

Section 58 of the Competition Act (Cap. 50B)

Grounds of Decision issued by the Competition and Consumer Commission of Singapore

In relation to the notification for decision of the proposed acquisition by London Stock Exchange Group Plc of certain subsidiaries and assets of Refinitiv Holdings Limited

24 May 2021

Case number: CCCS 400/140/2020/004

Confidential information in the original version of this Decision has been redacted from the published version on the public register. Redacted confidential information in the text of the published version of the Decision is denoted by [X].

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I. Introduction

(a) The Notification

1. On 27 March 2020, the London Stock Exchange Group plc (“**LSEG**”) and Refinitiv Holdings Limited (“**Refinitiv Holdings**”) (collectively, the “**Parties**”) filed a joint notification pursuant to section 57 of the Competition Act (Cap. 50B) (the “**Act**”) through their joint legal representative, Allen & Gledhill LLP (“**A&G**”), for a decision by the Competition and Consumer Commission of Singapore (“**CCCS**”) as to whether the proposed acquisition of sole control by LSEG over the Refinitiv business (“**Refinitiv**”) (the “**Transaction**”), if carried into effect, would infringe the section 54 prohibition of the Act. CCCS accepted the notification as complete on 6 April 2020.
2. The Phase 1 review of the Transaction was completed on 2 July 2020. CCCS was unable to conclude at the end of its Phase 1 review that the Transaction, if carried into effect, will not infringe section 54 of the Act. Specifically, CCCS was unable to conclude at the end of the Phase 1 review that the merged entity could not or would not be able to foreclose access or raise the cost of access to Refinitiv WM/Reuters FX benchmarks for competing clearing services providers and index licensing providers, and that such a foreclosure strategy would not lead to a substantial lessening of competition (“**SLC**”) in the supply of index licensing and clearing services to customers in Singapore post-Transaction. Please refer to paragraphs 48 to 86 for CCCS’s analysis on this.
3. On 31 August 2020, upon receipt of a complete Form M2, CCCS proceeded with its Phase 2 review of the Transaction.
4. During CCCS’s review of the Transaction at Phase 1 and Phase 2, CCCS conducted two public consultations and sought third-party feedback from sixty-seven (67)¹ third-parties, including the Parties’ competitors and customers for fixed income index licensing (the only overlapping product identified by the Parties) and the six categories of products or services for which either or both Parties generate revenue from customers in Singapore and the provision of which require inputs from each other, namely:
 - a. trading services;
 - b. post-trade (clearing) services;

¹ CCCS contacted fifty-three (53) of these third-parties at Phase 1 and fourteen (14) of these third-parties at Phase 2.

- c. index licensing;
 - d. financial information products;
 - e. regulatory reporting services; and
 - f. Information Technology (“IT”) services and software.
5. Of the twenty-five (25)² responses received at Phase 1 and Phase 2, seventeen (17)³ of them provided substantive responses to CCCS, while the remaining eight (8) third-parties either had no concerns about the Transaction or declined to comment.⁴ Amongst those who have provided substantive responses, eleven (11)⁵ third-parties highlighted competition concerns in relation to the Transaction.
6. The pertinent concerns that were highlighted by these third-parties are as follows:
- a. **Foreclosure of access to specific Refinitiv products and services**
 - i. Foreclosure by the merged entity of access to Refinitiv’s WM/Reuters foreign exchange benchmarks (“WM/R FX benchmarks”) for competing clearing service providers and index licensing providers;⁶
 - ii. Foreclosure by the merged entity of access to Refinitiv’s financial information such as indicative interest rate swap (“IRS”) prices and Reuters’ British Bankers’ Association London Interbank Offered Rates (“BBA LIBOR”) rates for clearing service providers;⁷
 - iii. Foreclosure by the merged entity of access to Refinitiv reference data for competing trading venues and packaged solutions;⁸
 - b. **Foreclosure of access to Refinitiv’s packaged solution and distribution services in general**
 - i. Foreclosure by the merged entity of access (including denied access, slower access, degraded data and services quality) to Refinitiv’s products and packaged solutions for competing index licensing providers and clearing service providers;⁹

² The nineteen (19) third-parties who responded at Phase 1 include: [REDACTED].

The six (6) third-parties who responded at Phase 2 include: [REDACTED].

³ The seventeen (17) third-parties which provided substantive responses were: [REDACTED]. With the exception of [REDACTED], all the other third-parties raised competition concerns in relation to the Transaction.

⁴ The eight (8) third-parties who did not provide substantive responses to CCCS’s questions were: [REDACTED]. [REDACTED] and [REDACTED] had no concerns about the Transaction, while the other five (5) respondents either indicated that they had no input to provide [REDACTED], declined to respond [REDACTED], or did not respond to CCCS’s follow-up emails [REDACTED].

⁵ The eleven (11) third-parties who raised competition concerns were: [REDACTED].

⁶ This concern was raised in relation to clearing service providers by [REDACTED] and [REDACTED] and in relation to index licensing providers by [REDACTED], [REDACTED] and [REDACTED].

⁷ This concern was raised by [REDACTED].

⁸ This concern was raised by [REDACTED].

⁹ This concern was raised by [REDACTED], [REDACTED] and [REDACTED].

- ii. Foreclosure of rival trading venues through Refinitiv’s refusal to distribute venue data of rival trading venues post-Transaction;¹⁰
 - c. **Foreclosure of access to specific LSEG products and services**
 - i. Foreclosure by the merged entity of access to LSEG’s real-time venue data for competing packaged solutions;¹¹
 - ii. Foreclosure by the merged entity of access to LSEG’s Stock Exchange Daily Official List (“**SEDOL**”) security identifiers for competing packaged solutions;¹²
 - iii. Foreclosure by the merged entity of access to LSEG’s Financial Times Stock Exchange (“**FTSE**”) Russell indices;¹³
 - d. **Foreclosure of rival clearing houses and trading venues arising from the non-horizontal link in trading and clearing services and packaged solutions**
 - i. Foreclosure of rival over-the-counter interest rate derivatives (“**OTC IRDs**”) clearing houses and rival trading venues (including OTC IRD trading venues and FX trading venues) arising from the non-horizontal link in trading and clearing services;¹⁴
 - ii. Foreclosure of rival packaged solutions arising from the non-horizontal link in trading and clearing services and packaged solutions, as well as restrictions on use of security identifiers;¹⁵ and
 - iii. Foreclosure of rival clearing service providers through bundling of Refinitiv’s packaged solutions with LSEG’s clearing services.¹⁶
7. In response to the competition concerns identified by CCCS that the merged entity would be able to foreclose access or raise the cost of access to Refinitiv WM/Reuters FX benchmarks for competing clearing services providers and index licensing providers, the Parties proposed a set of behavioural commitments to CCCS on 25 November 2020¹⁷ (“**Proposed Commitments**”). The Proposed Commitments were subsequently revised in response to CCCS’s feedback before being put up for public consultation from 27 January 2021.

¹⁰ This concern was raised by [X].

¹¹ These concerns were raised by [X] and [X].

¹² These concerns were raised by [X] and [X].

¹³ These concerns were raised by [X] and [X]. [X] also raised concerns in relation to access to WM/R FX Benchmarks even though it is not a competitor to the Parties in Singapore.

¹⁴ This concern was raised by [X], [X] and [X].

¹⁵ This concern was raised by [X].

¹⁶ This concern was raised by [X].

¹⁷ CCCS received, and provided feedback to, a total of five (5) commitment proposals dated 25 November 2020, 11 December 2020, 21 December 2020, 11 January 2021 and 15 January 2021 respectively, prior to the completion of the Transaction.

8. Between 27 January 2021 and 9 February 2021, pursuant to section 60A of the Act, CCCS conducted a public consultation on the Proposed Commitments. Save for a competitor in the supply of packaged solutions and index licensing services¹⁸ which provided suggestions to refine the Proposed Commitments to better address the identified competition concerns that could arise from the Transaction, all third-parties who responded to the public consultation were of the view that the Proposed Commitments were sufficient to address the competition concerns identified or did not raise further concerns in relation to the Proposed Commitments. The Parties submitted their amended Proposed Commitments on 21 May 2021 in response to the feedback received from CCCS following the public consultation. CCCS considers the amended Proposed Commitments (“**Final Commitments**”) to be sufficient to address the competition concerns which could arise from the Transaction.
9. CCCS concludes that, subject to the Parties’ implementation of and compliance with the Final Commitments, the Transaction has not infringed section 54 of the Act.

II. The Parties to the Transaction

(a) The Acquirer

LSEG

10. The acquirer, LSEG, is a public limited company and was incorporated under the laws of England and Wales on 18 February 2005 under the Companies Act 1985 as a private company limited by shares with the name Milescreen Limited. On 16 November 2005 it changed its name to London Stock Exchange Group Limited. On 7 December 2005 it re-registered as a public limited company pursuant to section 43 of the Companies Act 1985 and changed its name to London Stock Exchange Group plc.¹⁹ Its shares are traded on the London Stock Exchange’s (“**LSE**”) Main Market for listed securities.²⁰ LSEG is not controlled, solely or jointly, by any single shareholder or group of shareholders.²¹
11. LSEG is an international financial markets infrastructure (“**FMI**”) business headquartered in the United Kingdom, with significant operations in North

¹⁸ [X]’s response dated 8 February 2021 to CCCS’s Public Consultation of Proposed Commitments.

