 Form CO, Table 2.3.

220 Regulation No 684/2012 of the European Parliament and of the Council of 4 July 2012 on OTC derivatives, central counterparties and trade repositories, as amended and further detailed in Commission Delegated Regulation (EU) 2016/2251 of 4 October 2016 supplementing Regulation (EU) No 648/2012 of the European Parliament and of the Council on OTC derivatives, central counterparties

years,[221] the impact of this would most likely be negligible for Traiana's business. The Notifying Parties explained that […] of Traiana's customers are expected to be affected by the next phase of the Uncleared Margin Rules, and that […].[222] As such, Traiana is currently, and is expected to remain, a negligible player in this market that does not exercise a constraint on MarkitSERV.

(249) Finally, the vast majority of customers that expressed a view considered that the Transaction would have a neutral impact on the market for FX CCP connectivity.[223] This is driven by Traiana's negligible presence in FX CCP connectivity and the differentiation between the Parties' offering. For example, one customer explained that: "*Markit products aren't direct competitors with Traiana given they dominate separate asset classes*". Some others pointed to the fact that the Parties' services are more complementary than competing. [224] Likewise, the majority of clearinghouses expected a neutral impact.[225]

(250) For completeness, even if the market were segmented between bilateral and prime broker trades, the Commission's assessment would remain unchanged. Even on the narrower segment of FX CCP connectivity for bilateral trades (the only segment on which the Parties overlap), MarkitSERV would remain the largest supplier whereas Traiana would be an insignificant player and not a close competitor, with considerable doubt as to whether it even competes with MarkitSERV at all (given that customers do not consider switching to Traiana to be credible, as outlined above).

(251) In light of the above and all of the evidence available to it, the Commission concludes that the Transaction does not give rise to serious doubts as to its compatibility with the internal market for the market for CCP connectivity in the FX asset class, as the Transaction does not strengthen MarkitSERV's dominant position in this market due to Traiana's negligible presence and the fact that it essentially does not compete with MarkitSERV.

IRD

(252) The provision of IRD CCP connectivity is a horizontally affected market on the basis that MarkitSERV has a market share of [80-90]% and Traiana brings an increment of [0-5]%.[226] Traiana's activities in the area of IRD CCP connectivity are limited, as they relate to just […] trades each year, out of a total market of around 6.25 million trades. The Commission investigated the Notifying Parties' market share estimates to verify whether they are accurate. According to well-established case law, very large market shares of 50% or more may in themselves be evidence of the existence of a

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and trade repositories with regard to regulatory technical standards for risk-mitigation techniques for OTC derivative contracts not cleared by a central counterparty, as amended.

221 Replies to question 22 of Questionnaire 1 and question 12 of Questionnaire 2.

222 Form CO, paragraph 430.

223 Replies to question 31 of Questionnaire 1.

224 Replies to questions 30 and 31 of Questionnaire 1.

225 Replies to question 23.1 of Questionnaire 2.

226 Commission computation based on data in RFI 19 Table 21.1.

dominant position;[227] in view of MarkitSERV's very high market share a dominant position can therefore be presumed.

(253) In this regard, the market investigation indicated that the Notifying Parties' market share estimates are credible in the IRD asset class. Customers confirmed that MarkitSERV is the largest CCP connectivity provider, and that TradeWeb and Bloomberg compete with it. In addition, customers also suggested that trading venues compete in the IRD asset class: "*[t]he competitors for MarkitWire (for IRDS) are venues offering direct clearing capability*".[228] In contrast, Traiana was not considered to be a meaningful competitor.[229] The market investigation did not give any reason to doubt the Notifying Parties' market share estimates, according to which MarkitSERV would hold a dominant position with a market share of [80-90]% in IRD CCP connectivity and Traiana's share would be minimal, at [0-5]%.

(254) First, the market investigation supported the Notifying Parties' argument that there is considerable doubt as to whether Traiana's service competes with MarkitSERV at all – indicating that the Transaction would not strengthen MarkitSERV's position. The vast majority of MarkitSERV's IRD customers indicated that it was either not possible for them to replace MarkitSERV with Traiana or at best unclear whether they could do so. Only one IRD customer of MarkitSERV indicated that it might consider replacing the IRD CCP connectivity it gets from MarkitSERV with a service from Traiana.[230] However, that customer also indicated that it expects that it could only substitute the services "*to a limited extent*", that it would need to evaluate Traiana's service first (its responses suggested that it was not familiar with Traiana's specific offering in this asset class) and that it would be challenging to switch between these providers.[231] Moreover, given that Traiana's IRD CCP connectivity offering solely relates to the submission of bunched order allocations, it appears unlikely that Traiana could in practice replace this customer's current use of MarkitSERV. No customers responding to the market investigation indicated that they have switched between MarkitSERV and Traiana in the last three years.[232]

(255) Second, the market investigation supported the Notifying Parties' claims that Traiana is not a close competitor to MarkitSERV in the IRD asset classes, and so the Transaction would not strengthen MarkitSERV's dominant position. When asked to identify the closest competitors to MarkitSERV's offering, no customers identified Traiana as a close competitor in IRD. Likewise, no customers identified that MarkitSERV would be a close competitor to Traiana.[233] Customers explained that this is because while both Parties are active in CCP connectivity (more generally), "*Traiana and MarkitSERV serve different asset classes"*[234] Indeed, most customers appeared unaware that Traiana had a CCP connectivity offering in relation to IRD.[235] This is likely explained by the very significant level of differentiation between

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227 Case T-221/95, *Endemol*, para. 234 and Case T-102/96, *Gencor*, para. 205. See also Horizontal Merger Guidelines, para. 17.

228 Replies to questions 13 and 20 of Questionnaire 1.

229 Replies to questions 13 and 20 of Questionnaire 1.

230 Replies to question 23.1 of Questionnaire 1.

231 Replies to questions 23.1, 13.3 and 23.

232 Replies to question 25 of Questionnaire 1.

233 Replies to question 20 of Questionnaire 1.

234 Replies to question 23.2 of Questionnaire 1.

235 Replies to question 13.3 of Questionnaire 1.

MarkitSERV and Traiana's offering. On the one hand, MarkitSERV's core functionality is to submit trades to CCPs for clearing. On the other hand, Traiana's service is limited to the submission of bunched order allocations to clearing, which represents [0-5]% of MarkitSERV's business is for bunched order allocations. This means that Traiana does not compete for [90-100]% of MarkitSERV's business. Indeed, one competitor explained that Traiana was not focused on providing CCP connectivity in IRD, rather "*a smaller part of their business is to allocate parts of bunched orders (block trades) to the target clients of individual transactions*",[236] supporting the Notifying Parties' claims that Traiana's service has a fundamentally different purpose and focus from that of MarkitSERV's CCP connectivity service.

(256) Third, the Notifying Parties' own internal documents indicate that Traiana does not compete with MarkitSERV in the IRD asset class.[237]

(257) Finally, the vast majority of customers that expressed a view considered that the Transaction would have a neutral impact on the market for IRD CCP connectivity.[238] This is driven by Traiana's negligible presence in IRD CCP connectivity and the differentiation between the Parties' offering. For example, one customer explained that: "*Markit products aren't direct competitors with Traiana given they dominate separate asset classes*". Some others pointed to the fact that the Parties' services are more complementary than competing.[239] Likewise, the majority of clearinghouses expected a neutral impact.[240]

(258) For completeness, even if the market were segmented between bilateral and prime broker trades, the Commission's assessment would remain unchanged. Even on the narrower segments of IRD CCP connectivity for bilateral trades or for prime broker trades, the Transaction would not strengthen MarkitSERV's market position for the abovementioned reasons (in particular, as customers do not consider switching between them to be credible, as outlined above).

5.3.3. Conclusion

(259) In light of the above and all of the evidence available to it, the Commission concludes that the Transaction does not give rise to serious doubts as to its compatibility with the internal market with respect to the market for CCP connectivity in the IRD asset class, as the Transaction does not strengthen MarkitSERV's dominant position in this market due to Traiana's negligible presence and the fact that it essentially does not compete with MarkitSERV.

5.4. FX NOE messaging services worldwide

(260) The Commission concluded above that the NOE messaging market is a separate market that is global and further distinguished by asset class and trade type (bilateral, tri-party). The only asset class in which the Parties activities overlap horizontally with respect to NOE messaging is FX. The Parties activities further overlap in both

236 Replies to question 15.3 of Questionnaire 2.
237 For example, Form CO Annex 5.4(ii) document 005 "IHS Markit – Overview", slide 24.
238 Replies to question 31 of Questionnaire 1.
239 Replies to questions 30 and 31 of Questionnaire 1.
240 Replies to question 23.1 of Questionnaire 2.

bilateral and tri-party NOE messaging, i.e. FX PB give-up messaging, which are considered separate markets and are assessed in turn below.

(261) The Commission assesses the impact on bilateral FX NOE messaging despite the market not being affected at first sight (see combined market share in Table 3 of [5-10]%), because the market shares provided by the Notifying Parties do not seem to reflect the position of the Parties accurately when considering plausible narrower markets, as indicated by the results of the market investigation.

(262) The Notifying Parties' estimates of IHSM's and Traiana's market shares in the global market for bilateral FX NOE messaging services in terms of average number of trade messages per day for 2019 are shown below in Table 3. Number of trades is considered a more meaningful measure than value given that FX NOE messaging services are charged on a per trade basis or as a subscription.

Table 3: Global bilateral FX NOE messaging services in 2019

	# of trades	**% of trades**
MarkitSERV	[…]	[5-10]%
Traiana	[…]	[0-5]%
Combined	**[…]**	**[5-10]%**
Refinitiv		[40-50]%
Trading platforms (incl. EBS, Refinitiv Matching, Hotspot, FX All, Currenex)		[20-30]%
Aggregators/OMS providers (incl. FlexTrade, SmartTrade, Charles River, Broadridge, ION)		[10-20]%
Risk Management Systems (incl. Murex, Openlink, Finastra)		[0-10]%
Total	6 000 000	100%

Source: The Notifying Parties' best estimates based on BIS OTC Derivatives Data; Bank of England Foreign exchange and OTC derivatives markets turnover survey; and Euromoney Foreign Exchange Survey. Note: The market size is estimated based on the BIS 2019 daily average notional value of FX trades divided by the average size of a trade (as reported by the Bank of England). Competitor market shares have been sourced from management estimates.

(263) The Notifying Parties' estimates of the Parties' market shares in an alternative market that does not distinguish by trade type and includes bilateral FX NOE messaging services and FX PB give-up messaging services, is shown below in Table 4.

Table 4: Global FX NOE messaging services in 2019

	# of trades	**% of trades**
MarkitSERV	[…]	[5-10]%
Traiana	[…]	[5-10]%
Combined	**[…]**	**[10-20]%**
Total	6 400 000	100%

Source: The Notifying Parties' best estimates based on BIS OTC Derivatives Data; Bank of England Foreign exchange and OTC derivatives markets turnover survey; and Euromoney Foreign Exchange Survey.

(264) Beyond that, the Notifying Parties were not able to provide market share estimates for the following narrower plausible distinct markets identified: (i) independent

provision of bilateral FX NOE messaging services (as opposed to a wider market comprising independent and captive provision)[241] and (ii) bilateral FX NOE messaging services provided for electronic FX trades (as opposed to a wider market comprising electronic and bilateral/voice trading).[242] However, the Notifying Parties consider that market shares of Traiana and MarkitSERV in bilateral FX NOE messaging for electronic trades only would not differ significantly from their market shares in the broader market comprising FX NOE messaging for electronically and bilaterally executed trades.[243]

(265) Bilateral NOE messaging involves sending NOEs from brokers, venues and dealer banks to customers, and in some cases the return acknowledgement of these messages, that take place "pre-risk", i.e. prior to the trade entering the customer's risk management system. MarkitSERV provides bilateral NOE messaging services across a number of asset classes (CDS, equities, FX and IRDs), while Traiana provides this service for FX only (in addition to Traiana's tri-party messaging services which it provides for FX, equities, interest rate derivatives and equity derivatives). Hence, the Commission assesses below the horizontal overlap with respect to bilateral FX NOE messaging and plausible narrower markets.

5.4.1. Notifying Parties' view

(266) *First,* regarding bilateral FX NOE messaging, the Parties are not competing for the same customers. Most of Traiana's bilateral NOE messaging customers are buy-side clients trading predominantly on a tri-party basis. Some of these clients, having adopted Traiana's messaging service in connection with tri-party (i.e. prime brokerage) services, requested that Traiana also act as the conduit for their bilateral post-trade notifications arising from the same dealer relationships. Therefore, Traiana's client base for bilateral services is predominantly buy-side customers as opposed to the large dealer bank clients served by MarkitSERV. According to the Notifying Parties, customers with significant bilateral trade volume would not chose Traiana as their provider of FX NOE messaging services.

(267) *Second,* the market for bilateral FX NOE messaging is highly competitive with several types of providers active in addition to the independent providers, namely MarkitSERV, Traiana and Refinitiv. Other providers are risk systems such as Murex, OpenLink, Finastra (which provides the Summit and Sophis products); post trade messaging vendors such as Broadridge; integration specialists/consultants such as Accenture and Infosys; and trading platforms, like EBS, Refinitiv Matching and FX all, Cboe/Hotspot, and Currenex.

(268) *Third,* as evidenced by recent terminations of contracts, and in addition to other types of providers, self-supply is a competitive constraint for the Parties in bilateral FX NOE messaging.

(269) *Fourth,* the Parties' customers are large, powerful financial institutions, hedge funds, asset managers and corporations that have significant buyer power and are able to sponsor entry, whenever they are not content with a service offering.

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241 Notifying Parties' response to question 1 in RFI 14.
242 Notifying Parties' response to question 5 in RFI 19.
243 Notifying Parties' response to question 5 in RFI 19.

5.4.2. Commission's assessment

(270) In bilateral FX NOE messaging services, the Parties' combined market share is [5-10]% according to the Notifying Parties.[244] The increment from the Transaction is small. The Notifying Parties estimate the increment from Traiana is only [0-5]% for the provision of bilateral FX NOE messaging. In a market segmented by independent versus captive provision of FX NOE messaging services, MarkitSERV's market share would likely be significantly higher than estimated by the Notifying Parties.[245] However, the increment brought about by the Transaction through Traiana is still very small and independent provision of FX NOE messaging services faces competition from captive providers as well as self-supply.

(271) This means that the Transaction likely does not change the market structure significantly given that Traiana is a negligible competitor. The Commission's considerations are set out below in detail.

(272) *First*, the market investigation confirmed that customers do not generally believe that MarkitSERV's and Traiana's bilateral FX NOE messaging services compete closely,[246] Traiana being the main provider of tri-party FX messaging services, i.e. FX PB give-up messaging, and competing more closely with recent entrant Cobalt.[247] It is likely that these responses from market participants would be similar for plausible narrower markets (independent provision, provision for electronic vs. bilateral/voice executed trades) given that no respondents highlighted in their free text responses that these distinctions have a bearing on their response.[248]

(273) Several respondents confirm the Notifying Parties' view that Traiana's and MarkitSERV's services are targeted at different customers. Several customers state that they are not familiar with the respective other Parties' services, as they only use MarkitSERV or only use Traiana.[249] One customer notes that they *"[do] not consider Traiana and MarkitSERV to be close competitors."*[250]

(274) This is further confirmed by a win-loss analysis of material contracts of both Parties' FX NOE messaging services between 2016 and 2021. During the last 5 years, MarkitSERV lost […] significant clients, […] of which replaced MarkitSERV's services with an in-house solution and […] of which changed to a competitor. However, the competitor to whom customers switched was never Traiana,[251] supporting the argument that the Parties are not particularly close competitors in bilateral FX NOE messaging.

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244 Even if a general FX NOE messaging market (including tri-party messaging) was considered, the Notifying Parties' combined market share would increase to only [10-20]%, because the market for bilateral messaging is significantly larger than the market for trilateral messaging. Traiana has a market share of [80-90]% in the market of FX PB give-up management services (which include tri-party FX NOE messaging services), leading to the higher combined market share in the broader market of bilateral and tri-party FX NOE messaging services.

245 Responses by a competitor to RFIs on 29 and 30 June 2021.

246 Replies to questions 17-21 of Questionnaire 3.

247 Reply to question 9.1 of Questionnaire 3.

248 Replies to questions 17-21 of Questionnaire 3.

249 Reply to question 15.1 of Questionnaire 3.

250 Minutes of a call with a customer on 28 April 2021, 10:00 CET.

251 Notifying Parties' response to RFI 10, Annex 145.

(275) Traiana's bilateral FX NOE messaging service lost […] clients during the same time, […] of which no longer needed the service, […] of which built in-house connectivity and […] of which possibly moved to a competitor (no names known), while the remaining […] provided no reason. No customers are known to have switched to MarkitSERV.[252] This confirms that the Parties are not close competitors in bilateral FX NOE messaging.

(276) In addition, the Commission notes that Traiana's bilateral FX NOE messaging services seem to be ancillary to its tri-party offering […]. The same seems to be true vice versa where MarkitSERV is predominantly catering to customers requiring bilateral FX NOE messaging and only provides very limited tri-party FX NOE messaging – so limited, that many customers do not even seem to be aware of its offering; for example one customers states: *"No, Markitserv does not have a prime services offering that we are aware of."*[253]

(277) Furthermore, and with respect to the competitive closeness of the Parties, customers consider captive providers to have similar competitive strength in the market for FX NOE messaging[254] as the main "independent" suppliers (MarkitSERV, Traiana and Refinitiv). The fact that several captive providers are considered to have similar competitive strength as the main "independent" suppliers further indicates that customers consider these providers to offer competing services. One customers states: *"MarkitSERV and Cobalt are competitors to Traiana's FX NOE service, in addition to any proprietary FX NOE delivery service that any firm develops and supports."*[255] The constraint on the JV from captive providers is supported by the fact that customers consider that switching to captive providers is possible.[256]

(278) Moreover, some captive suppliers also provide an independent offering (such as Refinitiv), meaning that they are well placed to expand and constrain the JV and that the line between captive and independent providers is blurred.[257] As to the question whether captive providers compete between themselves for FX NOE messaging services, the market investigation did not explicitly examine this. However, it is likely that the competitive constraint posed by other captive providers in respect of their FX NOE messaging offering is lower than that of an independent provider. However, the fact that captive providers are offering FX NOE messaging for their own trading venue suggests that they have the general technical knowledge to apply this to other trading venues.

(279) Another element that constrains independent providers of FX NOE messaging services is self-supply. This seems to be an option, as several respondents mention this. For example, asked why customers procure several trade processing services from the same provider, one answers: *"Convenience until we can build an in-house substitution."*[258] In addition, the above mentioned win-loss analysis confirms that in-house solutions are a common replacement for customers cancelling either

252 Notifying Parties' response to RFI 10, Annex 146.
253 Reply to question 21 of Questionnaire 3.
254 Reply to question 15 of Questionnaire 3. Specifically, Broadridge, SmartTrade, Fluent Trade Technologies, Murex and CBOE FX.
255 Reply to question 17 of Questionnaire 3.
256 As outlined in recitals (130) and (131).
257 See recital (129).
258 Reply to question 7.1.2 of Questionnaire 3.

MarkitSERV's or Traiana's bilateral FX NOE messaging service. In fact, though not explicitly investigated, it is likely that customers switching to an in-house solution are building this solution using direct trading venue/risk management system providers' or other aggregators/order management system providers' messaging services as inputs. This indicates that while independent NOE messaging providers may not be the closest competitors to captive providers, those captive providers do exert a competitive constraint on independent NOE messaging providers.

(280) *Fifth,* in its pre-notification outreach, the Commission talked to a number of customers about their bargaining power vis-à-vis the Parties. One customer *"considers that it has bargaining power as a customer against Traiana. In particular, this is apparent through the fact that [the customer] can and does create direct connections with major clients and counterparties."*[259] Another customer *"understands that it would have some bargaining power as a customer against the Parties, given the multiple touchpoints of [the customer] globally with each of the Parties."*[260]

(281) *Sixth,* customers of the Parties seem to indeed be able to sponsor entry as evidenced by recent examples in the trade processing markets, e.g. Access Fintech sponsored by J.P. Morgan, Citi, Goldman Sachs and Deutsche Bank, and Cobalt, which is sponsored by Citi and Singapore Exchange (as well as IHSM itself, […]).

(282) *Seventh,* in terms of impact, customers of trade processing services in general and FX NOE messaging and FX PB give-up management services in particular, have a positive or neutral view on the Transaction.[261] Several customers echo views of the Notifying Parties regarding the rationale of the Transaction, i.e. that the combination of MarkitSERV and Traiana could lead to efficiencies in a fragmented trade processing services landscape. One customer explicitly mentions the possible trade-off between competition and efficiencies: *"Negative impacts from a competition perspective may be offset by increased investment in the service."*[262]

(283) Significant competitors of the Parties in bilateral FX NOE messaging did not raise any concerns and noted that although their services compete, they also worked together in an open way (i.e. connect to each other) given the "utility like nature" of FX NOE messaging services.[263] Furthermore, they stated that they are *"particularly focused on FX for legacy reasons (...) and likely a stronger competitor in FX post-trade services than MarkitSERV (...)."*[264]

(284) *Eighth,* calls with customers as well as internal documents highlight that in particular MarkitSERV's services require investment to remain competitive.[265] For example, one customer notes that *"IHSM had been attempting to sell Markitwire for some*

259 Minutes of a call with a customer on 28 April 2021, 10:00 CET.
260 Minutes of a call with a customer on 4 May 2021, 11:00 CET.
261 Replies to questions 36-38 of Questionnaire 3.
262 Reply to question 36.1 of Questionnaire 3.
263 Minutes of a call with a competitor on 12 May 2021, 11:00 CET.
264 Minutes of a call with a competitor on 12 May 2021, 11:00 CET.
265 Minutes of a call with a customer on 4 May 2021, 11:00 CET and internal document of IHSM titled "Project Parthenon Opportunity overview", slide 20.

time; even though it is a profitable business, the technology is old and in its current state has likely already past its peak value."[266]

(285) *Ninth*, the concern voiced by one FX trading venue competitor that the *"combination of ISHM and Traiana's NOE services may lead to price increases for clients, and so less appetite for clients to trade on [the competitor's FX trading venue]"*[267], does not seem plausible. Customers of FX trading venues do not chose their trading venue based on the prices of trade processing providers, but rather based on a trading venues' liquidity, which is normally also the first criterion based on which FX trading venues advertise their services.[268] The Notifying Parties provided an example of a typical relationship between the costs associated with an FX trade that is processed using MarkitSERV's FX NOE messaging: *"For a mid-size regional bank, the Parties estimate the post trade processing cost (third party costs and infrastructure costs but not including the cost of staff to support post trade processing) of an average FX trade to be approximately $6.50, of which, approximately $0.02 would normally be attributed to NOE messaging. Execution costs for the same trade could reasonably be expected to be between $300 and $600 per trade for Spot transactions, with significantly higher costs per trade for Forward and Swap transactions."*[269] Hence, the costs of FX NOE messaging services represent a fraction of other trade processing services costs and are even less important when considering other trading costs (e.g. charged by the trading venue). It seems therefore unrealistic to assume customers would be discouraged from trading on a certain FX trading venue, because of higher costs for FX NOE messaging services.

(286) On balance, the Commission concludes that the Parties do not seem to be close competitors in bilateral FX NOE messaging and there are sufficient alternatives available to market participants. Even in a hypothetical narrower market only including independent providers of bilateral FX NOE messaging services, potential competition from captive providers would pose a sufficient competitive constraint in addition to market participants' ability to self-supply or sponsor entry. The share of independent provision of FX NOE messaging services compared to all FX trades in 2019 was below 10%.[270] This indicates that the vast majority of executed FX trades are not captured by the independent providers of FX NOE messaging services.

(287) With respect to a narrower market of FX NOE messaging for electronically executed FX trades separate from a market for FX NOE messaging for bilaterally/voice executed trades, the Commission observes that MarkitSERV and Traiana provide services for both types, as does their main competitor Refinitiv.[271] The proportion of bilaterally/voice executed trades in FX is ca. 30%, so the smaller part of the overall FX trading market. MarkitSERV's market share in an "electronic only" FX NOE

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266 Minutes of a call with a customer on 4 May 2021, 11:00 CET.

267 Minutes of a call with a competitor on 24 May 2021, 14:00 CET.

268 E.g. "EBS Market provides orderly, executable and genuine liquidity across all major and emerging market currencies." See https://www.cmegroup.com/trading/market-tech-and-data-services/ebs/platforms html, accessed on 12 July 2021.

269 Notifying Parties' response to question 1 in RFI 15.

270 Case team calculations based on Form CO, Annex 144 and responses by a competitor to RFIs on 29 and 30 June 2021.

271 Notifying Parties' response to questions 5 and 6 in RFI 19.

messaging market would be [5-10]% (in 2019), while Traiana's would be [0-5]%[272], and hence the market would not be affected.

5.4.3. Conclusion

(288) Based on the above considerations and the evidence available to the Commission, the Transaction does not give rise to serious doubts as to its compatibility with the internal market as a result of a horizontal effects in the market for bilateral FX NOE messaging services, or separate narrower markets distinguishing by independent versus captive provision of FX NOE messaging services or FX NOE messaging services for electronically executed FX trades or bilateral/voice FX trades.

5.5. FX PB give-up messaging services worldwide

(289) A horizontal overlap arises in the plausible narrower market of FX PB give-up messaging services, which is a service type of FX PB give-up management services (see Section 4.6.2). In the global market of FX PB give-up messaging services, Traiana has a market share of [80-90]% and MarkitSERV a market share of [0-5]% in 2019.[273]

Table 5: Global FX PB give-up messaging services

	# of trades	**% of trades**
MarkitSERV	[…]	[0-5]%
Traiana	[…]	[80-90]%
Combined	**[…]**	**[80-90]%**
Trading platforms (incl. EBS, Refinitiv Matching, Hotspot, FX All, Currenex)		[10-15]%
Others (incl. Access FinTech, Cobalt, TransFICC)		[0-5]%
Total	**400.000**	**100%**

Source: BIS OTC Derivatives Data. Note: Traiana's market share is based on its share of the BIS 2019 daily average notional value of FX PB trades. This value market share is used to estimate the market size in terms of number of trades (this assumes Traiana's market share in terms of value of PB trades is equal to its market share in terms of number of PB trades) which is used to estimate MarkitSERV's market share (BIS does not report data on the volume or average value of PB trades). Competitor market shares have been sourced from management estimates.

(290) Traiana provides FX PB give-up management services, of which FX PB give-up messaging services are a separate service type that is available standalone as well as in combination with other FX PB give-up management services.

(291) MarkitSERV does not provide FX PB give-up management services, but provides FX PB give-up messaging in relation to a very small volume of FX prime brokerage

272 Case team calculations based on Form CO, Annex 144, under the conservative assumption that all trades processed in terms of FX NOE messaging by MarkitSERV and Traiana are for electronically executed trades.

273 Form CO, Annex 105. The Notifying Parties are unable to provide market shares for plausible narrower separate markets, e.g. FX PB give-up messaging services for electronically executed trades, see Notifying Parties response to question 10 in RFI 19.

trades for a very limited number of customers. Hence, the Commission assesses below the horizontal overlap with respect to FX PB give-up messaging services.

5.5.1. Notifying Parties' view

(292) *First,* the Notifying Parties consider that they effectively do not compete in the market for FX PB give-up messaging services, given that MarkitSERV only provides FX PB give-up messaging services for a very small number of customers, mostly as part of legacy arrangements and only marginal revenues result from this activity.

(293) *Second*, the Notifying Parties note that Traiana is the leading competitor in FX PB give-up management services (including FX PB give-up messaging services) and faces competitive pressure mainly from FX trading venues who are also able to directly connect to prime brokers.

(294) *Third*, the Notifying Parties note that they are facing considerable bargaining power from their main customers, as evidenced by the fact that the top 10 customers of each Party account for [large proportion] of their revenue. Those customers are able to move significant business and/or may move to self-supply.

5.5.2. Commission's assessment

(295) The Commission assesses below the impact of the Transaction on the market of FX PB give-up messaging services, a plausible narrower separate market by service type in FX PB give-up management services.

(296) In the FX PB give-up messaging service market, Traiana is the dominant player with a market share of [80-90]% according to the Notifying Parties. MarkitSERV provides FX PB give-up messaging services for [0-5]% of the number of trades for which Traiana provides FX PB give-up messaging services. Concretely, MarkitSERV offers this service to a very limited number of customers in the following instances:

(i) MarkitSERV provides FX PB give-up messaging to […] customers who use its bilateral FX NOE messaging service as well. The Notifying Parties claim that MarkitSERV only provides "pre-risk messaging"[274] to these customers and not the full spectrum of FX PB give-up messaging that Traiana provides, which is a "post-risk"[275] service. However, the Commission understands that while "post-risk" messaging services may not be able to replace "pre-risk" messaging due to the latter's higher latency, this higher latency means that "pre-risk" messaging would seem to be able to replace "post-risk" messaging. Hence, in respect of these customers, MarkitSERV would seem to provide a fully comparable offering in terms of FX PB give-up messaging services to Traiana's.

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274 "Pre-risk" means that messages are sent after trade execution for the purpose of updating a customers' risk management system. Customers usually have internal limits as to the type and amount of risk they can incur in their trading activities and the risk management system keeps track of this. Hence, a real-time update of this system is important. […].

275 "Post-risk" means that messages are sent after trade execution but for a different purpose than updating a customers' risk management system. "Post-risk" messages are used to reconcile trades in a customers' middle/back-office, but do not influence whether or not new trades are executed (which happens in the front-office). As such latency can be slower and Traiana's service has a latency of ca. […] ms.

(ii) MarkitSERV provides FX PB give-up messaging to […] customers as part of legacy agreements with an annual revenue of […] (MarkitSERV's total revenue in 2020 from FX-related trade processing services was […][276]).

(297) The market investigation supports the view of the Notifying Parties that they do not compete in FX PB give-up messaging services or any narrower separate markets (FX PB give-up messaging services for electronically executed FX trades and FX PB give-up messaging services for bilaterally/voice executed FX trades). While a connection to electronic trading venues is relevant since ca. 70% of FX trading volume currently takes place electronically, the Commission notes that customers regularly trade via both trading channels and require FX PB give-up messaging services regardless of the trading channel. As such, Traiana's and MarkitSERV's market share on narrower separate markets by trading channel are therefore expected to be similar as in a broader market and competitive dynamics are unlikely to be fundamentally different in any of these plausible narrower separate markets.[277]

(298) When asked to identify Traiana's closest competitors in FX PB give-up management services, customer's responses were limited to: "Cobalt" or "no-one".[278] MarkitSERV is mentioned as a provider of FX PB give-up management services "in an ancillary capacity".[279] The Commission considers that this supports the Notifying Parties' view that Traiana and MarkitSERV do not compete closely in the FX PB give-up messaging services market (or any plausible narrower separate markets).

(299) In terms of impact, the majority of respondents expect a neutral or positive impact of the Transaction on FX NOE messaging/FX PB give-up management services markets.[280] One customer explains: *"Currently Traiana has a very high market usage and we do not see the expected transactions impacting the rest of the market competition."*[281] The Commission notes that MarkitSERV's incremental market share is [0-5]% and hence unlikely to be able to change the market structure as a result of the Transaction.

5.5.3. Conclusion

(300) In light of the above and all of the evidence available to it, the Commission concludes that the Transaction does not give rise to serious doubts as to its compatibility with the internal market with respect to FX PB give-up messaging services, as the Transaction does not strengthen Traiana's dominant position in this market due to MarkitSERV's negligible presence and the fact that it essentially does not compete with Traiana.

5.6. CCP connectivity in FX and IRD worldwide (upstream) and clearing services in FX and IRD worldwide and in the EEA (downstream)

(301) CCP connectivity services of the type provided by MarkitSERV and certain trading venues allow customers to send trades executed on a venue or bilaterally to CCPs for

276 Notifying Parties' response to question 5 in RFI 6.
277 Notifying Parties' response to question 5 in RFI 19.
278 Replies to question 30 of Questionnaire 3.
279 Replies to question 32 of Questionnaire 3.
280 Replies to questions 37 and 38 of Questionnaire 3.
281 Reply to question 38.1 of Questionnaire 3.

clearing. MarkitSERV's CCP connectivity service is an important source of trades for some CCPs in the FX and IRD asset classes. The Transaction, therefore, gives rise to a vertical link between MarkitSERV's CCP connectivity service in FX and IRD (upstream) and CME's clearing service in these asset classes (downstream).