¹⁹ Paragraph 7.1 of Form M1; LSEG’s profile on the UK Companies House website.

²⁰ Paragraph 7.1 of Form M1.

²¹ Paragraph 7.2 of Form M1; LSEG’s key shareholders are the Qatar Investment Authority (10.22%), The Capital Group Companies, Inc. (9.29%), BlackRock Inc. (8.17%) and Lindsell Train Limited (6.89%).

America, Italy, France, Romania and Sri Lanka.²² It has approximately 5,000 employees worldwide,²³ and its main business activities include:

- a. **Capital Markets:** LSEG operates a broad range of international equity, exchange-traded funds ("ETFs"), fixed income and derivatives markets, including: LSE (Main Market and Alternative Investment Market ("AIM")); Borsa Italiana (operator of the Italian Stock Exchange); MTS (a fixed income trading venue); Turquoise (a pan-European equities multilateral trading facility ("MTF") in which LSEG has a majority stake) and Curve Global Limited (an interest rate derivatives joint venture with a number of major dealer banks and the Chicago Board Options Exchange, in which LSEG has an approximately 45% stake). Through its various trading venues, LSEG's Capital Markets division offers market participants, including retail investors, institutions and small and medium-sized enterprises, access to Europe's capital markets;²⁴
- b. **Post-trade and risk management:** In addition to its majority ownership of LCH Group Holdings Limited ("LCH Group"), a multi-asset class global clearing house operator that includes LCH SA (LCH Group's subsidiary based in Paris) and LCH Ltd. ("LCH"), the UK clearing house with an open access model, LSEG owns Cassa di Compensazione e Garanzia ("CC&G"), the Italian clearing house, and Monte Titoli S.p.A., an Italian-based custody and settlement business;²⁵
- c. **Information services:** Through various subsidiaries including FTSE Russell, LSEG provides a range of information and data products, including indices and benchmarks, real-time pricing and reference data, as well as analytics, reporting, reconciliation services and regulatory disclosure distribution services;²⁶ and
- d. **Technology services:** LSEG is also a developer and operator of technology solutions, including trading, market surveillance and post-trade systems for a number of organisations and exchanges, including LSEG's own markets. Additional services include network connectivity,

²² Paragraph 10.5 of Form M1.

²³ Paragraph 10.5 of Form M1.

²⁴ Paragraph 10.6.1 of Form M1.

²⁵ Paragraph 10.6.2 of Form M1.

²⁶ Paragraph 10.6.3 of Form M1.

hosting and quality assurance testing. MillenniumIT and GATElab are among the group's technology companies.²⁷

12. In Singapore, LSEG provides products and services to customers under the trade names of "LSEG", "Millennium IT", "FTSE Russell", "The Yield Book"; "SEDOL", "Unavista", "ForexClear" and "SwapClear".²⁸ Its physical presence in Singapore is in the form of sales offices (the FTSE International Limited Singapore Branch and LCH Limited Singapore Branch) or client support offices (Millennium IT Software (Private) Limited (Singapore Branch)).²⁹
13. LSEG's total (group) worldwide turnover in the financial year which ended on 31 December 2018 was approximately €2,411.1 million (approximately S\$3,769.0 million).³⁰ Its total (group) Singapore turnover for the same financial year was approximately £[X] (approximately S\$[X]).

(b) The Target

Refinitiv business

14. Refinitiv Holdings is the ultimate holding company of the subsidiaries and assets that form the Refinitiv business to be acquired as part of the Transaction.³¹ Refinitiv Holdings is a vehicle owned by BCP York Holdings (Delaware) L.P. ("ConsortiumCo") and Thomson Reuters.³² ConsortiumCo is a vehicle owned by a consortium of investors including Blackstone ([X]% interest), Canada Pension Plan Investment Board ([X]% interest) and Suzuka Investment Pte. Ltd. ([X]% interest).³³
15. Refinitiv is one of the main providers of financial markets data and infrastructure, providing its services globally to over 40,000 institutions in 190 countries.³⁴ It provides data and insights, trading venues, and open data and technology platforms that connects the global financial community to transact and manage risk in a safe, effective and efficient way.³⁵ Refinitiv offers a comprehensive range of solutions that can broadly be divided into three primary business

²⁷ Paragraph 10.6.4 of Form M1.

²⁸ Paragraph 10.3 of Form M1.

²⁹ Paragraph 10.21 of Form M1.

³⁰ Paragraph 13.1 of Form M1.

³¹ Paragraph 7.3 of Form M1.

³² Paragraph 7.3 of Form M1.

³³ Paragraph 8.5 of Form M1.

³⁴ Paragraph 10.7 of Form M1.

³⁵ Paragraph 10.7 of Form M1.

segments: (a) data and analytics; (b) capital markets and workflow solutions; and (c) risk management services.³⁶

16. The Refinitiv business to be acquired pursuant to the Transaction also (indirectly) includes the activities of Tradeweb, an independent US publicly-traded company, which Refinitiv holds an approximately 54% economic stake in.³⁷ Tradeweb is an operator of electronic trading venues for OTC trading of fixed income and derivatives products and offers price discovery, order execution and trade workflows services to more than 2,500 clients of a global network of the world's largest banks, asset managers, hedge funds, insurance companies, wealth managers and retail clients. Tradeweb's revenues from customers in Singapore come mainly from trading services for IRDs (in particular, swaps/swaptions).³⁸ The Parties submitted that Tradeweb's activities in Singapore were considered in the notification notwithstanding that: (a) Refinitiv does not wholly-own Tradeweb; and (b) Tradeweb is an independent, publicly listed company that has other shareholders, its own management team, and its own Board with fiduciary duties not just to Refinitiv, but also its public and other minority shareholders.³⁹ The Parties also submitted that the Transaction will not have any impact on Tradeweb's strategic decision-making.⁴⁰
17. In Singapore, the Refinitiv group provides products and services to customers under the trade names "Refinitiv", "Tradeweb", "Infosight", as well as various other business and brand names.⁴¹ Its registered entities in Singapore are all sales offices,⁴² except for Refinitiv Asia Pte. Ltd., which also has various corporate support functions (e.g. finance and communications).⁴³
18. Refinitiv's total (group) worldwide turnover, excluding Tradeweb, in the financial year which ended on 31 December 2018 was approximately €5,323.1 million (approximately S\$8,321.1 million).⁴⁴ For that same financial year, Tradeweb's worldwide turnover was approximately US\$684 million (approximately S\$988 million).⁴⁵ Refinitiv's total (group) Singapore turnover,

³⁶ Paragraph 10.8 of Form M1.

³⁷ Paragraph 10.9 of Form M1.

³⁸ Paragraph 14.4 of Form M1.

³⁹ Paragraph 10.9 of Form M1.

⁴⁰ Paragraph 10.9 of Form M1.

⁴¹ Paragraph 10.4 of Form M1. The other business and brand names include Autex, Datascope, Datastream, Eikon, Elektron, Enterprise Risk, FXall and Matching, Lipper, TREP, WorldCheck, and WM Reuters FX benchmarks.

⁴² The Singapore-registered entities are Infosight Singapore Pte. Ltd., Refinitiv Asia Pte. Ltd., Refinitiv Asia Pte Ltd – Infosight Singapore Division, Refinitiv Transaction Services Limited Singapore Branch, Refinitiv Transaction Services Pte. Ltd., and Tradeweb Europe Limited Singapore Branch.

⁴³ Paragraph 10.22 of Form M1.

⁴⁴ Paragraph 13.2 of Form M1.

⁴⁵ Paragraph 13.2 of Form M1.

excluding Tradeweb, for the financial year which ended on 31 December 2018 was US\$[<] (approximately S\$[<]).⁴⁶ Tradeweb’s Singapore turnover for the year ended on 31 December 2019 was US\$[<] (approximately S\$[<]).⁴⁷

III. The Transaction

(a) Nature of the Transaction

19. The Transaction, which was completed on 29 January 2021, concerns the acquisition by LSEG of sole control over the entire Refinitiv business which Refinitiv Holdings is the holding company for, and is structured as an all share acquisition (i.e. LSEG will make payment to Refinitiv Holdings in LSEG shares, instead of making payment in cash to Refinitiv Holdings; although LSEG may, at its option, settle up to US\$2.5 billion of the consideration for Refinitiv in cash) pursuant to the Sale and Purchase Agreement (“SPA”) dated 1 August 2019,⁴⁸ as amended on 23 August 2019 and 4 November 2019, between, among others, LSEG and Refinitiv Holdings.⁴⁹ The Parties submitted that the enterprise value of the Transaction is approximately US\$ 27 billion (approximately S\$39 billion), as at 1 August 2019.⁵⁰

20. The SPA states that the Long Stop Date for the Transaction is 31 May 2021 (i.e. the SPA may be terminated by LSEG or Refinitiv Holdings by written notice if the Transaction is not consummated by that date) and does not provide for the Long Stop Date to be extended by either Party.⁵¹

(b) Commercial Rationale for the Transaction

21. The Parties submitted that the Transaction will enhance the merged entity’s product and service offering by bringing together LSEG’s diversified global FMI business – with its focus on capital markets, post-trade and risk management, and information and technology services – and Refinitiv’s market data, analytics and execution capabilities, positioning the merged entity well to compete globally through enhanced data and technology enabled innovation and product offerings for customers.⁵²

⁴⁶ Paragraph 13.4 of Form M1.