(302) Upstream, MarkitSERV is the leading provider of CCP connectivity worldwide in the FX ([90-100]% market share) and IRD ([80-90]%) asset classes.[282] As described in Section 5.3 above, MarkitSERV faces competition from trading venues, which provide customers with the ability to send trades directly to CCPs (without the intermediation of any middleware provider, such as MarkitSERV). Its main competitors in the FX and IRD asset classes are Bloomberg, FX Connect (TradeNexus) and TradeWeb.

(303) Downstream, MarkitSERV provides connectivity services to CME's clearing service ('CME Clearing') in the FX and IRD asset classes (while MarkitSERV is also active in CDS, CME Clearing does not offer clearing in the CDS asset class).[283] The Notifying Parties estimate that CME Clearing is a negligible player in the provision of OTC FX clearing services worldwide ([0-5]% market share) and is a very small player in relation to OTC IRD clearing services worldwide ([5-10]% market share).[284] These market shares would be even lower on an EEA-wide market.[285] The Notifying Parties identify that LCH is by far the largest provider in both asset classes worldwide and in the EEA, noting that in IRD, JSCC, HKEX, ASX, Eurex and BME are also active.[286] This reflects the Commission's findings in previous market investigations, in which it confirmed that in IRD clearing, in 2019 LCH had a market share of 90-100%, CME's market share was 0-5% and Eurex and others each represented 0-5%.[287] Likewise, the Commission found that in the EEA LCH's market share in FX was 90-100%, with Eurex holding a market share of 0-5%.[288]

(304) The Commission assesses below the risk that the JV would seek to engage in input foreclosure of CCP connectivity in FX or IRD with a view to foreclosing rival CCPs. In view of the similar dynamics in these two asset classes, the Commission's assessment is presented together for these asset classes, with relevant differences in the analysis noted where appropriate. Likewise, in view of the similar dynamics in the relevant clearing markets worldwide and in the EEA, the Commission's assessment is conducted globally (as CME's market shares would only be lower at EEA level). The Commission assesses below both a total foreclosure strategy (whereby MarkitSERV would cease providing customers with the ability to connect

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282 In terms of a potential narrower product market by trade type, MarkitSERV exclusively provides CCP connectivity for bilateral trades. Its market shares would not be materially different from those presented in this recital if a separate, narrower product market were defined for CCP connectivity delineating by type of trade (RFI 17, Notifying Parties' response to question 1). In light of this, and the assessment conducted below, the Commission considers that for the markets of CCP connectivity in FX and IRD worldwide for bilateral or for tri-party trades the Transaction would not give rise to serious doubts as to its compatibility with the internal market even on such a narrower market definition.

283 Form CO, paragraph 107.

284 Form CO, paragraph 597(b).

285 Notifying Parties' response to RFI 17, paragraph 2.1.

286 Form CO paragraphs 613ff, Notifying Parties' response to RFI5 paragraph 3.17.

287 Commission decision in Case M.9564 *London Stock Exchange Group/Refinitiv Business* of 13.1.2021, table 43 (publication pending). Market share estimates on the basis of the notional cleared volumes of clearing of OTC interest rate derivatives.

288 Ibid., table 64.

to certain CCPs) and a partial foreclosure strategy (which could involve charging higher prices to some CCPs or degrading the technical connectivity to some CCPs, for instance by reducing the speed or reliability with which trades are sent to clearing).

(305) For completeness, the Commission notes that the Transaction is unlikely to give rise to a risk of customer foreclosure given that CME's market shares in the (downstream) market for derivatives clearing services by asset class would not exceed [10-20]%.

5.6.1. Notifying Parties' view

(306) The Notifying Parties argue that MarkitSERV will not be able to foreclose rival CCPs' access to FX or IRD CCP connectivity for the following reasons.[289]

(307) *First*, the Notifying Parties argue that in each of these asset classes there are a number of other providers of CCP connectivity solutions to which customers and CCPs could switch. This includes Bloomberg, FX Connect (TradeNexus), TradeWeb and other trading venues, which will all be available options for customers post-Transaction. The Notifying Parties claim that the time and cost of switching to one of these rivals is very low.[290]

(308) *Second*, the Notifying Parties argue that customers do not base their decisions on which CCP to use for clearing services upon which post-trade services they are using. Instead, customers' choice of CCP is driven by which CCP provides the optimal venue for them to clear their trades. As FX and IRD CCP connectivity only represents a very small proportion of the cost of trading compared to clearing costs, customers could not be convinced to clear trades at a particular CCP simply because they use MarkitSERV for CCP connectivity.[291]

(309) *Third*, any foreclosure attempt would be disciplined by customers. The Notifying Parties explain that the market is "*characterized by an open clearing model, where OTC trading venues are connected to several clearing houses, and where customers indicate how and where they want their contracts to be cleared*".[292] MarkitSERV's customers are large financial institutions, such as large global banks, as well as buy-side clients such as hedge funds, asset managers and corporations. The Notifying Parties argue that customers have significant buyer power and would act to discipline the JV in the event of any foreclosure attempt.[293]

(310) As regards incentive, the Notifying Parties claim that in respect of FX or IRD trades, MarkitSERV will have no incentive to foreclose rival CCPs' access to CCP connectivity.[294] They explain that CME's market shares are limited in clearing of FX and IRD trades (less than [0-5]% and [5-10]% respectively). Accordingly, it only has a small base of sales on which it could recoup any benefits from a foreclosure

289 Form CO, paragraph 530 onwards and 596 onwards.
290 Form CO, paragraph 596(a).
291 Form CO, paragraph 530.
292 Form CO, paragraph 596(b).
293 Form CO, paragraph 468.
294 Form CO, paragraph 597.

strategy.[295] The Notifying Parties add that the Parent IHSM would not benefit from any foreclosure strategy, as it would not receive the benefit of increased sales by CME's clearing service.[296]

5.6.2. Commission's assessment

(311) In terms of the JV's ability to foreclose rival CCPs in the clearing of FX and IRD asset classes through a strategy of foreclosing access to MarkitSERV's CCP connectivity services, there are some reasons to consider that the JV may have such an ability. In particular, MarkitSERV is the dominant player in FX ([90-100]% share) and IRD ([80-90]% share) and is an important source of trades for some CCPs; for example, the Notifying Parties estimate that MarkitSERV processes more than [90-100]% of the FX trades cleared by LCH.[297] However, the market investigation also indicated several reasons to doubt that MarkitSERV would the ability to engage in a successful foreclosure strategy.

(312) *First,* the market investigation supported the Notifying Parties' claim that customers' choice of CCP is determined by factors other than their supplier of CCP connectivity services. Dealer and broker banks explained that (once it is established that the CCP offers clearing for the products they need), "*[t]he clearing to a CCP or another will primarily be driven by the market liquidity and the client preference"*. This highlights the network effects in clearing markets: the more participants clear the same products in the same CCP, the higher the liquidity in those products in that CCP which increases compression possibilities, reduces risk and results in lower margin requirements for all participants, as trades of a higher number of participants can be "off-set" in terms of risks. These network effects normally lead to high concentration of certain products clearing in particular CCPs and a low attractiveness for customers to clear in several CCPs or switch CCPs. [298] Other factors considered important when selecting a clearing provider included the margin requirements (which are also a result of the number of participants clearing the same products) and clearing fees at the CCP. In contrast, respondents considered that interoperability with CCP connectivity solutions for FX and IRD was much less important in their decision making.[299] CCPs themselves agreed that factors such as product availability, clearing fees and reputation were more important parameters for competition between CCPs than interoperability with CCP connectivity solutions.

(313) *Second,* the market investigation suggested that CME's small size would make a foreclosure strategy challenging. The market investigation confirmed that CME Clearing is a small player in FX and IRD, facing competition from much bigger rivals such as LCH.[300] Indeed, as the Notifying Parties explained: "*whereas LCH clears an average of USD 40-45 billion notional per day, CME's cumulative cleared volume since 2017 is around [over USD 100 billion]"*.[301] Customers indicated that CME Clearing's small size and limited uptake in these asset classes is part of the reason why it is a less attractive option for clearing than some rivals. Customers

295 Form CO, paragraph 531.
296 Form CO, paragraph 597(c).
297 Form CO, paragraph 597.
298 Replies to questions 7 and 10 of Questionnaire 1.
299 Replies to question 7 of Questionnaire 1.
300 Replies to question 5 of Questionnaire 1 and questions 8 and 9 of Questionnaire 2.
301 Form CO, paragraph 589.

explained that there would need to be significantly greater client/counterparty demand for and liquidity at CME Clearing before they would consider increasing their use of it to clear their trades.[302] Therefore, the small size and limited uptake of and liquidity at CME Clearing (compared with its rivals) would hinder the JV's ability to convince its customers to switch to CME Clearing for FX and IRD from other CCPs simply on the basis of access to MarkitSERV's CCP connectivity products for these asset classes.

(314) *Third,* the JV's ability to convince customers to switch to CME Clearing for FX and IRD clearing services is further limited by the fact that it is difficult for customers to switch CCPs. The vast majority of customers considered that it was challenging, or even impossible, to switch between CCPs.[303] As well as noting that switching would only be possible insofar as the new CCP offered clearing for the products required by the customer, they highlighted that there would be material technical challenges and operational risks in switching CCP. Customers again pointed to the fact that some CCPs lack liquidity, which constitutes a barrier to switching.[304] In line with this, the majority of customers confirmed that they have not switched (all or a large part of their needs) from one CCP to another in the last three years.[305] These barriers indicate that it could be a considerable challenge for MarkitSERV to convince customers to switch CCP for clearing FX and IRD trades simply on the basis of access to MarkitSERV's CCP connectivity products for these asset classes.

(315) *Fourth,* the JV's ability to engage in a foreclosure strategy is limited by the likely strong response of customers. When asked how they would respond if the JV stopped providing connectivity to third party CCPs or worsened connectivity conditions, the majority of customers who expressed a view explained that they would switch to an alternative solution. Even if MarkitSERV is today the dominant CCP connectivity provider in FX and IRD, with few strong alternatives, customers explained that access to alternative CCPs (in particular LCH) is crucial so "*the market would find alternative solutions"*. One customer considered that attempting a foreclosure strategy by MarkitSERV would amount to "*abandoning a market where they are established*". Another added that a total foreclosure attempt "*would promote competition instantly from other providers… It would limit the trade processing servie to only income from CME trade flow and risk losing all other CCP activity*".[306] This sentiment also applies to a partial foreclosure strategy, where a customer explained that "*the clearing volumes are generally more important than the middleware and we would therefore most likely look for an alternative middleware service provider*".[307] Some rival CCPs also noted that customers may retaliate to defeat a foreclosure strategy, explaining that "*this could be a commercial challenge to the JV as the customers may find alternative solutions… this scenario is hopefully*

302 Replies to question 6 of Questionnaire 1. For completeness, the Commission notes that it is unlikely that a sufficient number of customers would switch as to remove customers' concerns regarding liquidity and limited uptake at CME Clearing given that LCH holds a 90-100% market share in FX and IRD and that there are network effects from customers continuing to use the LCH as their CCP.

303 Replies to question 8.1 of Questionnaire 1.

304 Replies to question 8 of Questionnaire 1.

305 Replies to question 9.1 of Questionnaire 1. Indeed, the limited examples of switching generally suggested that switching only tends to take place in the case of shock events such as the market exit of a provider or Brexit.

306 Replies to questions 26.3 and 27.3 of Questionnaire 1.

307 Replies to questions 26 and 27 of Questionnaire 1.

unrealistic… we would expect a very strong and unanimous reaction from regulators, market participants, service providers, etc".[308]

(316) *Fifth*, the JV is unlikely to have the ability to engage in a successful partial foreclosure strategy centred on raising fees to customers wishing to send FX or IRD trades to third party CCPs, or raising fees to rival FX or IRD CCPs with a view to increasing their cost base and making their prices uncompetitive:

(a) Regarding a strategy to selectively discriminate fees for customers depending on whether they use CME Clearing or a rival CCP, such a strategy is unlikely to successfully foreclose rival CCPs for FX or IRD. When customers were asked to identify the factors driving their choice of CCP connectivity provider, they generally placed only limited weight on fees (it was only the fifth most important factor on average).[309] This is supported by data submitted by the Notifying Parties, which showed that generally the fees paid by customers are a small proportion of the cost of trading compared with clearing costs.[310] As explained below, already pre-Transaction, it appears that clients are prepared to incur higher costs so that they can clear their trades at their CCP of preference, so it is unlikely that an increase in connectivity costs (which form a smaller part of the overall costs of trading) would significantly influence their choice.

(b) Regarding a strategy to increase fees charged by rival CCPs for FX or IRD clearing, as outlined in recital (312) above, clearing fees were not the most important aspect driving a customer's choice of CCP. This is further supported by the fact that already pre-Transaction CME Clearing does not charge its clients for clearing FX trades "*given its limited traction*".[311] In comparison, clearing costs at rival CCPs can be material.[312] Despite this commercial strategy, CME Clearing remains a small player in FX clearing, with a market share of [0-5]%. Rival CCPs appear to generate significant margins in clearing and so may be able to absorb an attempt to increase fees.[313] In view of the foregoing, it appears unlikely that the JV could successfully increase rival CCPs' cost base to such an extent that would convince MarkitSERV's customers to switch their FX or IRD clearing to CME Clearing.

(317) In light of the foregoing, it is unlikely that the JV would have the ability to engage in a successful strategy to totally or partially foreclose rival CCPs by restricting or worsening access to MarkitSERV's CCP connectivity service in FX or IRD.

(318) *In terms of the JV's incentive*, the market investigation indicated that the JV is unlikely to have the incentive to use MarkitSERV's CCP connectivity service to totally or partially foreclose rival CCPs in clearing IRD and FX trades.

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308 Replies to question 21 of Questionnaire 2.

309 Replies to question 14 of Questionnaire 1.

310 Form CO, paragraph 532-538.

311 Form CO, paragraph 586.

312 Form CO, paragraph 532-538.

313 Form CO, paragraph 537. For example, LCH's 2019 accounts indicated that it earned EUR 861 million in revenues, had gross profits of EUR 723 million and an EBITDA of EUR 464 million. Similarly, ICE (albeit mainly active in the credit asset class) generated clearing fees in 2019 of US 1.1 billion.

(319) *First,* reducing or worsening access to third party CCPs for FX and IRD might undermine the *attractiveness* of MarkitSERV and harm its ability to attract and retain customer business. The vast majority of customers indicated that operational reliability was a "very important" factor for them in selecting their CCP connectivity provider; this was the most significant driver of banks' choice, together with the preference of the client/counterparty. The next most important factors were indicated to be the reputation of the CCP connectivity provider and the speed with which trades are sent to clearing.[314] This indicates that a foreclosure strategy by MarkitSERV could put at risk its ability to retain its customer base, as it would become less attractive to customers (which may in turn negate or reduce MarkitSERV's ability to successfully foreclose rivals).

(320) *Second,* a foreclosure strategy may also undermine the *relevance* of MarkitSERV for its customers and its CCP partners for FX and IRD. Some major CCPs indicated that they consider that it is important from MarkitSERV's perspective to be able to provide connectivity to them. For example, in IRD, one CCP explained: "*[i]f MarkitSERV was not able to offer their clients access to process [rates trades as our CCP], this could lead to clients switching to alternative platforms (e.g. TradeWeb/Bloomberg)*".[315] This is supported by the fact that more than 90% of the FX and IRD clearing markets are represented by third parties. If MarkitSERV were to reduce its access to the major CCPs, and only provide effective connectivity services in respect of [0-5]% of FX trades and [5-10]% of IRD trades, this would put at risk its relevance for the overwhelming majority of customers.

(321) *Third,* the market investigation indicated that risks outlined in recitals (319) and (320) are real, because customers would retaliate against a foreclosure strategy. Customers strongly considered that this retaliation risk meant that the JV would not have an incentive to engage in foreclosure.[316] They explained that the JV would not have such an incentive because this would "*jeopardize [MarkitSERV's] market leadership and reputation by deterioration of service*", "*this would have a very negative affect on their reputation*".[317] The strategy would backfire – one customer explained that "*the market would find alternative solutions"*, with another agreeing that "*many market participants would look for a new provider to enable their clearing flow to LCH"*. One customer explained that a foreclosure attempt "*would promote competition instantly from other providers*".[318] The market investigation indicated that customers would switch away from MarkitSERV rather than accepting a worse product offering or inability to access the CCP they wish to use.[319] Customers also identified that such a strategy could be perceived as anti-competitive and draw regulatory scrutiny.[320]

(322) *Fourth,* the JV would have only a very small base of revenues on which it could reap the rewards of a foreclosure strategy. CME Clearing represents a negligible proportion of FX trades sent to clearing ([0-5]%) and a small proportion of cleared IRD trades ([5-10]%). As explained above, customers face barriers in switching

314 Replies to question 14 of Questionnaire 1.
315 Replies to questions 17 and 17.1 of Questionnaire 1.
316 Replies to question 27.3 of Questionnaire 1.
317 Replies to question 27.3 of Questionnaire 1.
318 Replies to question 26.3 of Questionnaire 1.
319 Replies to questions 26.3, 27 and 27.3 of Questionnaire 1.
320 Ibid.

CCPs and, in particular, to a CCP with limited liquidity and uptake such as CME Clearing. It would therefore be a challenge for MarkitSERV to displace a significant proportion of customers to CME Clearing (while putting at risk its CCP connectivity revenues). The gains from a foreclosure attempt may therefore be limited.

(323) *Fifth*, an input foreclosure strategy would require a change of business strategy for MarkitSERV, and pursuant to the Shareholders Agreement, IHSM's consent is required for the approval of the business plan and budget of the JV.[321] While a successful input foreclosure strategy might benefit the parent CME (which controls CME Clearing and so would receive all profits from increased FX or IRD clearing revenues), IHSM would not benefit from such a strategy since it would lose profits from foregone upstream FX or IRD CCP connectivity sales by MarkitSERV, but without a corresponding increase in downstream profits (given that it is not active in clearing). Effectively, IHSM would take half of the risk and half of the losses of a foreclosure strategy, and receive none of the gain if the strategy succeeds. Given that IHSM (IHS Markit) is synonymous with and well-known to be a parent of MarkitSERV, it cannot be excluded that reputational damage felt by MarkitSERV following the foreclosure strategy may also impact IHSM. Therefore, it is unlikely that IHSM would approve any foreclosure strategy.

(324) In light of the foregoing, the Commission concludes that the JV would not have the incentive to engage in a strategy to totally or partially foreclose rival CCPs by restricting or worsening access to MarkitSERV's CCP connectivity service in FX or IRD.

(325) *In terms of the impact of a foreclosure strategy*, given that the Commission finds that it is unlikely that the JV would have the ability to foreclose and that the JV does not have the incentive to foreclose, there is no need to reach a conclusion on the impact of a potential foreclosure strategy. [322]

5.6.3. Conclusion

(326) In light of the above and all of the evidence available to it, the Commission concludes that the Transaction does not give rise to serious doubts as to its compatibility with the internal market from the risk of input or customer foreclosure with respect to FX or IRD CCP connectivity services (upstream) and CCPs clearing services in these asset classes (downstream).

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321 Form CO, paragraph 175.

322 For completeness, the Transaction does not give rise to serious doubts as to its compatibility with the internal market in relation to a concern that CME Clearing would post-Transaction have a competitive advantage through access to MarkitSERV's CCP connectivity data. First, the JV would lack the ability. IHSM has in place very strict policies regarding client data, such as ring-fencing raw data. MarkitSERV's terms also contain confidentiality provisions and require MarkitSERV not to use information other than for the purpose which it is provided (Reply to question 11 in RFI 8). Second, breaching these contractual provisions may harm MarkitSERV's reputation with customers, as well as reducing rival CCPs' willingness to work with MarkitSERV. Third, it should be recalled that CME Clearing's market share is less than [0-5]% in FX and less than [5-10]% in rates; accordingly, the impact of such a strategy would likely be limited.

5.7. OTC FX trading services

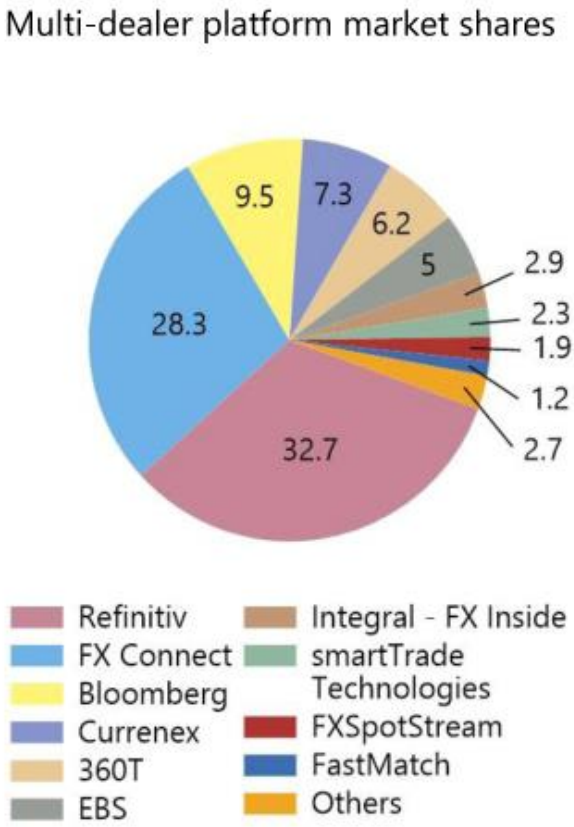
5.7.1. Customer foreclosure of FX trading services worldwide or EEA-wide (upstream) - FX CCP connectivity services worldwide (downstream)

(327) The Commission assesses below the risk that, post-Transaction, the JV's FX CCP connectivity services (downstream) could refuse trade flow from rivals of CME's FX trading venue EBS (upstream) and only provide connectivity to EBS for sending trades to clearing.

(328) Upstream, the Notifying Parties estimate that EBS's market share for FX trading services worldwide is [0-5]%.[323] Estimates reported by the Bank of International Settlements indicate that EBS's market share for FX trading services would be low ([5-10]%), as set out in the following Figure.

[323] The Commission also assessed possible input foreclosure concerns, i.e. the risk that, post-Transaction, CME's FX trading venue EBS (upstream) could work exclusively with the JV's FX CCP connectivity services or favour the JV's FX CCP connectivity services (downstream) to the disadvantage of rival CCP connectivity providers worldwide. The Commission concluded that in terms of ability, EBS's market share upstream ([0-10]%) would seem to be too limited to award it sufficient market power to foreclose rivals downstream. In possible narrower separate markets upstream (electronic anonymous FX trading services), EBS may have a greater market share. However, in terms of incentives, with MarkitSERV's market share in FX CCP connectivity downstream being [90-100]%, there is limited market share to gain through foreclosure of upstream FX trade flows from EBS. Moreover, CME as a parent of the JV would have limited incentives to foreclose rivals of the JV downstream, as CME would only receive 50% of the benefit of any increase in revenues downstream via stake in the JV, while bearing 100% of the losses in its FX trading venue upstream (as well as facing all of the risk of reputational damage from such a strategy). In terms of impact, both competitors downstream (Bloomberg and State Street) are vertically integrated with FX trading venues upstream which both have likely significantly higher market shares than EBS. If EBS were to foreclose its trade flow to those rival FX CCP connectivity providers, this would be more likely to harm EBS's position in FX trading markets. Customers prefer to "shop around" and trade on multiple venues, so if a venue tried to create a vertical silo and reduce access, FX traders would likely (all else being equal) find that venues' offering less attractive. FX trading venue competitors responding to the market investigation rate the impact of the Transaction as mixed, with 50% expecting a negative impact (replies to question 17 of Questionnaire 5). However, given the limited ability and incentives to engage in exclusionary conduct, the Commission concludes that the Transaction is unlikely to give rise to serious doubts as to its compatibility with the internal market as a result of non-horizontal effects in the markets for FX CCP connectivity services and OTC FX trading services in terms of input foreclosure.

Figure 2: FX trading venues' market shares



Source: BIS quarterly review, FX trade execution: complex and highly fragmented, December 2019[324]

(329) The Notifying Parties submit that EBS's market share remains small in each of the plausible narrower product markets envisaged in Section 4.3.2. In particular the Notifying Parties estimate that:

(a) by type of contract, EBS's market share in the global OTC FX spot trading market is [0-5]% and in the global market for OTC FX derivative trading it is [0-5]%. The Notifying Parties further estimate that EBS's market share across all contract types is well below [10-20]%.[325]

(b) by currency, EBS's market share across all contract types is well below [10-20]%.[326]

(c) by trading channel, EBS's market share in the global market for electronic OTC FX trading services is [0-5]% ([0-5]% if only considering electronic FX spot trading and [0-5]% if only considering electronic OTC FX derivative trading. In support of these estimates, according to a regular survey by

[324] https://www.bis.org/publ/qtrpdf/r_qt1912g.htm

[325] Based on the Triennial Central Bank Survey of Foreign Exchange and Over-the-counter (OTC) Derivatives Markets, last published in 2019 - Notifying Parties' response to question 10 in RFI 14.

[326] Ibid.

Euromoney, EBS's market share in the market of electronic multi-dealer FX platforms is around [5-10]%.[327]

(d) for "anonymous" versus "disclosed" trading, EBS's global market shares would still be well below [10-20]%.[328]

(330) At EEA level, CME's market share would be even lower, in particular, because less than [5-10]% of EBS's trading volumes (and less than [0-5]% of its revenues) are accounted for by EEA customers.[329]

(331) In view of the fact that the Notifying Party's market share estimates remain less than [10-20]% under any of the above plausible product and geographic market definitions, and that the market investigation did not indicate any reasons why the risk of input foreclosure would vary or be greater in relation to any of the plausible narrower product or geographic markets described above, in its assessment below the Commission focuses on the market shares for FX trading services worldwide.

(332) Downstream, as outlined in Section 5.3 above, MarkitSERV is the leading provider of CCP connectivity worldwide in the FX ([90-100]% market share) asset class.[330] MarkitSERV faces competition from trading venues, which provide customers with the ability to send trades directly to CCPs (without the intermediation of any middleware provider, such as MarkitSERV). Its main competitors in the FX asset class are Bloomberg, TradeNexus and TradeWeb.

5.7.1.1. Notifying Parties' view

(333) The Notifying Parties believe that the JV has no ability or incentives to foreclose rival FX trading venues. This is mainly because only […] MarkitSERV customers currently use the connectivity between EBS and MarkitSERV for sending trades to CCPs, which indicates that those services are not essential for trading venues.

(334) Furthermore, the Notifying Parties argue that the key parameter for choosing a trading venue is not the availability of certain trade processing providers but rather the liquidity for trading on that venue.

5.7.1.2. Commission's assessment

(335) With respect to the risk that, post-Transaction, the JV's FX CCP connectivity services (downstream) could refuse trade flow from rivals of CME's FX trading venue EBS, the Commission notes, *first*, concerning the ability to foreclose, that

327 https://www.euromoney.com/Media/documents/euromoney/pdf/FX-2019-Results-Presentation.pdf, slide 33 (under name NEX, the parent company, that CME bought in 2018), accessed on 11 July.

328 Notifying Parties' response to question 2 in RFI 10.

329 Form CO, footnote 174.

330 In terms of a potential narrower product market by trade type, MarkitSERV exclusively provides CCP connectivity for bilateral trades. Its market shares would not be materially different from those presented in this recital if a separate, narrower product market were defined for CCP connectivity for bilateral trades (i.e. delineating by type of trade; RFI 17, Notifying Parties' response to question 1). In light of this, and the assessment conducted below, the Commission considers that in respect of this market the Transaction would not give rise to serious doubts as to its compatibility with the internal market even on such a narrower market definition.

clearing of FX trades is currently not the norm and only a very small proportion of FX trades are cleared.

(336) Apart from that, several of EBS's FX trading venue competitors with higher market shares are not currently connected to MarkitSERV.[331] However, those are the FX trading venues that are themselves vertically integrated and own their own FX CCP connectivity providers. Nevertheless, CCP connectivity services from MarkitSERV do not seem to be essential as indicated by mixed responses to the question how important MarkitSERV is (none of the respondents to the market test indicated that CCP connectivity services from MarkitSERV were "very important", and there was an equal distribution of answers across "important, "somewhat important", "not important" and "other").[332] Indeed, none of EBS's competitors' trade flow is currently sent for clearing via MarkitSERV. However, a number of venues are currently testing this service with MarkitSERV.[333]

(337) *Second*, in terms of incentives, IHSM's EBITDA margins downstream are much higher ([…])[334] than EBS's EBITDA margins upstream ([…])[335]. It is unlikely, therefore, that it would be profitable for the JV to give up margin downstream (where margins are higher) in order to gain market shares upstream (where margins are lower). Apart from that, the JV is jointly controlled by both parents and it is unlikely that IHSM would approve the implementation of a foreclosure strategy that would decrease revenues for the JV (in which it holds a 50% stake) in order to benefit CME's FX trading business (in which IHSM does not own any stake).[336]

(338) A competitor in FX trading services notes the following with respect to incentives: *"(…) one of the joint venture parties, CME, also offers its own FX trading services through its FX trading business, EBS, potentially providing some incentive post transaction to engage in exclusionary behaviour. However, [the competitor] is not in a position to know how profitable such a strategy would be. [The competitor] would not expect a complete cessation of connectivity to MarkitSERV because the more trades it processes, the more revenue it earns."*[337]

(339) *Thirdly*, in terms of impact, it seems unlikely that a refusal to connect to other trading venues than EBS would marginalize those trading venues to a significant extent. This is mainly because of customers' bargaining power and preference to trade on multiple trading venues, which is precisely one of the reasons for using a third party aggregator of trade flows to send trades to CCPs.

(340) In this respect, one competitor indicated that a refusal to supply connectivity services to rival trading venues would be challenged by customers: *"If the new JV intends to*

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331 For example Bloomberg and GlobalLink, State Street's FX trading venues trading also under the names FX connect and Currenex).

332 Reply to question 12 of Questionnaire 5.

333 Notifying Parties' response to question 11 in RFI 19.

334 Notifying Parties' response to question 3 in RFI 8.

335 Notifying Parties' response to question 4 in RFI 9.

336 The same arguments hold for a vertical concern voiced by a FX trading venue competitor: *"JV may try to unfairly encourage customers to use CME's trading platforms, including EBS, instead of rivals. For example, it could worsen commercial or operational conditions for other trading venues that use its NOE services. The impact on CBOE could then be that clients would materially reduce or stop using CBOE's platforms."* Minutes from a call with a competitor on 24 July 2021, 14:00 CET.

337 Reply to question 16 of Questionnaire 5.

challenge the openly accessible market structure in terms of STP by way of making access difficult or impossible, it could provide their own trading venues a stronger position (if those are the only access points); this however may be challenged by the market participants who prefer multiple trading venue access."[338]

(341) FX trading venue competitors rate the impact of the Transaction as mixed, 50% of informative responses believing in a neutral impact and 50% believing in a negative impact.[339] However, given the limited ability and incentives to engage in customer foreclosure, and in view of the foregoing, equal access and fair treatment of FX trading venue competitors seems to be the more likely result of this Transaction.

5.7.1.3. Conclusion

(342) Based on the above considerations and the evidence available to it, the Commission considers that the Transaction is unlikely to give rise to serious doubts as to its compatibility with the internal market as a result of non-horizontal effects in the markets for FX CCP connectivity services and OTC FX trading services, in terms of customer foreclosure.