⁴⁷ Paragraph 13.4 of Form M1.

⁴⁸ Annex 9 to Form M1.

⁴⁹ Paragraph 11.1 of Form M1.

⁵⁰ Paragraph 11.8 of Form M1.

⁵¹ Article 12.01(b) of the SPA.

⁵² Paragraphs 12.2 of Form M1.

22. Specifically, the Parties submitted that the Transaction will enable the merged entity to:
- a. **deliver on LSEG’s objective of geographic diversification to better serve its global customer base** by combining Refinitiv’s activities and customer relationships across North America, Asia and emerging markets with LSEG’s established presence in the UK and Continental Europe;⁵³
 - b. **provide a better product offering by extending and combining capabilities across different asset classes**, which will provide customers with enhanced services across different areas of the financial markets ecosystem. LSEG believes opportunities exist for technology-driven product innovations across asset classes and that the merged entity will be well-positioned to support customers as they seek opportunities around these trends on a global basis;⁵⁴
 - c. **provide new benchmarking, index and data products and services to enhance customers’ decision-making**. The combination of Refinitiv’s data content, management and solutions capabilities with LSEG’s FTSE Russell index, data and analytics businesses will enable the merged entity to support customers in relation to the growth of passive investment and development of multi-asset investment strategies. This includes the ability to create new indices and analytics products in new emerging areas such as Environmental, Social and Governance (“ESG”) benchmarks;⁵⁵
 - d. **offer customers enhanced choice and access to new, innovative products and services**. LSEG and Refinitiv share a long-standing commitment to open access and a customer partnership approach that delivers innovation and choice to their customers. The merged entity will maintain this open access and customer partnership approach, continuing to drive further customer-led improvements post-Transaction;⁵⁶ and
 - e. **generate significant efficiencies through cost savings and revenue synergies from cross-selling products and services to the Parties’ largely complementary customer bases**. For example, cross-selling opportunities include the distribution of LSEG’s index products and The Yield Book analytics via Refinitiv’s data platforms and the distribution of

⁵³ Paragraph 12.3.1 of Form M1.

⁵⁴ Paragraph 12.3.2 of Form M1.

⁵⁵ Paragraph 12.3.3 of Form M1.

⁵⁶ Paragraph 12.3.4 of Form M1.

Refinitiv's pricing and reference data to LSEG's index customers. The merged entity will also be able to create new indices and analytics products from Refinitiv's data sets and expand the asset class coverage of the existing products and services.⁵⁷

(c) Whether the Transaction constitutes a merger under section 54 of the Act

23. The Parties submitted that the Transaction constitutes a merger within the meaning of section 54(2)(b) of the Act, given that it involves LSEG (directly or through wholly owned subsidiaries) acquiring the entire issued share capital from certain subsidiaries of Refinitiv Holdings, and thereby conferring sole control over Refinitiv to LSEG.⁵⁸

CCCS's assessment

24. CCCS is of the view that the Transaction constitutes a merger under section 54(2)(b) of the Act arising from the acquisition of direct control by LSEG over Refinitiv.

VI. Competition Issues

Parties' submission

25. The Parties submitted that at a global level, whilst the Parties are both active in the financial markets industry, there is little horizontal overlap in their businesses. LSEG's focus is on capital markets, post-trade and risk management services, and information and technology services, whereas Refinitiv is primarily active in the provision of financial information products, analytics and execution services.⁵⁹ Even in areas where the Parties (including their subsidiaries) are active on a global basis within the same broad product segments (i.e. fixed income, financial derivatives, information services and data and analytics), the Parties submitted there is little competitive overlap between them in practice as the Parties focus on different products and services, execution environments, customers and/or geographies. This is because Refinitiv is primarily a compiler and aggregator of financial information (with limited activities in the generation of financial information), which is supplied to customers principally as a comprehensive packaged solution delivered

⁵⁷ Paragraph 12.3.5 of Form M1.

⁵⁸ Paragraphs 11.1 and 11.2 of Form M1.

⁵⁹ Paragraph 10.11 of Form M1.

through datafeeds or desktop services. LSEG, on the other hand, is principally active in the generation of financial information from the venues that it operates, and, unlike Refinitiv, does not supply packaged solutions⁶⁰ to its customers.⁶¹

26. In this regard, the Parties submitted that the Parties (including Tradeweb) overlap in Singapore only in respect of index licensing (specifically, fixed income index licensing (excluding hybrids))⁶² to customers in Singapore (the “**Overlapping Goods or Services**”).⁶³ According to the Parties, indices measure changes in the value or performance of one or more underlying markets, market / geographic sectors or performance characteristics,⁶⁴ and are primarily used for the following purposes of: (a) measuring market performance⁶⁵ or as a benchmark; (b) as a reference value⁶⁶; or (c) to track funds⁶⁷. Customers of the Parties’ indices include large global asset owners, asset managers, ETF providers, data vendors, investment banks, pension funds, corporates, derivatives trading and clearing venues as well as exchanges.⁶⁸
27. Even though both Parties provide (a) venue data, (b) financial information products sold as packaged solutions and (c) security identifiers to customers in Singapore, the Parties submitted that no horizontal overlap arises in Singapore in respect of these products and services for the reasons set out below:
- a. **Venue data:** Venue data is data that is generated by trading activity on LSEG and Refinitiv’s respective trading venues. LSEG generates venue data from its capital market activities, which primarily consist of real-time venue data from its UK and Italian trading venues. Refinitiv, on the other hand, generates venue data from activities on its FX trading venues,

⁶⁰ With the exception of LSEG’s Mergent, and The Yield Book, which LSEG has an extremely limited presence in.

⁶¹ Paragraph 10.12 of Form M1.

⁶² Footnote 15 of Form M1. In the context of index licensing, within the asset class of “fixed income”, the Parties submitted that convertible bonds should be considered as a separate asset class to bonds (the value of convertible bonds being largely determined by the value of the optionality to convert the bond to an equity). The same is true of preferred securities (i.e. equity instruments paying a fixed dividend), in respect of which the Parties are not active, such that they should similarly be considered separately from bonds. Convertibles and preferred securities are “hybrids”, and hence the term “fixed income (excluding hybrids)” essentially refers to bonds.

⁶³ Paragraph 15.1.1 of Form M1.

⁶⁴ Paragraph 18.1 of Form M1.

⁶⁵ Paragraph 18.1.1 of Form M1. Indices can be used to indicate the performance or movements in price of a market, portfolio, market rate or basket of securities or as a benchmark against which to assess the performance and risk of a given financial instrument or investment.

⁶⁶ Paragraph 18.1.2 of Form M1. An index can provide a reference value for the amount payable under a financial contract or the value of tradable investment products, such as derivatives which may be traded on-exchange or on an OTC basis.

⁶⁷ Paragraph 18.1.3 of Form M1. Indices can be used as the basis of a tracking fund (such as ETFs or mutual funds), which will involve the investment portfolio being formed based on the constituents of the index.

⁶⁸ Paragraph 18.8 of Form M1.

Matching and FXall, and supplies this data to customers. However, the Parties do not compete closely in the distribution of venue data. In general, such data generated by exchanges and other trading venues are not close substitutes, due to, for example, legacy reasons and differences in liquidity on different trading venues. In addition, for the most part, the Parties' venues have a differing asset class focus at the trading level (LSEG-operated venues are centred on equity and fixed income trading while Refinitiv-operated venues are centred on FX trading), and the data they generate would therefore not be substitutable (since they relate to different asset classes). Further, given that LSEG has no trading business in Singapore, the combination of the Parties' activities in venue data is of no or minimal relevance to customers in Singapore, since the primary use case for venue data is for the trading of securities. As such, the Parties submitted that venue data is not an area of horizontal overlap in their notification.⁶⁹

- b. **Financial information products (packaged solutions⁷⁰):** Consistent with their view of market practice and industry dynamics, the Parties submitted that the most appropriate framework⁷¹ in which to analyse competitive dynamics in financial information products is by reference to packaged solutions. In Singapore, LSEG has a *de minimis* and notional

⁶⁹ Paragraph 15.2.1 of Form M1.