5.7.2. Assessment of concerns with respect to commercially sensitive data

(343) One competitor raised concerns with respect to data gathered by MarkitSERV in the course of providing its trade processing services, which the competitor considers as commercially sensitive. This data is available to MarkitSERV as a result of its FX CCP connectivity and bilateral FX NOE messaging services: *"(…) the joint venture would have unrivaled access to valuable data that could provide it and its parent with a competitive advantage."*[340]

(344) With respect to this data, the competitor submitted that MarkitSERV, with its unique position in the market connecting trading venues and CCPs across several asset classes, has a unique view that would provide CME as an operator of exchanges and trading venues (and concretely EBS, the OTC FX trading venue) with an unfair competitive advantage. The competitor notes: *"CME may be able to unfairly exploit the knowledge it would gain over the needs and trends of the clients to the disadvantage of its competitors, including [the competitor]."*[341] By contrast, the competitor remarks with respect to its own ability to gather data: *"The data that [the competitor] holds on clients is therefore limited by the services it offers, as well as for reasons of regulatory compliance (SEC and CFTC regulations)."*[342]

(345) In addition, the competitor considers that this data also affords *"a competitive edge when making sales to clients, as having good information on clients' activities is important when competing for new business."*[343]

(346) In terms of ability to foreclose, the Commission notes that MarkitSERV has a dominant position in FX CCP connectivity ([90-100]% market share), while in

338 Reply to question 16 of Questionnaire 5.
339 Reply to question 17 of Questionnaire 5.
340 Reply to question 19 of Questionnaire 5.
341 Minutes of a call with a competitor on 24 June 2021, 14:00 CET.
342 Minutes of a call with a competitor on 24 June 2021, 14:00 CET.
343 Minutes of a call with a competitor on 24 June 2021, 14:00 CET.

bilateral FX NOE messaging, the combined market share of the JV would be significantly lower and would not seem to award the JV a full market overview. In addition, the Commission recalls that only a small volume of FX trades are currently cleared, and hence, even the very high market share MarkitSERV has in FX CCP connectivity is unlikely to provide it with the full market overview that would create a significant advantage for CME as a parent of the JV.

(347) Apart from that, the competitor did not provide any further detail on which data exactly could be used to create a significant advantage for the JV's parent CME. While MarkitSERV is a strong competitor in several FX trade processing services, it is unclear which data could be so valuable for an FX trading venue as to provide a significant advantage, when MarkitSERV is currently not commercialising any data gathered in the course of trade processing services to any trading venue.[344] Furthermore, MarkitSERV's terms contain confidentiality provisions and require MarkitSERV to not use information for any purpose whatsoever other than the purpose for which it was provided. It is credible that a breach of this obligation would have the potential to harm MarkitSERV's reputation and credibility as an independent trade processing services provider.

(348) Based on these considerations it does not seem likely that the Transaction would enable the JV to foreclose competitors of one of the parents by virtue of the information it holds.

(349) In terms of incentives to foreclose, the Commission notes that IHSM currently has in place very strict policies regarding client data and internal oversight with respect to those policies. This includes for example ring-fencing of raw data and strict policies on data use.[345]

(350) Furthermore, the Commission does not find it likely that the JV will internally agree (and concretely that IHSM would approve) on the use of information which could potentially create reputational harm to the JV (and, by extension, IHSM) to the benefit of only one of the JV's parents. CME would gain all of the profits from a successful foreclosure strategy, whereas IHSM would not receive any such benefit, only the risk of reputational damage and customer retaliation against the JV's products.

(351) In terms of impact, the Commission considers the concern with respect to commercially sensitive data insufficiently substantiated for two reasons: (i) no other market participant raised any similar concerns, and (ii) when asked for an example, the competitor raising the concern referred to a possibility for MarkitSERV to have a complete market overview and use this to the advantage of a trading venue with respect to equity derivatives, not FX products.

(352) With respect to the data providing the JV "a competitive edge when making sales to clients", the Commission considers that this is indeed one of the possible benefits of a vertical integration within a value chain, which is not per se anti-competitive. In this case, the vertical integration is considered less concerning given that other competitors are equally vertically integrated, e.g. State Street owns a CCP

344 Notifying Parties' response to question 11 in RFI 14.
345 Notifying Parties' response to question 11 in RFI 8.

connectivity service as well as owning an FX trading venue (GlobalLink) and Refinitiv provides FX NOE messaging for third party venues while itself owning FX trading venues (Refinitiv Matching and FX all).

(353) In any case, the Commission does not consider it likely that if data was used to benefit CME's EBS (e.g. for providing leads for marketing purposes to sales teams), that this would have the effect of marginalizing rival FX trading venues. This is mainly because market participants in this market seem to use multiple trading venues and therefore likely would not stop using other FX trading venues even if EBS was able to acquire market participants as new customers.

5.7.2.1. Conclusion

(354) Based on the above considerations and the evidence available to it, the Commission considers that, the Transaction does not give rise to serious doubts as to its compatibility with the internal market as a result of leveraging (commercially sensitive) data gathered as part of the JV's activities in FX NOE messaging and FX CCP connectivity and using it for the benefit of CME's FX trading venue.

5.8. Trade optimization services

(355) TriOptima and Reset's market shares in the relevant plausible markets for 2020 based on revenues are as shown below.[346] As outlined in Section 4.11, there are separate product markets for each of portfolio compression, margin management, portfolio reconciliation and basis risk management, in each case split by asset class.[347]

[346] Form CO, Annex 127. The Notifying Parties estimate that market shares were similar in 2019 and in 2018, with TriOptima's market share in portfolio compression being higher in 2018.

[347] The Commission's assessment in this Section is on the basis of a narrower market that only includes third party providers (as opposed to supply by CCPs). Traiana is only active as a third party provider. Accordingly, its market share would be lower in a broader market including CCPs. As a result, the Transaction does not give rise to serious doubts as to its compatibility with the internal market on either basis and it can be left open whether CCPs should be considered part of the relevant product market.

Table 6: TriOptima and Reset's global market shares in trade optimization services by asset class in 2020

Service/Asset class	Overall	Interest rate derivatives	FX	Credit default swaps	Equity derivatives	Commodities
Portfolio Compression (*TriOptima*: triReduce)	[65-75]%	[70-80]%	[50-60]%	[90-100]%	n/a	n/a
Portfolio Reconciliation (*TriOptima*: triResolve)	[90-100]%	[90-100]%	[90-100]%	[90-100]%	[90-100]%	[90-100]%
Margin Management (*TriOptima*: triBalance, triCalculate, triResolve Margin, IMEM)	[10-20]%	[10-20]%	[10-20]%	[10-20]%	[10-20]%	[10-20]%
Basis risk mitigation (*Reset*)	[60-70]%	[60-70]%	[40-50]%	n/a	n/a	n/a

Source: Form CO, Tables 6.14 and 6.15, reply to question 3 of RFI 5,

(356) The Notifying Parties submit that they are not able to estimate the market shares of competitors in portfolio compression, portfolio reconciliation and margin management (split by asset class).[348] In basis risk mitigation services, the Notifying Parties expect that tpMATCH accounts for at least 30%, and each of BGC and Dealerweb account for up to 5%, though the Notifying Party did not provide estimates split by asset class.[349]

(357) TriOptima and Reset's product offering and the competitive landscape in each of portfolio compression, portfolio reconciliation, margin management and basis risk mitigation are as follows.

Portfolio compression

(358) TriOptima's triReduce is a web-based multilateral compression service. triReduce schedules specific compression events ('runs') by product. Participants submit an existing portfolio of trades that they wish to compress together with their tolerances (e.g. of risk level). triReduce calculates a proposal to compress the participants' trades (by replacing multiple offsetting trades with a single one) which is neutral in terms of the impact on market risk and which reduces overall notional exposure for participants within the risk tolerances they have provided. Before the compression proposal can become legally binding: (i) it must be accepted by all participants, and (ii) CCPs must review and confirm that, pursuant to the compression proposal, the CCP is cash flow- and market risk-neutral throughout. Once these steps are completed, the proposal can become legally binding and the participants can

348 The Notifying Parties submit that they are not aware of any commonly accepted delineations of these segments or of any third party estimates of the total size of each of these segments.

349 Notifying Parties' submission to Commission on 10 June 2021.

implement the compression result in their respective systems. From a trade lifecycle perspective, compression occurs post-execution so the relationship is centred around buy-side, sell-side participants, and CCPs.[350]

(359) In portfolio compression services, according to trading optimization competitors, Quantile is the closest competitor of triReduce, followed by Capitalab. ClearCompress, Capitolis and LMRKTS are also named by a few as close competitors of triReduce.[351] This is confirmed by customers, who generally indicated that Quantile was triReduce's closest competitor and that Capitalab is also a very close competitor. For example, one customer identifies that triReduce's closest competitors are "*Capitallab* [sic], *Quantile, Capitolis*". Another customer specified that "*Quantile services* [compete] *in terms of general product offering and market concentration. However, other competitors emerge on bilateral space or specific asset class*".[352] Regarding the competitive landscape across the different asset classes in which triReduce is active (IRD, FX, CDS), competitors did not indicate that there would be any differences as to which competitors compete most closely with triReduce.[353] One customer considered that there are some differences in the focus of these providers: "*Quantile for rates, Lmrkts for FX*". However, other than this respondent, customers did not indicate that there would be significant differences in the competitive landscape in the different asset classes (with the exception that in CDS triReduce does not have any close competitors as it holds a [90-100]% market share).[354] Therefore, the Commission concludes that for portfolio compression services across all asset classes, triReduce's closest competitor is Quantile, with Capitalab also being a very close competitor. Other providers such as ClearCompress, Capitolis and LMRKTS also compete closely with triReduce, albeit to a lesser extent.

Portfolio reconciliation

(360) TriOptima's triResolve is a platform which provides portfolio reconciliation services for OTC derivatives across all asset classes. Participants submit data on their end of day portfolios in a specified format, and triResolve essentially provides clients with the possibility to regularly check their positions to make sure they match with those of their counterparties. This type of portfolio reconciliation is a regulatory requirement in a number of jurisdictions (including Europe[355]). Customers of this service include the operations and risk departments of banks, which are required to reconcile their portfolios regularly under applicable regulations, as well as buy-side customers such as hedge funds, asset managers and corporates, which are required to carry out monthly reconciliations.[356]

(361) In portfolio reconciliation services, according to trading optimization competitors, Acadia is the closest competitor of triResolve, followed by Quantile.[357] According to customers, triResolve is the "*market standard*" and "*recognized industry platform*".

350 Form CO, paragraphs 66ff.
351 Replies to question 11 of Questionnaire 4.
352 Replies to question 10 of Questionnaire 6.
353 Replies to question 11 of Questionnaire 4.
354 Reply to question 10 of Questionnaire 6.
355 As per Article 11.1 of Regulation (EU) No 648/2012 of 4 July 2012 ("EMIR").
356 Form CO, paragraphs 71ff.
357 Reply to question 10 of Questionnaire 4.

Customers did not consistently identify any providers as close competitors to triResolve.[358] Neither competitors nor customers identified any variation in this competitive landscape by asset class. Therefore, the Commission concludes that for portfolio reconciliation services across all asset classes, triResolve is the clear market leader and its closest competitors are Acadia and Quantile.

Margin management

(362) TriOptima provides margin management services through a number of margin management products:

(a) triBalance is an initial margin ("IM") optimization service for bilateral and cleared exposures covering IRD, FX and Equity asset classes;

(b) triCalculate is an X-Value Adjustment ("xVA") and valuations analytics service covering all the main OTC asset classes, which reports and validates a number of different "valuation adjustments" that banks must make when assessing the value of derivative contracts that they have entered into.

(c) triResolve Margin calculates and reconciles the variation margin for OTC bilateral trades and assists clients to optimise the margin on their positions. The service calculates margin calls from exposure, credit agreement and collateral balance data, communicates margin calls with counterparties electronically, and provides a dashboard for managing the daily workflow and exceptions in the margin process; and

(d) Initial Margin Exposure Manager ("IMEM") calculates and reconciles uncleared initial margin from ISDA sensitivities data. IMEM is a service offered in commercial partnership with Acadia. triResolve develops and maintains the service while AcadiaSoft contracts with clients and hosts the service in their data centres.[359]

(363) In margin management services, according to trading optimization competitors, CloudMargin is the closest competitor of TriOptima, followed by Acadia and Cassini.[360] Capitalab, Quantile and Calypso are also named by a few as close competitors of TriOptima. According to customers, Quantile and Capitalab is the closest competitor, followed by CloudMargin and Acadia.[361] Neither competitors nor customers identified any variation in this competitive landscape by asset class. Therefore, the Commission concludes that TriOptima faces competition from a number of close competitors across all asset classes for margin management services.

358 Reply to question 9 of Questionnaire 6.
359 Form CO, paragraph 73.
360 Reply to question 12 of Questionnaire 4.
361 Reply to question 11 of Questionnaire 6.

Basis risk mitigation

(364) Reset is a multilateral basis risk mitigation service for IRD and FX derivatives. Customers submit a portfolio of trades to Reset. Reset then analyses the portfolio and suggests trades to reduce exposure against daily fluctuations in benchmark rates within risk constraints pre-defined by the users. Reset is not a trading platform and does not execute the recommended trades. Trades recommended by Reset are executed on CME's trading venues or off-venue, i.e. without using a trading venue. Whether a trade is executed through a CME platform or off-venue depends on the customer's location and applicable regulatory requirements.

(365) In basis risk mitigation services, trading optimization competitors were not aware of which suppliers would be close competitors to Reset.[362] tpMatch was named by several customers as the closest competitor.[363] Neither competitors nor customers identified any variation in this competitive landscape by asset class. The Commission notes that multi-sourcing appears to be prevalent also in basis risk mitigation services. About half of responding customers indicate that they multi-source basis risk mitigation services from both Reset and tpMatch.[364] Therefore, the Commission concludes that Reset's closest competitor for basis risk mitigation across all asset classes is tpMatch.

5.8.1. Input foreclosure of RED codes worldwide (upstream) – portfolio compression/portfolio reconciliation/margin management for CDS worldwide (downstream)

(366) RED codes are used as an input for some of trade optimization services provided by the TriOptima business and other suppliers. RED codes are only used in the CDS asset class. More specifically, RED codes are used as an input for triReduce's portfolio compression services, concretely its CDS compression cycles, and for triResolve's portfolio reconciliation services in order to reconcile CDS trades. While RED codes are not used by TriOptima in margin management services, they are used as an input by some of TriOptima's competitors in this market. RED codes are not used by Reset, or by its competitors in basis risk management and so this plausible market will not be further assessed.

(367) Upstream, under the narrowest plausible market definition, IHSM has a 100% market share in the supply of RED codes worldwide. RED is directly delivered to its users by IHSM within a data feed alongside a user interface, as well as being distributed by third party data vendors such as Bloomberg and Refinitiv. RED is widely distributed across CDS market participants.[365]

(368) Downstream, the JV's market share would be [90-100]% for CDS portfolio compression services, [90-100]% for CDS portfolio reconciliation services and [10-

362 Reply to question 13 of Questionnaire 4.
363 Reply to question 12 of Questionnaire 6.
364 Reply to question 4.3 of Questionnaire 6.
365 Form CO, paragraphs 613ff; Notifying Parties' response to RFI 5 paragraph 3.17.

20]% for CDS margin management services. Its competitors in these trade optimization services are described at the start of this Section 5.8.[366]

(369) The Commission assesses below the risk that the JV would seek to engage in input foreclosure of RED codes with a view to foreclosing rival trade optimization providers. The risk of customer foreclosure is not assessed because depending on the upstream market definition either IHSM is the only provider of RED codes (and so there are no rivals to foreclose) or, on a wider plausible market definition including similar identifiers, the JV would account for a negligible proportion of demand for identifiers.[367]

5.8.1.1. Notifying Parties' view

(370) The Notifying Parties argue that IHSM will have no ability or incentive to foreclose access to RED codes worldwide for the following reasons.[368]

(371) *First*, with regard to ability, the Notifying Parties argue that the success of the RED code relies on widespread market use of the identifiers (the product was built for wide adoption of the identifier) and withholding or restricting access would seriously undermine the RED offering. Indeed, IHSM already uses RED codes in its trade processing services but has not sought to restrict competitor access to RED codes pre-Transaction.

(372) *Second*, with regard to ability, the Notifying Parties note that a number of TriOptima's competitors in portfolio compression and portfolio reconciliation (including Quantile, LMRKTS, Capitalab, Duco, Vermeg, DTCC and CloudMargin) do not license RED codes, which shows that they would not be an essential input for competing in the downstream markets.

(373) *Third*, with regard to ability and incentive, the Notifying Parties argue that RED codes are used only in relation to OTC credit trades (CDS). TriOptima's 2019 worldwide portfolio compression revenues from CDS compression were […], representing just [0-5]% of total portfolio compression revenues. Similarly, TriOptima's 2019 portfolio reconciliation revenues from CDS were less than […], representing just [5-10]% of total portfolio reconciliation revenues.

(374) *Fourth*, with regard to incentive, customers choose trade optimization providers based on the algorithms the providers use and the types of trades they optimise and compress. Similarly, the Notifying Parties note with respect to portfolio reconciliation that customers may use different vendors to reconcile the same trade data set based on other characteristics, e.g. tenor of trades; as such, market shares may not reflect market power.[369]

(375) *Fifth*, with regard to incentive, the Notifying Parties argue that IHSM would have no incentive to foreclose access to RED codes due to the structure of the JV. IHSM

366 As there are separate relevant product markets by asset class for these services, and as RED codes are only used in CDS, the Commission's assessment is focused on the CDS asset class.

367 The JV would represent less than [0-5]% of demand for identifiers. Notifying Parties' response to RFI 12 question 2.

368 Form CO, paragraph 617.

369 Notifying Parties' response to RFI 7, paragraph 3.3.

would lose 100% of the revenues from limiting supply of RED codes and would only capture 50% of any hypothetical benefits that would accrue to the JV.

5.8.1.2. Commission's assessment

(376) The Commission assesses below IHSM's ability and incentive to engage in input foreclosure of RED codes with a view to foreclosing rival providers of CDS portfolio compression, CDS portfolio reconciliation and CDS margin management services. For convenience, in this Section 5.8.1.2, the competing providers of these services will be referred to as "rival CDS trade optimization providers".

(377) In terms of its ability, the market investigation showed that RED codes do not appear to be an essential input for rival CDS trade optimization competitors. In line with the Notifying Parties' submissions, only three rival CDS trade optimization competitors indicated that they use RED codes in their business and none of these three are considered the closest competitors to TriOptima by competitors or customers in CDS portfolio compression, CDS portfolio reconciliation or CDS margin management.[370] More specifically by asset class, the JV is already pre-Transaction the only provider of CDS portfolio compression and so does not have any competitors to foreclose. In CDS portfolio reconciliation a foreclosure strategy would be unlikely to bring about any significant market change given that triResolve is already considered to be the "*market standard*" and "*recognized industry platform*" and its few close competitors do not use RED codes.[371] Regarding CDS margin management, where TriOptima has a market share of [10-20]%, it appears that it is possible for competitors to compete effectively without having access to RED codes. In particular, TriOptima does not use RED codes as an input (and has not previously requested access to RED codes either) and several major competitors, including a number identified as close competitors to TriOptima, do not use RED codes. Accordingly, the JV's ability to foreclose its closest competitors appears limited.

(378) In light of the above, the Commission considers that it is unlikely that the JV would have the ability to foreclose rival CDS trade optimization providers by refusing or worsening their access to RED codes.

(379) In terms of its incentive, the JV would not stand to gain significantly from a strategy to foreclose rival providers of CDS portfolio compression, CDS portfolio reconciliation and CDS margin management services by foreclosing their access to RED codes. As indicated above, not all rival CDS trade optimization providers use RED codes and TriOptima's closest competitors in CDS portfolio compression, CDS portfolio reconciliation and CDS margin management appear not to.[372] The majority of customers of RED codes indicated that a foreclosure strategy could lead to retaliation against the JV. More specifically, they indicated that, if faced with a foreclosure strategy, they would ask their customers (i.e. buy- and sell-side clients, who are likely also customers of IHSM, CME and the JV) to lobby IHSM on their behalf to resolve the issue. One customer noted: "*RED codes are used by our customers as unique identifiers for credit derivatives and they will need to help us to get the data from IHSM*."[373] Indeed, these competitors considered that the impact of

370 Reply to question 18 of Questionnaire 4.
371 Reply to question 9 of Questionnaire 6.
372 Reply to question 18 of Questionnaire 4.
373 Reply to question 18.2 of Questionnaire 4.

the Transaction is likely to be neutral on the various markets for trade optimization services,[374] implying that they are not concerned by a potential foreclosure of RED codes (for any of the JV's CDS trade optimization services) due to the likely reaction of end-customers or otherwise as they consider the JV is likely to lack the incentive to engage in such a strategy.

(380) Indeed, customers' responses indicated that the JV would have little to gain from attempting an input foreclosure strategy. Only half of responding customers indicated that they need RED codes to be available in the trade optimization services they use, and none of these indicated that they would switch trade optimization providers if RED codes were no longer available in the rival trade optimization service providers they use; instead, they would stick to their current providers regardless.[375] As such, a foreclosure strategy would result in reduced sales of RED codes to rival CDS trade optimization providers, with the JV unlikely to experience a sufficient increase in its sales of CDS portfolio compression, CDS portfolio reconciliation and CDS margin management services to offset this loss.

(381) In relation to this point, the Commission notes that multi-sourcing appears to be very prevalent in the procurement of certain CDS trade optimization services, such as CDS margin management services, because customers wish to benefit from different providers' algorithms to manage and reduce their risks.[376] This is summarized by one customer, "[O]*ptimisation services are selected on ability to delivery risk reducing results and maximise the success of each run entered. Additionally the scope and products supported*."[377] All responding customers indicate that they multi-source trade optimization services, i.e. procure the same service from several suppliers.[378] Furthermore, customers appear to multi-source from several suppliers, not just two, indicating that the reason for multi-sourcing is not simply to have a back-up/alternative but rather to benefit from the (differentiated) services provided by each supplier. Indeed, customers continue to on-board new suppliers, even where they already source the service in question from two or more suppliers.

(382) In this regard, many of TriOptima's services relevant for CDS use an 'all you can eat' fee model. This means that even if a customer were to decide to abandon (or reduce) its multi-sourcing strategy and instead procure exclusively (or more) with TriOptima, the JV would not benefit from increased fees. Given that multi-sourcing is prevalent and so it is likely that most customers already procure from TriOptima and some of its rivals (i.e. there are few customers only sourcing from rivals but not TriOptima), this means that such a foreclosure strategy would not result in a significant increase in revenues for TriOptima.[379]

(383) Finally, IHSM, who supplies the RED codes and who would normally have the incentive to increase rather than restrict usage of RED codes[380], would only obtain

374 Reply to question 21 of Questionnaire 4.
375 Reply to question 15 of Questionnaire 6.
376 Reply to question 16 of Questionnaire 6.
377 Reply to question 16 of Questionnaire 6.
378 Reply to question 4.3 of Questionnaire 6.
379 Notifying Parties' response to RFI 10, paragraph 6.
380 Financial instrument identifiers are subject to strong network effects, because the greater the adoption of an identifier by market participants, the more attractive it is to other market participants to also use the same identifier when trading with counterparties for efficiency purposes.

50% of the limited potential gains, while facing 100% of the losses from reduced RED code revenues.

(384) In light of the above, the Commission considers that it is unlikely that the JV would have the incentive to foreclose rival CDS trade optimization providers by refusing or worsening their access to RED codes.

(385) Given that the Commission does not find that IHSM would have the ability or incentive to foreclose, there is no need to assess the impact of a potential foreclosure. Nevertheless, the Commission finds that for the reasons described in recital (377), the impact of a potential foreclosure on the relevant markets for CDS portfolio compression, CDS portfolio reconciliation and CDS margin management would be limited. In particular, RED codes do not appear to be an important input for the JV's closest competitors.

5.8.1.3. Conclusion

(386) Based on the above considerations and the evidence available to it, the Commission considers that the Transaction is unlikely to give rise to serious doubts as to its compatibility with the internal market as a result of non-horizontal effects in the markets for RED codes worldwide (upstream) and CDS portfolio compression, CDS portfolio reconciliation and CDS margin management worldwide (downstream), in terms of input foreclosure.

5.8.2. Customer foreclosure of portfolio compression, portfolio reconciliation, margin management and basis risk mitigation services for IRDs, CDS and equity derivatives worldwide (upstream) – trade confirmation services for IRDs, CDS and equity derivatives or overall worldwide (downstream)

(387) Upstream, Section 5.8 describes TriOptima and Reset's market shares and competitors in the provision of IRD/CDS/FX portfolio compression, IRD/CDS/FX/equity derivatives portfolio reconciliation, IRD/CDS/FX/equity derivatives margin management and IRD/FX basis risk mitigation services. As described below, the vertical link only relates to the IRD/CDS/equity derivatives. Therefore, in this Section 5.8.2, for convenience the aforementioned services (portfolio compression, portfolio reconciliation, margin management and basis risk mitigation) in these three asset classes will be referred to as "IRD/CDS/equity derivatives trade optimization services".

(388) Downstream, MarkitSERV is a third party provider of trade confirmation services. MarkitSERV is the only third party provider of trade confirmation services for IRDs, CDS and equity derivative trades (accordingly it has a 100% market share on these plausible markets). In these asset classes, any trades not confirmed by MarkitSERV are confirmed directly between the trading parties and do not fall under a potential (third party) trade confirmation market.[381] MarkitSERV is not active in relation to FX or commodities trades; in these asset classes the main competitors are Swift (FX, commodities), Equias (commodities) and ICE e-confirm (commodities). The

[381] Notifying Parties' response to RFI 9, paragraph 7.3. Accordingly, on a wider market that includes also trades confirmed by trading parties themselves the JV would have an even lower ability and incentive to try to engage in customer foreclosure (as many more companies engaging in trade confirmation would procure the upstream services).

Notifying Parties are not able to estimate MarkitSERV's market shares in a plausible overall market for trade confirmation services for all asset classes provided by third parties, though given that such broader shares would take into account the presence of competitors in FX and commodities, MarkitSERV's market share would in any event be lower than its shares in the IRD, CDS and equity derivatives asset classes.[382]

(389) The Transaction gives rise to a vertical link between IRD/CDS/equity derivatives trade optimization services and third party trade confirmation services (overall or on the aforementioned asset classes). This is because TriOptima and Reset's IRD/CDS/equity derivative trade optimization services use MarkitSERV's trade confirmation services as an "output channel" for their services in the sense that trade terminations or new trades are sent via MarkitSERV to CCPs:

(a) Both triBalance and triReduce, when providing portfolio compression and margin management services, involve terminating existing trades as part of generating a new portfolio of trades. For cleared trades, triBalance and triReduce generally terminate trades with the CCP directly, i.e. MarkitSERV does not intermediate. The CCP may then send the trade on to MarkitSERV for processing or not, according to the customer's wishes. In a small number of cases for cleared trades, triBalance/triReduce may send the trade directly to MarkitSERV for termination ([…]). For uncleared trades, triBalance and triReduce either send the trade termination directly to MarkitSERV ([…]) or not at all, depending on the customer's wishes.

(b) Other portfolio compression and margin management providers may choose to send termination instructions for non-cleared trades to MarkitSERV on a similar basis. A method for receiving termination instructions would be initially agreed between the provider and MarkitSERV, […][383] […][384] […].

(c) There are also residual trades, i.e. new trades created as part of portfolio compression, which can be submitted directly to MarkitSERV by the compression provider or by the customer of the provider.[385] MarkitSERV requires a client authorisation letter from each of the provider's clients in order to process new trades or terminate old trades.[386]

(d) In portfolio reconciliation, providers typically connect to MarkitSERV's systems via an API to allow these providers to process trades on behalf of their clients.

(e) Trades recommended to clients by Reset may be passed to MarkitSERV for trade processing once they have been executed directly by firms or on venue. Other basis risk mitigation service providers have a similar relationship with MarkitSERV, i.e. they recommend trades to their customers. These recommended and executed trades may eventually be passed on to MarkitSERV for trade processing but there is no direct connectivity.

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382 Notifying Parties' response to RFI 19 questions 13-14.

383 […].

384 […].

385 Notifying Parties' submission to Commission on 18 June 2021.

386 Notifying Parties' submission to the Commission dated 18 June 2021, paragraph 4.8.

(390) Given that MarkitSERV holds a 100% market share worldwide in IRD/CDS/equity derivatives trade confirmation services,[387] there is a vertically affected market between IRD/CDS/equity derivatives trade optimization (upstream) and IRD/CDS/equity derivatives trade confirmation services (downstream).

(391) The Commission assesses below the risk that the JV may seek to engage in a customer foreclosure strategy to foreclose rival IRD/CDS/equity derivatives trade optimization providers by refusing or worsening their access to MarkitSERV's "output channel" of IRD/CDS/equity derivatives trade confirmation services.

(392) The Commission does not further assess input foreclosure, i.e. the risk that the JV forecloses its trade optimization services to rival trade confirmation providers, as this is not relevant, since MarkitSERV is the only third party provider globally of IRD/CDS/equity derivatives trade confirmation services and there are no rivals to foreclose for these asset classes. On a broader trade confirmation market encompassing other asset classes, MarkitSERV would have no incentive to foreclose rivals. In particular, it does not compete directly with any rivals,[388] given that the only third parties providing trade confirmation services are active in other asset classes from MarkitSERV and it is unlikely that these services are substitutable across asset classes from a demand-side perspective. Therefore, the Transaction would not give rise to serious doubts as to its compatibility with the internal market in respect of input foreclosure on any plausible basis.

5.8.2.1. Notifying Parties' view

(393) The Notifying Parties argue that IHSM will have no ability or incentive to foreclose access to MarkitSERV's trade confirmation services (for IRD/CDS/equity derivatives or overall) or otherwise favour TriOptima or Reset to the detriment of its competitors, for the following reasons.[389]

(394) *First*, with regard to ability, the Notifying Parties note that the majority of trades for which portfolio compression and margin management services are utilised are cleared, and as such instructions are normally submitted to the CCP directly rather than via MarkitSERV. For example, based on Quarter 1 2021 data, approximately 93% of Euro-denominated interest rate swaps ("IRS"), 94% of GBP-denominated IRS and 96% of USD-denominated IRS (the three largest asset sub-classes that are subject to portfolio compression) were cleared. Further, the proportion of cleared trades is increasing in response to regulation. Indeed, a large majority ([…]) of cleared trade terminations that are sent to MarkitSERV are sent via NettingSync, which is a platform connecting MarkitSERV to various CCPs, and MarkitSERV is unable to attribute these terminations to upstream competitors. Only a small volume of terminations on cleared trades ([…] of cleared terminations) are sent to

387 The Notifying Parties are not able to estimate MarkitSERV's market shares for an overall trade confirmation services across all asset classes (worldwide). However, there are some competitors active in certain asset classes where MarkitSERV is not present (e.g. Swift in FX, Equias, ICE and Swift in commodities) [Notifying Parties' reply to RFI 19, questions 13-14]. It can therefore be assumed that MarkitSERV's market share would be lower on such an overall market than for IRD, CDS or equity derivatives.

388 See previous footnote.

389 Form CO paragraph 617.

MarkitSERV directly by the compression provider and therefore MarkitSERV can attribute terminations to competitors.

(395) As regards new trades arising from portfolio compression or margin management services, of the […] trade optimization competitors of TriOptima that connect to MarkitSERV, new trades resulting from optimization services can only be identified for […]. For the remaining […] competitors, trades cannot be attributed to the competitors because they send trades to MarkitSERV for a variety of reasons (on their own behalf or on behalf of their clients) other than trade optimization, and it is not possible to ascertain whether a particular trade is being sent in their capacity as a trade optimization competitor or otherwise.

(396) Similarly, MarkitSERV has no ability to discriminate against other basis risk mitigation providers in favour of Reset as there is no requirement for trades to be identified as being executed for the purpose of basis risk mitigation when they are sent to MarkitSERV. […].

(397) Further, MarkitSERV has no ability to foreclose other providers of trade optimization services as trades recommended by basis risk mitigation service providers do not need to be processed by MarkitSERV before being sent to clearing. These trades could be sent by the trading venue to clearing directly or through competing trade processing providers (e.g. in FX, trades recommended by Reset are typically processed by Refinitiv).