⁷⁰ According to footnote 19 of Form M1, the Parties submitted that packaged solutions comprises real-time data feeds, non-real-time data feeds and desktop services. The majority of Refinitiv's financial information products are offered as packaged solutions. While it is possible for customers to licence discrete content sets within Refinitiv's non-real-time datafeeds services, these only account for [10 – 20%] of Refinitiv's revenues from 2018 from non-real-time data feeds. Refinitiv's real-time datafeeds and desktop services are only available as packaged solutions. Datafeeds are generally licensed for machine consumption and delivered via an application programming interface (API), file transfer protocol (FTP) or other method of data transfer, which customers then use as an input to applications or portals built in-house or sourced from third parties. A real-time datafeed is one which gives a customer access to raw market data with very low latency. Desktop solutions licensed for individual (human) end-user consumption and delivered via a "front-end" window that enables the end-user to access the content, analytics and workflow functionalities contained in the product (e.g. messaging functions, charting tools, calculation tools, access to market liquidity, etc.) on the screen. Desktop products are now typically web-delivered solutions.

⁷¹ The Parties submitted that given the specific context of the present Transaction, which concerns Refinitiv's activities in the collation and distribution of financial information products (where LSEG has a limited presence), the Parties consider that the market segmentation set forth by the merging parties in Blackstone / Thomson Reuters F&R Business (i.e. real-time datafeed services, non-realtime datafeed services and desktop services) remains the best reflection of market practice and industry dynamics for the following reasons: (a) Refinitiv sells and markets the vast majority of its desktop services to end-users as part of a comprehensive fully integrated desktop product, where individual content sets are not individually priced or sold; (b) competitors similarly price in packaged formats for desktop services in the normal course of business (e.g. Bloomberg, S&P Global, SIX Financial, FactSet, ICE, and Morningstar); and (c) a similar packaging and marketing model is applied to the majority of Refinitiv's datafeeds which are sold as comprehensive packaged solutions. See footnote 25 of Form M1 and paragraph 53.1 of Parties' response dated 28 April 2020 to CCCS's RFI dated 20 April 2020.

presence in packaged solutions through its Mergent⁷² product. Notably, LSEG generates only £[X] (approximately S\$[X]) of revenues from sales to customers in Singapore as it is mainly sold to customers in the United States.⁷³ According to the Parties, Mergent in any event does not constitute a comprehensive packaged data solution or comprehensive package of feeds which is a key characteristic of the Refinitiv offering. The Parties submitted that due to LSEG's *de minimis* presence in Singapore, as well as the *de minimis* ([0-10]%) aggregation of worldwide market shares from the combination of LSEG's and Refinitiv's offerings in packaged solutions, there is no overlap in this area of any material significance.⁷⁴

Similarly, LSEG has a limited presence in packaged solutions amounting to £[X] (approximately S\$[X]) through The Yield Book. However, the Parties submitted that The Yield Book is also not a comprehensive packaged data solution or comprehensive package of feeds. While the single security functionality could be viewed as an individual module within the analytics platform (and therefore be characterised as a "packaged solution"), The Yield Book, which is focused on fixed income single security analytic capabilities together with portfolio management functionality, has a narrow use case and specialist functionality with which Refinitiv does not compete.⁷⁵ Accordingly, the Parties submitted this is not an area of horizontal overlap in this notification.⁷⁶

- c. **Security identifiers and identifying codes:** The Parties submitted that LSEG deploys and offers industry codes issued for the unique identification of securities (i.e. security identifiers), whereas Refinitiv deploys and offers identification codes as part of its services which are used to refer to the subject of the underlying information it distributes to its clients (e.g. names, tickers, Reuters Instrument Codes ("RICs")). Refinitiv has two principal identification code offerings, called RICs and PermID, but neither competes closely with LSEG's SEDOL security identifier, due to different use cases. According to the Parties, Refinitiv in any event only generated *de minimis* revenues in Singapore in 2018 of US\$[X] (approximately S\$[X]) by licensing its RICs to clients who

⁷² According to footnote 26 of Form M1, the Parties submitted that Mergent comprises a discrete selection of content sets (e.g. broker research reports, earnings estimates, fundamentals data and ownership content data) that can be characterised as a "packaged solution".

⁷³ Footnote 7 of Form M1.

⁷⁴ Paragraph 15.2.2(a) of Form M1.

⁷⁵ Footnote 7 of Form M1.

⁷⁶ Paragraph 15.2.2(b) of Form M1.

wish to have the right to use RICs to identify non-Refinitiv sourced data in their trade workflow for referential purposes.⁷⁷ PermID and RICs are used almost exclusively by users of Refinitiv data products and are not commonly licensed to third-parties on a stand-alone basis.⁷⁸

28. The Parties also submitted that there are non-horizontal⁷⁹ links between various products and services offered by the Parties in the six categories of products for which either one or both Parties generate revenue from customers in Singapore and require inputs from each other in order to produce, namely:
- a. trading services;
 - b. post-trade (clearing) services;
 - c. index licensing;
 - d. financial information products;
 - e. regulatory reporting services; and
 - f. IT services and software.

However, the Parties submitted that because of, *inter alia*, regulatory constraints and competitive alternatives, there are no markets globally in which strategies that could result in the marginalisation or exclusion of rivals are plausible.⁸⁰

CCCS's assessment

29. CCCS has received feedback⁸¹ suggesting that the Parties have minimal horizontal overlap across all products and services offered globally. Only a few third-parties⁸² have identified horizontal overlap between the Parties. Most of the

⁷⁷ Paragraph 15.2.3 of Form M1.

⁷⁸ Footnote 30 of Form M1.

⁷⁹ In OTC trading / clearing, which are relevant non-horizontal links in Singapore, it is the trading customers who choose the trading venue on which to execute their trades and the CCP with which to clear. There is no technical supply-customer relationship between a trading venue and a CCP. In financial information services, market players supply each other with different content sets as an input. The non-horizontal links were identified following a comprehensive exercise which mapped the services or content sets which LSEG, Refinitiv and Tradeweb can theoretically supply to each other in order to facilitate the sales of their products and services to Singaporean customers. See slide 34 of Technical Briefing slides submitted by the Parties.

⁸⁰ Paragraph 10.14 of Form M1.

⁸¹ [X]'s response dated 21 April 2020 to questions 13 and 14 of CCCS' Invitation to Comment dated 9 April 2020; Notes of Call with [X] dated 15 April 2020; [X]'s response dated 21 April 2020 to questions 13 and 14 of CCCS' Invitation to Comment dated 9 April 2020; [X]'s response dated 20 April 2020 to question 9 of CCCS' Invitation to Comment dated 9 April 2020; [X]'s response dated 12 May 2020 to question 3 of CCCS' Invitation to Comment dated 8 May 2020.

⁸² Notes of Call with [X] dated 22 April 2020; [X]'s response and enclosed minutes dated 24 April 2020 to CCCS's Invitation to Comment dated 9 April 2020; [X]'s response dated 25 May 2020 to Question 1a and 6 of CCCS's Further Questions dated 18 May 2020; [X]'s response dated 23 April 2020 to question 6b, 6e, 6g, 7b, 7c, 7d and 22 of CCCS's Invitation to Comment dated 9 April 2020; Paragraph 7 of [X]'s submission dated 7 October 2020 pursuant to CCCS's public consultation dated 16 September 2020.

concerns⁸³ raised were non-horizontal in nature. Based on information available, CCCS is of the view that competition concerns are unlikely to arise from the Transaction with respect to the supply of any overlapping goods or services.

30. Given the lack of overlaps between the Parties' overall business and low risk of competition concerns arising for the goods and services which both Parties supply, CCCS has focused its assessment of the Transaction on the non-horizontal links between the Parties in the following products for which either or both Parties generate revenue from customers in Singapore and require inputs from each other in order to produce, namely:

- a. trading services;
- b. post-trade (clearing) services;
- c. index licensing;
- d. financial information products;
- e. regulatory reporting services; and
- f. IT services and software.

31. In evaluating the potential impact of the Transaction, CCCS considered whether the Transaction will lead to non-horizontal (vertical and conglomerate) effects that would substantially lessen competition or raise competition concerns in any market in Singapore.

VII. Counterfactual

32. In determining whether a merger will substantially lessen competition in Singapore, CCCS will evaluate the likely state of future competition with and without the merger situation.⁸⁴ The competitive situation without the merger is referred to as the "counterfactual".⁸⁵ In most cases, the best guide to the appropriate counterfactual will be the prevailing conditions of competition, although CCCS may need to take into account likely and imminent changes in the structure of competition in order to accurately reflect the nature of rivalry without the merger.⁸⁶

⁸³ [X]'s response dated 11 May 2020 to question 1 of CCCS's Invitation to Comment dated 9 May 2020; Notes of call with [X] dated 23 April 2020; [X]'s response dated 21 April 2020 to CCCS' Invitation to Comment dated 9 April 2020, [X]'s response dated 21 April 2020 to question 6 of CCCS' Invitation to Comment dated 9 April 2020; Paragraph 12 of notes of call with [X] dated 5 May 2020; [X]'s presentation slides submitted to the [X] dated 22 November 2019; [X]'s response and paragraph 20 of enclosed minutes dated 24 April 2020 to CCCS's Invitation to Comment dated 9 April 2020.