(398) *Second*, with regard to incentive, customers choose trade optimization providers based on the algorithms the providers use and the types of trades they optimise and compress. Similarly, the Notifying Parties note with respect to portfolio reconciliation that customers may use different vendors to reconcile the same trade data set based on other characteristics, e.g. tenor of trades; as such, market shares may not reflect market power.[390] The ability for the customers to send trades to MarkitSERV's trade confirmation service from their trade optimization provider is of very limited importance when selecting a trade optimization provider compared to the algorithms offered and the trade types covered by the service. Accordingly, any decision by MarkitSERV to favour TriOptima or Reset would have no impact on a customer's choice of provider.

(399) *Third*, with regard to incentive, the Parties' business models are based on providing connectivity across as many elements of the trading environment as possible. MarkitSERV would have no incentive to favour TriOptima or Reset as it would risk losing the revenue and margin across its entire trade processing business for no foreseeable benefit in additional TriOptima or Reset revenues. In particular, the vast majority of MarkitSERV's revenue is generated from large financial institutions who also use trade optimization services, and who are able to exert significant buyer power when negotiating with the Parties. These customers could retaliate to any decision by MarkitSERV to favour TriOptima or Reset by moving business to other trade processing providers or in-house.[391]

390 Notifying Parties' response to RFI 7, paragraph 3.3.

391 Notifying Parties' submission to Commission on 10th June 2021.

(400) The Notifying Parties add that MarkitSERV has never in the past refused to connect to a new provider on request and proactively connects to new providers. For example: (i) MarkitSERV engaged in significant work with […], including supporting a new venue type even though it would be the only broker using it; and (ii) MarkitSERV recently connected to […] which is launching a new business model but is not yet live.[392]

(401) Similarly, the Notifying Parties note that TriOptima's business case is premised on the ability to connect broadly to market participants, notably trading venues, CCPs, and trade processors. With respect to the TriOptima services that connect to MarkitSERV (triReduce, triBalance) as well as Reset, the Notifying Parties note that 100% of the revenues generated by these services require connectivity with other third party providers.[393]

5.8.2.2. Commission's assessment

(402) The Commission assesses below the JV's ability and incentive to engage in a customer foreclosure strategy to foreclose rival third party IRD/CDS/equity derivatives trade optimization providers (i.e. the narrowest plausible upstream market).

(403) In terms of its ability, based on the information provided in recitals (394) to (397), the Commission takes note that, in the vast majority of cases, MarkitSERV is not able to identify whether a trade termination or new trade instruction that is sent to it by a trade optimization competitor is sent in that company's capacity as a provider of competing trade optimization services or in another context (e.g. as a trade on its own behalf or on behalf of its clients). Therefore, in the vast majority of cases, MarkitSERV does not have the ability to target and foreclose its competitors.

(404) Further, the market investigation confirmed the Notifying Parties' view that connectivity with MarkitSERV's trade confirmation service is not key to being able to compete effectively in the markets for IRD/CDS/equity derivatives trade optimization services. Most providers of portfolio compression, portfolio reconciliation, margin management and basis risk mitigation services do not have direct connectivity with MarkitSERV's trade confirmation service for the output of their own trade optimization services; rather, most competitors send trade instructions directly to trading venues or CCPs or only to their clients.[394] Very few send trade instructions via middleware providers such as MarkitSERV. This was confirmed by the customers, who generally do not rely on MarkitSERV's trade confirmation services as an output channel of the trade optimization services they use; most customers request their trade optimization providers to send outputs directly to their CCPs or middleware providers, but only one customer mentioned that they use only middleware providers such as MarkitSERV's trade confirmation service.[395]

(405) In the same vein, cooperation with MarkitSERV (for instance to collaborate to bring to market new or improved products) does not appear key to being able to compete effectively in the markets for IRD/CDS/equity derivatives trade optimization.

392 Notifying Parties' submission to Commission on 29th June 2021.
393 Notifying Parties' submission to Commission on 29th June 2021.
394 Reply to question 15 of Questionnaire 4.
395 Reply to question 14 of Questionnaire 6.

According to trade optimization providers, the key to achieving effective innovation is cooperation with customers, followed by CCPs.[396] As such, MarkitSERV would likely not be able to significantly impede effective competition by hindering innovation in the trade optimization markets by withholding its cooperation with TriOptima's competitors.

(406) In light of the above, the Commission considers that it is unlikely that the JV would have the ability to foreclose rival providers of IRD/CDS/equity derivatives trade optimization services (i.e. competitors of TriOptima and Reset in the markets of portfolio compression, portfolio reconciliation, margin management and basis risk mitigation services for IRDs, CDS and equity derivatives worldwide) by refusing or worsening their access to MarkitSERV's trade confirmation services for IRD/CDS/equity derivatives or overall.

(407) In terms of its incentive, the JV would not stand to gain significantly by foreclosure of MarkitSERV's trade confirmation services for IRD/CDS/equity derivatives or overall. On the customers' side, the majority of responding customers indicated that (regardless of asset class or optimization product) they would not switch trade optimization providers if MarkitSERV withdrew or deteriorated connectivity of its trade confirmation service with their trade optimization provider; instead, they would stick to their current providers regardless.[397] They indicated there are solutions to enable them to keep doing so. In particular, one customer explained the alternatives and the trade-off between the choice of trade optimization provider and the availability of MarkitSERV connectivity of that provider, "*In FX, for example, we prefer to have several solutions. We have an in-house booking method which we could use if MarkitSERV withdrew or deteriorated the connectivity to third party optimisation service providers. While direct connectivity is preferable, we would leverage our in-house tools and continue to use our current service providers*."[398]

(408) This is consistent with the Commission's finding that the choice of trade optimization provider depends on factors other than the availability of connectivity with middleware providers. As one customer summarizes, "…*optimisation services are selected on ability to delivery risk reducing results and maximise the success of each* [compression] *run entered. Additionally the scope and products supported. Connectivity is only an aspect of selecting optimisation services, not an overriding factor. As such if changes to current infrastructures occur, the basis for changing provide would be predominantly based on the above*[mentioned factors]."[399]

(409) Indeed, multi-sourcing appears to be very prevalent in trade optimization services, and particularly in portfolio compression services and margin management services, because customers wish to benefit from different providers' algorithms to manage and reduce their risks.[400]

(410) Moreover, most of Traiana's trade optimization services either use an 'all you can eat' fee model or have lower fees for higher volumes. Given that multi-sourcing is prevalent and so it is likely that most customers already procure from Traiana and

396 Reply to question 16 of Questionnaire 4.
397 Reply to question 16 of Questionnaire 6.
398 Reply to question 16.1 of Questionnaire 6.
399 Reply to question 16.1 of Questionnaire 6.
400 Reply to question 16 of Questionnaire 6.

some of its rivals, this means that the potential gains of a foreclosure strategy would be limited as even if a particular competitor is foreclosed, to the extent the customer already multi-sources from both that competitor and TriOptima/Reset, the latter would not gain significant additional fees.[401]

(411) Indeed, already pre-Transaction, TriOptima offers interconnectivity with Acadia, a direct and close competitor in margin management.[402] This supports the argument put forward by the Notifying Parties that TriOptima values wider connectivity with market participants, even competitors.

(412) In light of the above, the Commission considers that it is unlikely that the JV would have the incentive to foreclose rival trade optimization providers (i.e. competitors of TriOptima's and Reset in the markets of portfolio compression, portfolio reconciliation, margin management and basis risk mitigation services for IRDs, CDS and equity derivatives worldwide) by refusing or worsening their access to MarkitSERV's trade confirmation services.

(413) Given that the Commission does not find that there would be ability or incentive to foreclose, there is no need to assess the impact of a potential foreclosure. Nevertheless, the Commission finds that there would be the potential for customers to exert significant countervailing buyer power in case of a potential foreclosure. MarkitSERV's total revenues (across various services) from those customers that MarkitSERV is aware of that use rival portfolio compression providers amount to […].[403] This represents […] of MarkitSERV's total 2019 revenues, […]. Indeed, MarkitSERV's top eight customers account for more than […] of its revenues, and all of them use at least two other trade optimization providers.[404] As such, they could exert significant pressure on the JV by threatening to switch to other trade processing services such as in-house solutions or sponsor entry (e.g. by increasing connectivity with trading venues). The market investigation confirms this; one competitor explains, "*We think it would be unlikely for MarkitSERV to withdraw or deteriorate connectivity to Quantile as this would not be in the best interest of our mutual clients.*"[405] Another states, "*Since the service* [of connectivity between optimization provider and MarkitSERV] *is primarily used by our clients for integration/ reporting to industry bodies, the impact would be felt highest by our mutual clients…The primary barrier to withdrawing such service is loss of revenue from clients…clients will be very unhappy and react very strongly to such* [foreclosure] *behaviour*"[406]

5.8.2.3. Conclusion

(414) Based on the above considerations and the evidence available to it, the Commission considers that the Transaction is unlikely to give rise to serious doubts as to its compatibility with the internal market as a result of non-horizontal effects in the markets for portfolio compression, portfolio reconciliation, margin management (upstream) and basis risk mitigation services for IRD, CDS and equity derivatives

401 Notifying Parties' response to RFI 10, paragraph 6 and response to RFI 11, paragraph 4.1.

402 https://www.cmegroup.com/services/trioptima/triresolve-portfolio-reconciliation-and-collateral-management/im-compliance.html#features

403 Notifying Parties' submission to Commission on 29th June 2021, Annex 143.

404 Form CO, Annex 83.

405 Replies to question 19.4 of Questionnaire 4.

406 Replies to question 19.4 of Questionnaire 4.

worldwide and trade confirmation services for IRDs, CDS and equity derivatives or overall worldwide (downstream), in terms of customer foreclosure.

5.8.3. Input foreclosure of trade confirmation services for IRDs or overall worldwide (upstream) – portfolio reconciliation and margin management services for IRDs worldwide (downstream)

(415) In addition to the foregoing, in some circumstances trade confirmation services can be upstream of trade optimization services, as in some limited cases MarkitSERV sends trade confirmations and data to trade optimization providers, as described below.

(416) Currently, MarkitSERV does not send trade confirmations or other trade data directly to TriOptima or Reset. However, MarkitSERV's trade confirmation services send non-cleared IRD trades to LCH SwapAgent (only). MarkitSERV sends these trades on behalf of customers for LCH SwapAgent to provide certain trade optimization services, in particular portfolio reconciliation and margin management. Given that TriOptima is also active in portfolio reconciliation and margin management, there is a vertical link between MarkitSERV's trade confirmation service for IRD or overall worldwide (upstream) and TriOptima's portfolio reconciliation and margin management service for IRD worldwide.[407]

(417) Upstream, MarkitSERV is the only third party provider of confirmation services in relation to IRD, CDS and equity derivative trades, and as such has 100% in the worldwide markets for trade confirmation of those asset classes. In these asset classes, any trades not confirmed by MarkitSERV are confirmed directly between the trading parties, and thus do not fall under the (third party) trade confirmation market.[408] MarkitSERV does not provide confirmation services in relation to FX or commodities trades. On an overall market across all asset classes, its market share is likely to be lower (although the Notifying Parties were not able to provide an estimate).[409]

(418) Downstream, Section 5.8 describes TriOptima's market shares and competitors in the provision of IRD portfolio reconciliation and IRD margin management.

(419) Accordingly, the Commission considers below the risk that the JV would engage in input foreclosure, namely by restricting access to these trade confirmations or other trade data from MarkitSERV's trade confirmation service, with a view to foreclosing rival downstream IRD portfolio reconciliation or margin management providers worldwide. On the basis that neither TriOptima, Reset nor any of their competitors use MarkitSERV's trade confirmation services as an input for their portfolio compression or basis risk mitigation services, these services will not be further discussed in this Section. Likewise, as the only asset class in which MarkitSERV's trade confirmation service is used for portfolio reconciliation or margin management is IRD (by LCH SwapAgent), only this asset class will be assessed below.

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407 Notifying Parties' response to RFI 9, paragraph 8.4.

408 Notifying Parties' response to RFI 9, paragraph 7.3. If the relevant market were not limited to third party providers but were also to include counterparties' own trade confirmations, MarkitSERV's market shares would be even lower and (in line with the reasons set out below) its ability and incentive would be even lower.

409 See footnote 387.

(420) On the basis that MarkitSERV is the only provider of trade confirmation services in these asset classes and so the JV does not receive trade confirmations from any upstream rivals (as there are none) or indeed from MarkitSERV, the Commission considers the Transaction does not give rise to a risk of customer foreclosure.

5.8.3.1. Notifying Parties' view

(421) The Notifying Parties argue that IHSM will have no ability or incentive to foreclose access to MarkitSERV's trade confirmation data as an input to IRD portfolio reconciliation and margin management services, or otherwise advantage TriOptima with the trade confirmation data available to MarkitSERV for the following reasons.[410]

(422) *First*, with regard to ability, the JV's portfolio reconciliation and margin management services require different data than that gathered by MarkitSERV. TriOptima uses a client's own position data across an asset class or product, in order to optimise the client's risk position. TriOptima requires a customer's complete positions in an asset class or product class (i.e. a record of every trading position made by that customer) that the customer wishes to optimise. This information is held within a customer's risk department, and is provided directly from the customer to TriOptima.

(423) In comparison, MarkitSERV holds transaction data, which a customer sends to MarkitSERV for post-trade processing, usually at the time of execution. MarkitSERV's data is therefore not an up to date, nor complete, record of a customer's positions, which cannot be used by TriOptima for portfolio reconciliation and margin management. In particular, MarkitSERV does not always know if a trade is live or has been terminated by the trading parties and not been notified to MarkitSERV. In addition, MarkitSERV only covers a selection of asset classes and instruments, whereas TriOptima covers a wider range of asset classes and instruments. As such, according to the Notifying Parties any information that MarkitSERV could provide to TriOptima would be of limited value, as TriOptima's customers would still need to provide them with up to date position data and trades not covered by MarkitSERV.

(424) *Second*, with regard to ability, the Notifying Parties argue that customers generally do not want to run compression and optimization services across their entire trade portfolio. Instead, customers themselves select a subset of trades to be sent for compression, optimization and portfolio reconciliation and margin management depending on their specific requirements. Therefore, even if MarkitSERV had perfect position data, sharing this data with TriOptima (which react to customers' specific optimization requests) would provide no benefit to customers.

(425) *Third*, with regard to ability and incentive, MarkitSERV is restricted in the information that it can share both by its user agreements and its internal procedures. In particular, under MarkitSERV's client agreements, client data can only be shared at an aggregated, anonymised and non-discernible basis. Such information is of no use for portfolio reconciliation and margin management purposes.

[410] Notifying Parties' response to RFI 9 questions 7-8 and RFI 11 question 2.

(426) *Finally*, with regard to ability and incentive, the Notifying Parties note that IHSM previously operated a credit compression service, which was shut down in 2016 as it was deemed unviable. Prior to that time, IHSM's credit compression service relied on customers sending it their trade positions, rather than using MarkitSERV data. Customers choose providers based on the algorithms they use and types of trades they optimise and compress. The fact that MarkitSERV was unable to profitably operate a compression service, illustrates that MarkitSERV data confers no advantage (which would apply equally in relation to portfolio reconciliation and margin management).

(427) The Notifying Parties therefore consider that there are no effective use cases for MarkitSERV data that would give TriOptima a competitive advantage vis-à-vis their competitors and in any case MarkitSERV is restricted by its user agreements and internal procedures.[411]

5.8.3.2. Commission's assessment

(428) The Commission assesses below the JV's ability and incentive to engage in input foreclosure, namely by restricting access to these trade confirmations or other trade data from MarkitSERV's trade confirmation service, with a view to foreclosing rival downstream providers of IRD portfolio reconciliation and margin management services.[412]

(429) In terms of its ability, the market investigation corroborated the Notifying Parties' view. First, the large majority of competitors indicated that MarkitSERV is overall not a key data source for IRD portfolio reconciliation and margin management service providers. Most competitors source trade data as an input for their IRD portfolio reconciliation and margin management services directly from the clients or CCPs, with the emphasis on clients being the key source of data. Only one competitor mentioned middleware providers (such as MarkitSERV) as an important source of data for them.[413]

(430) This was confirmed by the customers; most customers send their trade data to their IRD portfolio reconciliation and margin management providers directly or request their CCPs to do it. A minority request their middleware providers (such as MarkitSERV) to do it, and none of these customers use only this channel.[414] This supports the Notifying Parties' argument that MarkitSERV's trade confirmation data does not appear essential or sufficient for the customers' IRD portfolio reconciliation and margin management needs. The Commission therefore concludes that MarkitSERV's trade confirmation data is not an important input for portfolio reconciliation and margin management services providers, meaning that the JV would not have the ability to foreclose rivals in the downstream markets for IRD

411 Notifying Parties' submission to Commission on 18 June 2021.

412 The Commission conducts this assessment on the basis that LCH SwapAgent is considered to be a third party provider of margin management services in these asset classes. In the event that it were not considered to be a third party provider (on the basis that LCH more broadly has some activities as a CCP), then on the narrowest plausible market definition limited only to third party providers, MarkitSERV does not provide trade confirmations to any third party competitors and so an input foreclosure strategy is implausible.

413 Reply to question 14 of Questionnaire 4.

414 Reply to question 13 of Questionnaire 6.

portfolio reconciliation and margin management services (i.e. competitors of TriOptima worldwide).

(431) In terms of its incentive, the Commission notes that as set out above in recitals (407) to (411), customers are not likely to switch for IRD portfolio reconciliation and margin management providers in case of foreclosure and customers multi-source, indicating that they likely are already customers of both TriOptima and (several of) its rivals. The potential gains of a foreclosure strategy would be limited as to the extent the customer already multi-sources from both that competitor and TriOptima, the latter would not gain significant additional fees (given that "all you can eat" fee models are the norm).[415]

(432) Therefore, the Commission finds that the JV would have no incentive to engage in foreclosure of MarkitSERV's trade confirmations for IRD or overall to competitors or otherwise exclusively favour TriOptima's portfolio reconciliation and margin management service using MarkitSERV's trade data.

(433) Given that the Commission does not find that there would be ability or incentive to foreclose, there is no need to assess the impact of a potential foreclosure. Nevertheless, the Commission finds that there would be the potential for customers to exert countervailing buyer power in case of a potential foreclosure, as described in recital (413).

5.8.3.3. Conclusion

(434) Based on the above considerations and the evidence available to it, the Commission considers that the Transaction is unlikely to give rise to serious doubts as to its compatibility with the internal market as a result of non-horizontal effects in the markets for trade confirmation services for IRDs or overall worldwide (upstream) and portfolio reconciliation and margin management services for IRDs worldwide (downstream), in terms of input foreclosure.

5.9. Conglomerate effects

(435) The Commission considers below whether the JV would be likely to bundle or tie together (various) combinations of its services and whether this would lead to anticompetitive conglomerate effects arising from the Transaction. In particular, the Commission considers conglomerate effects from various combinations arising from the Transaction among those services for which the JV's market share would be 30% or more, in particular: (i) MarkitSERV's trade confirmation services (by asset class or overall) worldwide, (ii) MarkitSERV's FX or IRD CCP connectivity services worldwide, (iii) TriOptima and Reset's trade optimization services (i.e. portfolio compression, portfolio reconciliation, margin management and basis risk mitigation services by asset class) worldwide, (iv) Traiana's FX PB give-up management services worldwide and (v) Traiana's credit limit management services worldwide.[416]

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415 Notifying Parties' response to RFI 10, paragraph 6 and response to RFI 11, paragraph 4.1.

416 The Commission did not consider in depth combinations between Traiana's credit limit management services on one side and MarkitSERV's trade confirmation services or CCP connectivity services on the other side, given all market shares in the relevant markets were 100%, and there were no indications of potential entrants being deterred by the JV. The Commission also did not consider overlaps relating

5.9.1. Notifying Parties' view

(436) The Notifying Parties submit that the JV will have no ability to foreclose rivals for the following reasons.

(437) *First,* OTC trading services are often highly customised and differentiated between providers, i.e. even where two rivals provide the same service, they will often be targeting different segments of the market. This will make customers less willing to switch provider to purchase a bundled offering (because their current product may be particularly well suited to their requirements), reducing the JV's ability to foreclose rivals.[417]

(438) *Second,* although some of the Parties' customers (such as banks) often purchase a range of services, different services are typically procured by different divisions, desks and individuals within the same organisation. For example, different individuals within a bank will be responsible for purchasing trade processing and portfolio compression services. As such, the Parties' ability to use bundling or tying strategies is significantly reduced as they would face the added challenge of trying to negotiate sales across multiple individuals.

(439) *Third,* MarkitSERV and Traiana provide services that automate the processing of OTC trades. Firms can perform many of these services themselves, e.g. through direct connectivity, or other service providers that are available. Therefore, providers that are active in relation to other parts of the OTC trading value chain can process trades directly, and the Parties have no ability to foreclose rivals.

(440) The Notifying Parties submit that the JV will have no incentive to foreclose rivals for the following reasons.

(441) *First,* the Parties' business models are based on providing open and non-discriminatory connectivity across as many elements of the trading environment as possible. This will continue post Transaction as the JV's combined service will be agnostic as regards the execution and clearing venues. The Parties would have no incentive to limit access to their services as this would run counter to the rationale of the Transaction, which is focussed on providing enhanced services to customers across the OTC trading lifecycle.

(442) *Second,* many of the services provided by the JV relate to markets of relatively low value. The JV would have no incentive to risk foregoing revenues in relatively large markets (e.g. trade processing) to foreclose rivals in significantly smaller markets (e.g. FX Retail Aggregation). As noted in the Commission's guidelines "*it is unlikely that the merged entity would be willing to forego sales on one highly profitable market in order to gain market shares on another market where turnover is relatively small and profits are modest*".

(443) *Third,* a bundling or tying strategy would not be profitable. This is because the OTC post trade processing services provided by the JV are not economic complements

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to FX NOE messaging services as both MarkitSERV and Traiana are already active in this market pre-Transaction with low market shares ([5-10]% and [0-5]% respectively) and do not bundle it with their other trade processing activities.

417 Form CO, paragraphs 524ff.

(e.g. a price increase of one service will not reduce demand for another service). There are also limited benefits of one-stop shopping, so this is unlikely to be a key driver in customers choosing between a bundled offer or purchasing individual services on a standalone basis. A bundled offering of OTC post trade processing services is therefore unlikely to be attractive to customers unless it is offered at a significant discount compared to purchasing individual services. The need to offer a significant discount for a bundled service reduces the profits (and therefore incentive) of bundling as a strategy.

(444) Moreover, in relation to the link between the trade processing services provided by MarkitSERV and the clearing services provided by CME, the Notifying Parties claim that their incentives are very unlikely to be aligned. IHSM would have no incentive to pursue a bundling or tying strategy with the aim of foreclosing the market for trading or clearing, as it would not receive any of the benefits of such a strategy.

5.9.2. Commission's assessment

(445) *First*, as regards ability, the Commission notes that the JV has a 100% market share in the markets for trade confirmation services (MarkitSERV) and credit limit management services (Traiana), as well as high market shares in certain CCP connectivity markets, trade optimization markets and FX PB give-up management services markets. This would indicate that the JV may have the ability to use its strength in these markets to tie or bundle other products. Moreover, there appears to be significant overlap in the customer bases of the various services at entity level.[418]

(446) However, the market investigation indicates that customers do not have strong incentives to one-stop shop[419] for various trade processing services. Almost all responding customers indicated that they would not stop using rivals' products if the JV bundled its trade optimization services with trade confirmation services or CCP connectivity services[420], or its FX PB give-up management services with MarkitSERV's trade processing services.[421] Customers explained that they would assess the merits of the products available from the JV and its rivals on a case-by-case basis, and indicated that other elements beyond just pricing drive their preference for trade processing and optimization products.[422] For example, one customer noted *"Naturally we would assess the bundled package and costs advantages - however, operational reliability is just as important as pricing for us".*[423] Customers confirmed that their choice of supplier is driven by product-specific factors such as "*market coverage*"*, "support level, reliability and client preference"* as well as crucially whether business requirements are met. These are considered on a case-by-case basis for product procurement decisions.[424] In line with this, customers indicated that they might consider a bundle but would not necessarily accept it, e.g. "[the customer] *would evaluate, to ensure sustainable economics, whether to accept or not a bundle offer*", "*We would have to review the contract and make a decision based on what was presented*", "*It depends on the products, if i need*

418 Form CO, Annex 086 and Annex 143, Notifying Parties' submission to Commission on 29 June 2021.
419 Non-horizontal Merger Guidelines, paragraph 104.
420 Replies to question 17 of Questionnaire 6 and question 28 of Questionnaire 1.
421 Replies to question 39 of Questionnaire 3.
422 See previous Sections in relation to each relevant product.
423 Replies to question 28 of Questionnaire 1.
424 For example, replies to questions 11.1.2 and 12.1 of Questionnaire 1.

them and if they are complimentary to what I need", "*if this was to be the case we would discuss and debate any new opportunities*", "*It would depend on the technology impact to changing, the productivity and the cost*" and "*Our decision would be determined by the pricing offered and the alternatives available*".[425]

(447) Finally, customers can and do multi-source across the various trade processing and trade optimization products. This is confirmed by a customer who explains that, *"Some of the services are purchased from the same supplier but they are individual purchasing decisions, with separate fee schedules for supporting activities in different parts of the bank.* [we are] *generally able to purchase services from different providers and mix-and-match the services that we purchase from different providers*"[426] Therefore, notwithstanding the JV's high market shares, customers would not necessarily accept the bundle and cease procuring from rival suppliers but would in each case consider alternative options available and choose the option that best suits their needs. The market investigation showed that customers' primary criterion for choosing trade processing is which service best meets their needs, rather than whether they already procure other products from a given supplier.

(448) As to the question of how important certain services are for customers and whether this would indicate that the JV could leverage them vis-à-vis other services, the Commission notes the following:

(449) With respect to MarkitSERV's trade confirmation services, these would not seem to be of particular importance for two reasons: (a) any trades not confirmed by MarkitSERV (in those asset classes where MarkitSERV is active) are confirmed directly between the trading parties, so in case MarkitSERV were to attempt to use trade confirmation services as leverage, market participants could simply choose to confirm trades directly, and (b) as set out in recital (407) other related services such as trade optimization services seem to be of far more importance for customers than trade confirmations.

(450) With respect to MarkitSERV's CCP connectivity services, while these are important infrastructure for many market participants, a number of responses to the market investigation indicate that (a) alternatives exist (e.g. through self-supply)[427] and (b) the value of CCP connectivity services compared to compression services, for example, is considered lower by market participants.[428] This is also confirmed in response to the question whether customers would stick to their current trade optimization providers if MarkitSERV were to deteriorate its connectivity to TriOptima's rivals: the majority of relevant respondents to the market investigation indicated that they would stick to their current trade optimization providers.[429]

(451) With respect to TriOptima and Reset's trade optimization services, while these are considered important by customers, a bundling or tying strategy would likely not lead to customers stopping purchases from rival trade optimization providers. The reason for this is that multi-sourcing appears to be very prevalent in trade optimization

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425 Replies to question 17 and 18 of Questionnaire 6, question 39 of Questionnaire 3 and questions 28 and 29 of Questionnaire 1.

426 Reply to question 4.2.1 of Questionnaire 6.

427 Replies to question 16.1 of Questionnaire 6.

428 Replies to question 16.1 of Questionnaire 6.

429 Replies to question 16 of Questionnaire 6.

services, and particularly in portfolio compression services and margin management services. Customers multi-source to benefit from different providers' algorithms to manage and reduce their risks. Therefore, a bundling or tying strategy would be unlikely to have a significant impact on the competitive dynamics in the trade optimization services market.

(452) With respect to Traiana's FX PB give-up management services, these are important for customers. However, a bundling or tying strategy would likely not be successful as the customer base is concentrated and consists of large banks which have bargaining power vis-à-vis Traiana (see Section 5.4.2). Furthermore, in this market, there is a recent entrant (whose entry was sponsored by large customers of Traiana) that is considered an alternative.

(453) With respect to Traiana's credit limit management services, while Traiana is the only undertaking to provide these services globally as a third party provider, trading counterparties can and do alternatively simply provide this service to each other bilaterally when trading. None of the customers responding to the market investigation alerted the Commission to a bundling or tying risk with respect to credit limit management services and similar considerations with respect to customers' bargaining power as for FX PB give-up management services (of which credit limit management services is a service type) apply.

(454) In light of the above, the Commission considers that it is unlikely that the JV would have the ability to engage in anticompetitive bundling or tying of the aforementioned services.

(455) *Second*, as regards incentive, the Commission notes that pre-Transaction, customers do 'mix and match' trade processing services of the Parties with the products of other companies, and it is unlikely that the JV could compel them to change this practice following the Transaction. For instance, as described in recital (409), multi-sourcing appears to be very prevalent in trade optimization services, and particularly in portfolio compression services and margin management services, because customers wish to benefit from different providers' algorithms to manage and reduce their risks.[430] As such, bundling or tying would not be likely to lead to a significant reduction of sales prospects faced by single-component rivals, such as trade optimization providers, in the market.

(456) In the same vein, the JV's rivals in the FX PB give-up management services and CCP connectivity services markets are primarily trading venues and CCPs themselves. As such, they would not be likely to lose significant sales in case of bundling by the JV, as their services in PB give-up management and CCP connectivity are ancillary to their offerings in the core markets of trading and clearing. For example, CCP connectivity is unlikely to be used to bundle trade processing or connectivity services, given that CCP connectivity is a facilitating service that customers use to intermediate between these two, more valuable and significant services (as indicated by the fact that customers would rather switch CCP connectivity provider than tolerate a foreclosure strategy reducing their access to CCPs).[431]

430 Reply to question 16 of Questionnaire 6.

431 Replies to question 26 and 27 of Questionnaire 1.

(457) Indeed, neither Notifying Party currently engages in bundling among their respective various trade processing services, despite potential complementarity and common customers. For instance, although almost all responding trade optimization customers indicated that they use portfolio compression, portfolio reconciliation and basis risk management services[432], Reset and TriOptima services are sold as standalone products, have separate pricing schedules, are sold under separate agreements, and function as standalone products. In particular, Reset is sold to individual traders and within TriOptima, triReduce and triBalance are sold primarily to X-Value Adjustment ("XVA") desks and triResolve (including triResolve Margin, triCalculate and IMEM) is sold to middle and back office functions. In this sense, almost all of the sales for these products are made on a standalone basis and there is no product suite offering spanning TriOptima and Reset.[433] Similarly, MarkitSERV already provides trade processing services across multiple asset classes but has not attempted to bundle any of these services.[434] In this regard, the Transaction would not significantly alter the Parties' incentives as compared to the situation pre-Transaction. The Parties' past behaviour,[435] therefore, indicates a lack of incentive for bundling these services. In addition, none of the respondents to the market investigation alerted the Commission to existing practices in that respect.

(458) Similarly, for Traiana's services, a customer notes with regard to the JV's likelihood to offer a forced bundling post-Transaction, "*we note that Traiana could already bundle their offering within FXPB and have not done so*", and *"Traiana already do this* [commercial bundling] *as part of their contract negotiations, but we are able to remove unwanted or unused components from the agreement"*.[436]

(459) In light of the above, the Commission considers that it is unlikely that the JV would have either the ability or the incentive to engage in anticompetitive bundling or tying of services.

5.9.3. Conclusion

(460) In light of the above and all of the evidence available to it, the Commission concludes that the Transaction does not give rise to serious doubts as to its compatibility with the internal market as a result of possible non-coordinated effects through a conglomerate bundling or tying strategy relating to the JV's products.

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432 Reply to question 4 of Questionnaire 6.
433 Notifying Parties' submission to Commission on 9 June 2021.
434 Form CO, paragraph 569.
435 Non-horizontal Merger Guidelines, paragraph 109.
436 Replies to question 39 of Questionnaire 3.

6. CONCLUSION

(461) For the above reasons, the European Commission has decided not to oppose the notified operation and to declare it compatible with the internal market and with the EEA Agreement. This decision is adopted in application of Article 6(1)(b) of the Merger Regulation and Article 57 of the EEA Agreement.

For the Commission

(Signed)
Margrethe VESTAGER
Executive Vice-President