⁸⁴ Paragraph 4.14 of the *CCCS Guidelines on the Substantive Assessment of Mergers 2016*.

⁸⁵ Paragraph 4.14 of the *CCCS Guidelines on the Substantive Assessment of Mergers 2016*.

⁸⁶ Paragraph 4.16 of the *CCCS Guidelines on the Substantive Assessment of Mergers 2016*.

The Parties' submissions

33. The Parties submitted that if the Transaction does not occur, the Parties would continue to operate independently; the appropriate counterfactual would thus be the pre-merger competitive conditions.⁸⁷

CCCS's assessment

34. In the absence of market feedback or evidence suggesting otherwise, CCCS considers the appropriate counterfactual to be the prevailing conditions of competition prior to the Transaction, which is that the Parties will continue their business operations independently.

X. Competition Assessment

Non-Horizontal Effects: Vertical and Conglomerate Effects

35. Vertical effects may arise from a merger involving firms at different levels of the supply chain, for example a merger between an upstream supplier and a downstream customer. The vertically-integrated firm may be able to foreclose rivals from either an upstream market for selling inputs or a downstream market for distribution or sales.⁸⁸ CCCS will be concerned in situations where competitors lack a reasonable alternative to the vertically integrated firm, as they may either be deprived of access to inputs or customers altogether or might be allowed to obtain the product or the facility only at unfavourable prices, thereby lessening rivalry in the market.⁸⁹ CCCS will also consider whether the merged entity would have the ability and incentive to foreclose its competitors and the likely effect of that foreclosure on competition.⁹⁰
36. Conglomerate effects, on the other hand, may arise from a merger involving firms that operate in different product markets, for example, a merger between firms that produce different but related products or a merger between firms operating in entirely different markets. A merger may give rise to a significant prospect that tying or bundling may occur, if the merged entity controls complementary goods. CCCS will be concerned in such a situation if it is

⁸⁷ Paragraph 23.1 of Form M1.

⁸⁸ Paragraph 6.11 of *CCCS Guidelines on the Substantive Assessment of Mergers 2016*.

⁸⁹ Paragraph 6.12 of *CCCS Guidelines on the Substantive Assessment of Mergers 2016*.

⁹⁰ Paragraph 6.13 of *CCCS Guidelines on the Substantive Assessment of Mergers 2016*.

difficult for rivals or new entrants to provide competing bundles which could constrain the behavior of the merged entity.⁹¹

Overview of Non-Horizontal Links

37. The Parties submitted that there are in total six categories of products for which either or both Parties generate revenues from customers in Singapore and require inputs from the other Party in order to be produced. In this respect, the Parties have considered the potential non-horizontal links between them for those products. A brief introduction of each category of product is set out below.⁹²

- a. **Trading services:** Trading is the expression of a mutual commitment by two parties to enter into a transaction involving financial instruments. Trading can occur on different trading venues, and certain securities may also be traded bilaterally OTC.

At a global level, LSEG and Refinitiv (directly and through Tradeweb) are both active in trading services. However, LSEG does not generate trading revenues from customers in Singapore and has no trading business in Singapore.⁹³

- b. **Post-trade services (clearing services):** Clearing refers to activities in the trading cycle between the commitment to enter into a transaction (trade execution) and the fulfilment of that commitment (settlement). The main function of clearing is to ensure that the obligations resulting from the trade are honoured by the transacting parties. After trade execution has taken place, the trade is captured, processed and may then also be cleared. Broadly speaking, market participants often choose to clear through a central counterparty (“CCP”), whose role is then to sit in the middle of the trade and assume the counterparty risk involved (i.e. that one of the counterparties may default on its contractual obligations). However, not all trades are cleared and market participants can instead choose to manage their risk bilaterally, subject to applicable legislative requirements.

At a global level and in Singapore, amongst the Parties, only LSEG is active in the provision of clearing services.

⁹¹ Paragraph 6.24 of *CCCS Guidelines on the Substantive Assessment of Mergers 2016*.

⁹² Paragraph 36.5 of Form M1.

⁹³ Paragraph 15.2.1 of Form M1.

- c. **Index licensing:** Indices measure changes in the value or performance of one or more underlying markets, market/geographic sectors or performance characteristics. Indices are used by financial market participants for a broad range of purposes, e.g., as a reference value for financial contracts or products, to track portfolios and benchmark investment performance, as a basis of tracking funds.

At a global level and in Singapore, both Parties are present in index licensing albeit with a different asset class focus. Refinitiv is principally active in FX benchmarks, in addition to providing a small number of niche products through Tradeweb. LSEG provides (through its FTSE Russell business) a wide range of indices and benchmarks across various asset classes. FTSE Russell's most significant products relate to equities and fixed income indices, and it does not compete with Refinitiv in the FX area. FTSE Russell generates only *de minimis* revenues from fixed income (excluding hybrids) index licensing to customers in Singapore.

- d. **Financial information products sold as packaged solutions:** This includes real-time datafeeds, non-real-time datafeeds and desktop solutions. As explained in the Parties' submission at paragraph 27b above, the Parties consider that the most appropriate framework in which to analyse competitive dynamics in financial information products is by reference to packaged solutions, as it remains the best reflection of market practice and industry dynamics.⁹⁴

As explained also in paragraph 27b above, LSEG has an extremely limited presence in this segment at a global level (and in Singapore)⁹⁵ through

⁹⁴ The Parties submitted in paragraph 53.1 and 53.2 of its response dated 28 April 2020 to CCCS's RFI dated 20 April 2020 that given the specific context of the present Transaction, which concerns Refinitiv's activities in the collation and distribution of financial information products (where LSEG has a limited presence), the Parties consider that the market segmentation set forth by the merging parties in Blackstone / Thomson Reuters F&R Business (i.e. real-time datafeed services, non-real time datafeed services and desktop services) remains the best reflection of market practice and industry dynamics for the following reasons: (a) Refinitiv sells and markets the vast majority of its desktop services to end-users as part of a comprehensive fully integrated desktop product, where individual content sets are not individually priced or sold; (b) competitors similarly price in packaged formats for desktop services in the normal course of business (e.g. Bloomberg, S&P Global, SIX Financial, FactSet, ICE, and Morningstar); and (c) a similar packaging and marketing model is applied to the majority of Refinitiv's datafeeds which are sold as comprehensive packaged solutions. As a result, the Parties therefore submit that competition in the market for financial information products generally takes place on the basis of packaged solutions, and not on the basis of the component content sets.

⁹⁵ The Parties also submitted in paragraph 54.1 of its response dated 28 April 2020 to CCCS's RFI dated 20 April 2020 that LSEG's data are sold as discrete content sets. Mergent is an exception as it comprises a selection of content sets that can be characterised as a packaged solution (though not as a 'comprehensive' packaged solution akin to those offered by Refinitiv).

Mergent⁹⁶ and The Yield Book. The Parties submitted that Mergent is not a close competitor to Refinitiv's packaged data solution, Eikon, and so there is no meaningful increment in the global market for the supply of packaged solutions overall, and even less so in Singapore (where revenues generated from Mergent are *de minimis*). Since LSEG's presence in the downstream segment in Singapore through Mergent is entirely *de minimis*, any potential non-horizontal links between LSEG's Mergent and Refinitiv's upstream inputs would be immaterial.

For completeness, the Parties submitted that LSEG also generates revenues from its sales of The Yield Book⁹⁷ to customers in Singapore. However, the non-horizontal link only technically arises as a result of combining Refinitiv with an existing vertically integrated provider (i.e. FTSE Russell and The Yield Book). Refinitiv is not active in fixed income single security analytics and a technical link only exists because Refinitiv is active upstream as an equities and fixed income licensor. Further, The Yield Book does not use indices from Refinitiv on its platform.

- e. **Regulatory reporting services:** Regulatory reporting involves banks, investment firms, trading venues and other financial institutions making the data relating to their trading activities publicly available or submitted to regulators pursuant to transparency, transaction reporting and market abuse obligations contained in certain financial regulations.

At a global level, Refinitiv (through Tradeweb) and LSEG are both active in the provision of regulatory reporting services. In Singapore, as between the Parties, only LSEG is active in the provision of regulatory reporting services. LSEG's regulatory reporting tool is branded UnaVista.

- f. **IT services / software:** IT services/software include market data platforms, which are a form of middleware offered by some data vendors to manage and distribute multiple sources of in-house and third-party data within their organisation, and services such as network connectivity, hosting and quality assurance testing.

⁹⁶ Mergent is a provider of information on public and private companies, including fundamental data on US companies, time series equity data, corporate actions for North American equities, and US corporate and municipal bond reference data

⁹⁷ The Yield Book focuses on fixed income single security analytics capabilities together with portfolio management functionality.

At a global level, LSEG and Refinitiv are both active in the provision of IT services/software. In Singapore, as between the Parties, only Refinitiv is active in the provision of IT services/software.

38. Information on the revenues generated from customers in Singapore for the six categories of products is set out in Annex A.⁹⁸ An overview of the non-horizontal links identified in respect of each of the products offered to customers in Singapore is presented in Annex B.

Geographical Markets for non-Horizontal Links

39. The Parties submitted that the products which they sell to customers in Singapore, and those which give rise to either a horizontal overlap or a non-horizontal link as a result of the Transaction, are global or at least European Economic Area (“EEA”)-wide in scope. In particular:⁹⁹
- a. **Trading and post-trade clearing services:** the relevant non-horizontal link arises from each of Tradeweb’s trading services provided to customers in Singapore in respect of OTC IRDs and Refinitiv’s trading services provided to customers in Singapore in respect of FX products on the one hand, and LSEG’s clearing services in these two asset classes on the other hand. These asset classes are traded and cleared on a global basis – investors (and their intermediaries) residing in a specific country also use trading venues and clearing houses in other countries.
 - b. **Financial information products (venue data, index licensing, packaged solutions, other financial information products):** both LSEG and Refinitiv generate revenue from the sale of a range of financial information products to customers in Singapore. A number of these financial information products are also non-horizontally related to those sold downstream to customers in Singapore. The Parties submitted that the markets for the supply of venue data, index licensing, packaged solutions and other financial information products are global in scope. It is also the Parties’ submission that this is consistent with the approach adopted by the European Commission (“EC”) in previous decisions.¹⁰⁰ Below are several factors submitted by the Parties that indicate that all relevant markets in

⁹⁸ Please note that Annex A includes clearing revenues generated indirectly from some Singaporean customers who clear through non-Singaporean clearing members. LCH only invoices clearing members for its clearing services. LCH does not have any Singaporean clearing members. See paragraphs 19.1 to 19.3 of Parties’ response dated 4 May 2020 to CCCS’s RFI dated 20 April 2020.

⁹⁹ Paragraph 6.1 of the Parties’ response dated 5 June 2020 to CCCS’s RFI dated 13 May 2020.

¹⁰⁰ However, CCCS notes that the Parties did not provide any reference to the previous EC’s decisions.

relation to the supply of financial information products and indices should be considered global in scope:

- i. There are no material regulatory or technical barriers that prevent suppliers from operating on a global basis;
- ii. The Parties' customers for information services are located across the world and tend to be large international firms operating in global financial markets;
- iii. The supply of financial information products and indices generally requires a limited physical distribution network, save where the customer wants to receive the same via a physical desktop terminal;
- iv. Transportation costs (including for the delivery of physical desktops and datafeeds) constitute only a fraction of the total cost of supply;
- v. In practice, the suppliers of financial information products and indices are active on a global basis; and
- vi. Prices do not vary materially across regions and countries, in particular because the same fee schedules are used for customers irrespective of the country or region in which they are located (and who are in many cases global organisations).

c. **IT services & software:** IT services and software are provided on a global market for reasons similar to those enumerated in paragraphs 39(b)(i) to 39(b)(vi) above.

CCCS's assessment

40. Based on feedback received which is consistent with the Parties' submission in paragraph 39 above, CCCS has, for the purpose of its assessment, considered the geographic scope of the market to be global-to-global (including to and from Singapore).

Summary of the Parties' Position

41. The Parties submitted¹⁰¹ that the Transaction does not give rise to non-horizontal competition concerns in any plausible market in Singapore and would instead enhance the merged entity's product and service offering by bringing together LSEG's diversified global business and Refinitiv's market data, analytics and execution capabilities, and will generate significant customer benefits, including (but not limited to) the extension of capabilities across asset classes and creation

¹⁰¹ Paragraphs 36.1 and 36.2 of Form M1.

of efficiencies from cross-selling and new products. According to the Parties, no such non-horizontal competition concerns would arise in relation to the relevant downstream products sold to customers in Singapore and the corresponding upstream inputs for the following reasons:

- a. The impact in Singapore of any non-horizontal links is limited, based on the relatively limited presence of the Parties downstream in Singapore (compared to other jurisdictions). Adopting a foreclosure strategy in respect of any of these downstream product or service categories in Singapore would be implausible in view of the minimal presence of the Parties in the downstream activities in Singapore relative to their global sales;
- b. The upstream market shares of the Parties in respect of each of the relevant inputs is (save for some limited exceptions) low;
- c. To adopt any strategy of foreclosure in respect of any downstream product or service category sold to customers in Singapore (or indeed anywhere else) would mean that LSEG would reverse its policy of “open access” which is a key element of LSEG’s fundamental commercial proposition as a trusted partner to the financial services industry. This policy – which LSEG has pursued for many years, and which it considers has generated significant value for its shareholders – is critical to preserving relationships with its existing business partners and generating new business opportunities. To change this policy and adopt a "vertical" silo model (e.g. for its venue data for instance) would be a major strategic shift which would undermine LSEG’s investment in these relationships, and would ultimately be counterproductive;
- d. Underpinning this is the fact that in general, LSEG considers that it is incentivised to distribute its products which may be used as inputs into some downstream markets as widely as possible as it will increase the commercial attractiveness and demand for the Parties’ data and related services;
- e. In some of the non-horizontally affected markets, the merged entity will continue to operate in a regulatory environment of extensive regulatory scrutiny. Even where a product is not currently regulated, it can be expected that any exclusionary strategy that operated to the disbenefit of customers (at any level of the market) or the market ecosystem as a whole would attract immediate regulatory scrutiny at a time when regulatory sensitivities are already heightened, resulting in adverse impact to LSEG’s business;

- f. The Parties' customers (at all levels of the market) are generally highly sophisticated operators, and they would have a wide range of strategies at their disposal to retaliate against any attempt to implement a foreclosure strategy which damaged their business. This is doubly true of those customers who are also competitors at one or other level of the market – for example, [X] and [X], on which Refinitiv is dependent for important parts of its data offering; and
 - g. In almost all markets in which a customer foreclosure theory might be posited, the merged entity will face a range of significant competitors. In addition, a necessary condition for customer foreclosure concerns to arise is that the relevant downstream activities of the Parties are an important and critical route to market for the competitors that the Parties face upstream. This is not the case due to the minimal presence of the Parties in the downstream activities in Singapore relative to global sales.
42. The Parties submitted¹⁰² that the factors given in paragraph 41 above would apply globally and also to customers in Singapore and that in relation to a number of non-horizontal links, competition concerns are even less likely to arise in Singapore.¹⁰³ This is because some of the global inputs identified are, generally, of lesser relevance to Singaporean customers – this is the case, for example, in relation to:¹⁰⁴
- a. **LSEG's venue data.** LSEG's sales of venue data to customers who are located in Singapore are very limited. In 2018, LSEG's sales to these customers of its venue data amounted to just £[X] (approximately S\$[X]), representing a *de minimis* [0-10]% of its global sales of venue data. This is likely because LSEG's venue data relates to trading venues located outside of Singapore. In addition, LSEG's venue data are not used in any indices sold by Refinitiv to customers in Singapore. More generally, LSEG venue data will not be relevant for a third-party index licensing provider looking to create and maintain an index that captures a universe of Singaporean constituents. In that situation, the provider would need to source prices for the index, and it is very likely that those prices would not come from any LSEG venues because the constituents are much more likely to be listed in Singapore or on a more local stock exchange (they would likely come from

¹⁰² Paragraph 6.3 of the Parties' response dated 5 June 2020 to CCCS's RFI dated 13 May 2020.

¹⁰³ Paragraph 6.4 of the Parties' response dated 5 June 2020 to CCCS's RFI dated 13 May 2020.

¹⁰⁴ Paragraph 6.4.1 of the Parties' response dated 5 June 2020 to CCCS's RFI dated 13 May 2020.

the Singapore Stock Exchange (“SGX”) and an index licensing provider would need the prices from the primary market on which the relevant securities are listed); and

- b. **Other financial information products.** A number of LSEG financial information products generate limited revenue from Singaporean customers, such as security identifiers (LSEG generated SEDOL sales of £[X] (approximately S\$[X]) in FY18 from customers in Singapore, representing less than [X][0-10]% of its total global sales) and regulatory information services (LSEG generated Regulatory News Service¹⁰⁵ sales of £[X] (approximately S\$[X]) in FY18 from customers in Singapore, representing less than [0-10]% of its total global sales).

43. The Parties also submitted that some of the Parties’ “downstream” products are, generally, of lesser relevance to Singaporean customers. For example:¹⁰⁶

- a. **LSEG’s index licensing.** In 2018, LSEG generated sales of only £[X] (approximately S\$[X]) from Singaporean customers, which represents less than [0-10]% of its global sales of index and benchmark licensing. As with venue data, LSEG’s sales to Singaporean customers make up a very small proportion of its global index licensing business.
- b. **LSEG’s clearing services.** LSEG does not have any clearing members in Singapore, and while some Singaporean customers clear through non-Singaporean clearing members those indirect revenues are limited at approximately £[X] (approximately S\$[X]).

44. For the reasons set out in paragraphs 42 and 43 above, the Parties submitted that any hypothetical non-horizontal concerns in relation to these upstream and downstream products and services with the Transaction can be said to be less likely to arise in Singapore, compared to geographies where the Parties are physically located, and/or generate more revenue.

CCCS’s assessment

45. CCCS did not receive any feedback that raised non-horizontal competition concerns that could impact competition in the supply of (1) regulatory reporting

¹⁰⁵ LSEG’s RNS is a regulatory and financial communications channel which helps companies and their intermediaries disseminate UK (and other global) regulatory disclosures. RNS’ clients include UK-listed companies and UK financial public relations firms and corporate advisers.

¹⁰⁶ Paragraph 6.4.2 of the Parties’ response dated 5 June 2020 to CCCS’s RFI dated 13 May 2020.

services and (2) IT services and software. Accordingly, CCCS's assessment in this section focused on the concerns that third-parties expressed relating to foreclosure of access to Refinitiv's and LSEG's products and services to competitors in the supply of: (3) clearing services; (4) index licensing services; (5) trading services; and (6) packaged solutions, organized as such:

- a. **Foreclosure of access to specific Refinitiv's products and services**
 - i. Foreclosure by the merged entity of access to Refinitiv WM/R FX benchmarks for competing clearing service providers and index licensing providers;¹⁰⁷
 - ii. Foreclosure by the merged entity of access to Refinitiv's financial information such as indicative IRS prices and Reuters' BBA LIBOR rates for clearing service providers¹⁰⁸; and
 - iii. Foreclosure by the merged entity of access to Refinitiv's reference data for competing trading venues and packaged solutions;¹⁰⁹
- b. **Foreclosure of access to Refinitiv's packaged solution and distribution services in general**
 - i. Foreclosure by the merged entity of access (including denied access, slower access, degraded data and services quality) to Refinitiv's products and packaged solutions for competing index licensing providers and clearing service providers;¹¹⁰ and
 - ii. Foreclosure of rival trading venues through Refinitiv's refusal to distribute venue data of rival trading venues post-Transaction;¹¹¹
- c. **Foreclosure of access to specific LSEG's products and services**
 - i. Foreclosure by the merged entity of access to LSEG's real-time venue data for competing packaged solutions;¹¹²
 - ii. Foreclosure by the merged entity of access to LSEG's SEDOL security identifiers for competing packaged solutions;¹¹³ and
 - iii. Foreclosure by the merged entity of access to LSEG's FTSE Russell indices;¹¹⁴

¹⁰⁷ This concern was raised in relation to clearing service providers by [REDACTED] and [REDACTED] and in relation to index licensing providers by [REDACTED] and [REDACTED].

¹⁰⁸ This concern was raised by [REDACTED] and [REDACTED].

¹⁰⁹ This concern was raised by [REDACTED].

¹¹⁰ This concern was raised by [REDACTED], [REDACTED] and [REDACTED].

¹¹¹ This concern was raised by [REDACTED].

¹¹² These concerns were raised by [REDACTED] and [REDACTED].

¹¹³ These concerns were raised by [REDACTED] and [REDACTED].

¹¹⁴ These concerns were raised by [REDACTED] and [REDACTED].

d. **Foreclosure of rival clearing houses and trading venues arising from the non-horizontal link in trading and clearing services and packaged solutions**

- i. Foreclosure of rival OTC IRDs clearing houses and rival trading venues (including but not limited to OTC IRD trading venues and FX trading venues) arising from the non-horizontal link in trading and clearing services;¹¹⁵
- ii. Foreclosure of rival packaged solutions arising from the non-horizontal link in trading and clearing services and packaged solutions, as well as restrictions on use of security identifiers;¹¹⁶ and
- iii. Foreclosure of rival clearing service providers through bundling of Refinitiv's packaged solutions with LSEG's clearing services.¹¹⁷

46. An overview of the non-horizontal links between the Parties in respect of each of the downstream markets which third-parties have raised concerns with is shown in **Annex C**.

47. In assessing the likelihood of an anticompetitive input foreclosure scenario, CCCS examined (a) whether the merged entity would have the ability to foreclose competition; (b) whether the merged entity would have incentive to foreclose competition; and (c) the effects on competition of the foreclosure strategy, i.e. whether the competition lost from potentially foreclosed competitors is sufficient to amount to an SLC.

a. **Foreclosure of access to specific Refinitiv's products and services**

- i. *Foreclosure of access to Refinitiv's WM/R FX benchmarks for competing clearing service providers and index licensing providers*

Concern(s) raised by third-parties

48. CCCS received feedback from competitors in the markets for clearing services and index licensing services respectively indicating concerns in relation to continued access to Refinitiv's WM/R FX benchmarks on a non-discriminatory basis post-Transaction. CCCS understands from the Parties' submission that WM/R FX benchmarks could include the WM/Reuters London 4pm Closing

¹¹⁵ This concern was raised by [redacted], [redacted] and [redacted].

¹¹⁶ This concern was raised by [redacted].

¹¹⁷ This concern was raised by [redacted].

Spot Rates (“**WM/R 4pm**”), WM/Reuters Intraday Spot rates, WM/Reuters Intraday Forward rates and WM/Reuters Closing Forward rates.¹¹⁸

The Parties’ submission

About the WM/R FX benchmarks¹¹⁹

49. According to the Parties, the WM/R FX benchmarks provide access to a wide range of FX data, offering intraday and closing spot rates, forward rates and non-deliverable forwards (“**NDFs**”) covering 150+ currencies across the global day. Refinitiv’s FX benchmarks are used by a variety of financial market participants, including asset managers, banks and index licensing providers, across a number of functions, including, among others: to calculate settlement prices of financial contracts and FX based derivatives; to measure portfolio performance; to value investment funds; to calculate indices; for reporting and auditing purposes; and for analysis and research.
50. FX benchmarks, including the WM/R family of benchmarks, are used by clearing houses for various purposes, for example, to assist with the cash settling of OTC IRDs and OTC FX products in the contract’s base currency, and to manage multiple currency coverages on margins / collaterals posted.
51. Index licensing providers use FX benchmarks, including the WM/R family of benchmarks, primarily to express indices in different currencies or construct indices comprising international securities with different currency denominations. They are used across different index asset classes, including equities, bonds and FX indices.
52. Refinitiv’s main WM/R FX benchmark services include:
 - a. Spot rates (including the 4pm UK closing, intraday and historical rates);
 - b. 2pm CET Fix (note that this is a stand-alone spot rate);
 - c. 12noon ET Fix (note that this is a stand-alone spot rate);
 - d. Forwards;
 - e. NDFs; and
 - f. Historical data.

Existing regulatory environment

¹¹⁸ Paragraph 13.3 of the Parties’ response dated 29 May 2020 to CCCS’ RFI dated 13 May 2020.

¹¹⁹ Paragraphs 3.1 to 3.5 of Parties’ response dated 31 August 2020 to CCCS’s Issues Letter dated 2 July 2020.

53. Refinitiv is recognised as an authorised benchmark administrator under the EU Benchmark Regulation (“**EU BMR**”). As a condition under the authorisation for the relevant Refinitiv entity (Refinitiv Benchmark Services (UK) Limited (“**RBSL**”)) to become an authorised benchmark administrator under the EU BMR, Refinitiv committed to the UK Financial Conduct Authority (“**FCA**”) until a decision is reached regarding the criticality of the WM/R 4pm under the EU BMR, that it would operate and administer the WM/R 4pm benchmark in accordance with fair, reasonable and non-discriminatory (“**FRAND**”) principles. According to the Parties, Refinitiv has interpreted this obligation to extend to all users globally (including Singapore) who wish to use the WM/R 4pm for clearing purposes, or any other use case within the meaning of the EU BMR. Article 35 of the EU BMR provides that the FCA may withdraw or suspend the authorisation of an administrator where the administrator no longer meets the conditions under which it was authorised. Since Refinitiv’s authorisation as a benchmark administrator was granted in light of its FRAND commitment to the FCA, ceasing to meet this obligation could lead to the FCA withdrawing or suspending its authorisation (in a worst case scenario). In addition, the FCA has wide-ranging enforcement powers which allow it to, amongst other things, issue public warnings, impose administrative fines and impose cease and desist orders.
54. Following Refinitiv’s commitment to the FCA, in July 2019, Refinitiv’s board adopted universal policies and controls to ensure that all WM/R 4pm customers are provided WM/R 4pm on a FRAND basis. Although the Board policy is limited to ‘users’ under the EU BMR, in practice Refinitiv extends this global policy beyond the requirements of the EU BMR and it is applied to all WM/R 4pm benchmark customers regardless of use case. In addition, the Board policy is applied to all of Refinitiv’s WM/R FX benchmarks (i.e. not just the WM/R 4pm).
55. In other words, Refinitiv applies a policy to make available the entire family of WM/R benchmarks to all customers globally, regardless of use case, as if these were subject to Refinitiv’s FRAND commitment to the FCA (which *de jure* applies only to the WM/R 4pm for all ‘users’ under the EU BMR regardless of location).

No foreclosure of access to Refinitiv’s WM/R FX benchmarks to competing clearing service providers

56. The Parties submitted that benchmarks are used by clearing houses as a reference in the provision of clearing services and functions relating to their roles as

clearing providers. Furthermore, benchmarks are used by clearing houses for the daily calculation of margin interest on collateral balances placed by members. A clearing house may also use benchmark data for risk management purposes (in particular to evaluate possible counterparty risk).¹²⁰

57. A clearing service provider can decide which benchmark it will use to clear its products. However, in practice, a clearing service provider will ensure that the cleared products' terms are sufficiently standardised, and choose a benchmark which is widely adopted both in the cleared and uncleared markets.¹²¹ Clearing service providers make use of WM/R FX benchmarks.¹²² According to the Parties, all of Refinitiv's FX benchmark revenues in Singapore are generated from the WM/R FX benchmarks (including the WM/R 4pm).¹²³ Refinitiv's FX benchmark sales to Singapore customers generated US\$[X] (approximately S\$[X]) which is [0-10]% of Refinitiv's global FX benchmark sales.¹²⁴
58. At the outset, the Parties submitted that the non-horizontal link between Refinitiv's FX benchmarks and LCH's clearing services is not material to the competitive assessment of the Transaction's effects in Singapore as LSEG generated no revenue from clearing members located in Singapore. Rather, LSEG's clearing revenue totaling only approximately £[X] (approximately S\$[X]) in 2018¹²⁵ and £[X] (approximately S\$[X]) in 2019¹²⁶ were generated indirectly¹²⁷, from Singaporean end-customers via non-Singaporean clearing members. LCH only invoices clearing members for its clearing services and LCH does not have any Singaporean clearing members. LCH does not invoice customers who clear through a LCH clearing member – in this scenario, it is the clearing member who invoices the customer. It is with the latter (i.e. the clearing member) that LCH's commercial relationship is with.¹²⁸ The Parties also

¹²⁰ Paragraph 36.37 and 36.38 of Form M1.

¹²¹ Paragraph 13.2 of Parties' response dated 29 May 2020 to CCCS' RFI dated 13 May 2020. For example, LCH ForexClear's product terms include FX rates which are based on standard templates that are published by the Emerging Market Trade Association and International Swaps and Derivatives Association.

¹²² Paragraph 13.3 of the Parties' response dated 29 May 2020 to CCCS' RFI dated 13 May 2020.

¹²³ Paragraph 5.1 of the Parties' response dated 15 June 2020 to CCCS's RFI dated 9 June 2020.

¹²⁴ Footnote 2 of Parties' response dated 15 June 2020 to CCCS's RFI dated 9 June 2020.

¹²⁵ Paragraph 13.1 of Parties' response dated 29 May 2020 to CCCS's RFI dated 13 May 2020.

¹²⁶ Paragraph 3.2 of Parties' response dated 15 June 2020 to CCCS's RFI dated 9 June 2020.

¹²⁷ According to paragraph 4.2 of Parties' response dated 29 May 2020 to CCCS' RFI dated 13 May 2020 and paragraph 30.1 of Parties' response dated 28 April 2020 to CCCS' RFI dated 20 April 2020, a clearing house's customers consist of direct clearing members, who have a principal, direct relationship with the clearing house. Clearing houses may also clear indirectly for clearing clients through clearing members, who are ultimately responsible for meeting obligations of cleared contracts and payment of clearing fees (such clearing members who act on behalf of a client rather than on its own behalf are known as "clearing brokers"). LSEG's clearing members generally include a number of large dealer banks, including but not limited to, the SwapClear Banks. The concentration among clearing clients tends to be more varied, ranging from regional banks, investment banks, hedge funds, pension funds and other investors who clear OTC interest rate derivatives.

¹²⁸ Paragraph 13.1 of Parties' response dated 29 May 2020 to CCCS' RFI dated 13 May 2020.

submitted that the revenue generated indirectly, from Singaporean end-customers via non-Singaporean clearing members is very small (less than [0-10]%) when compared to LCH's global business and Singapore-based clearing customers (who clear through non-Singaporean clearing members) accounted for approximately [0-10]% of SwapClear's SGD swap volumes in 2019, which suggests that the market is global with limited activity attributed to Singapore-based clients.¹²⁹

59. For completeness, the Parties submitted that the merged entity will not have the ability or the incentive to foreclose downstream competitors in clearing services by restricting access to Refinitiv's WM/R FX benchmarks post-Transaction for the following reasons:

- a. Proportionally speaking, Refinitiv's FX benchmarks are not material inputs (in terms of cost) to the provision of clearing services downstream. According to the Parties, this is evidenced by the fact that clearing service providers' spend on these benchmarks is very small compared to the overall size of their business. For example, the combined spend of LSEG's clearing houses LCH, LCH SA, and CC&G on data from Refinitiv only amounted to just over S\$[X] in 2018, including benchmarks as well as other data types, which is insignificant compared to their combined turnover of S\$[X] in 2018.¹³⁰ Apart from this, Refinitiv's FX benchmarks are a *de minimis* input to LCH's clearing services: less than [0-10]% of LCH ForexClear's trades by trade count in 2019 (or approximately [0-10]% by notional value) were based on Refinitiv's FX benchmarks. In addition, Refinitiv's total revenue generated from FX benchmarks licensed to LSEG was €[X] (approximately S\$[X]) in 2018, which accounts for only [0-10]% of its total revenue from FX benchmarks in the same year.¹³¹
- b. Notwithstanding the low amount of spend by LSEG on Refinitiv's FX benchmarks (specifically the WM/R 4pm),¹³² the Parties acknowledged that the benchmark is still important to CCPs.¹³³ Given the importance of WM/R FX benchmarks, Refinitiv has proactively committed to the FCA that it

¹²⁹ Paragraph 19.4 of Parties' response dated 4 May 2020 to CCCS' RFI dated 20 April 2020.

¹³⁰ Paragraph 36.39.1 of Form M1.

¹³¹ Paragraph 13.5 of the Parties' response dated 29 May 2020 to CCCS's RFI dated 13 May 2020.

¹³² According to paragraph 13.5 of the Parties' response dated 29 May 2020 to CCCS's RFI dated 13 May 2020, Refinitiv's FX benchmarks are a *de minimis* input to LCH's clearing services: less than [0-10]% of LCH ForexClear's trades by trade count in 2019 (or approximately [0-10]% by notional value) were based on Refinitiv's FX benchmarks. In addition, Refinitiv's total revenue generated from FX benchmarks licensed to LSEG was €[X](approximately S\$[X]) in 2018, which accounts for only [0-10]% of its total revenue from FX benchmarks in the same year.

¹³³ Paragraph 13.6 of Parties' response dated 29 May 2020 to CCCS' RFI dated 13 May 2020.

would operate it **as if it were** a critical benchmark under the EU BMR. Consequently, Refinitiv is obliged to license the WM/R 4pm to all users on reasonable and non-discriminatory terms, in accordance with Article 22 of the EU BMR.¹³⁴ The Parties submitted that this commitment is applied to all WM/R 4pm licences irrespective of where the customer is located.¹³⁵ The Parties submitted that the FCA commitment does not cover Refinitiv's other WM/R FX benchmarks. However, Refinitiv has extended its FRAND principles and universal FRAND pricing to all WM/R FX benchmark customers on a global basis without distinction based on location, including and CCPs and trading venues located in Singapore.¹³⁶ This is also evident in the extract from Refinitiv's letter to the FCA dated December 2018 below¹³⁷:

*“understanding the importance of FRAND for WM/R 4pm in the market, TRBSL¹³⁸ shall continue to ensure that **WMR 4pm is granted to users in accordance with FRAND principles...** With the expectation that the WM/R 4pm benchmark will be designated as critical, TRBSL enhanced its FRAND framework and policy to align with Article 22 of the EU BMR.” [Emphasis added]*

With respect to Refinitiv's commitment to the FCA, the Parties submitted that failure to comply with that commitment would be subject to the FCA's enforcement and disciplinary measures, and have very severe reputational implications and damaging spill-over effects for the wider operations of the merged entity in Singapore and beyond. Article 35 of the EU BMR provides that the FCA, as the competent authority in the UK under the EU BMR, may withdraw or suspend the authorisation of an administrator where the administrator no longer meets the conditions under which it was authorised. Refinitiv's authorisation as a benchmark administrator to administer the WM/R 4pm was granted in light of its commitment to the FCA to operate and administer the benchmark as a critical benchmark and comply with Article 22 of the EU BMR. It is likely that the FCA will view this as a condition under which Refinitiv was authorised as an administrator of the WM/R 4pm. Accordingly, Refinitiv ceasing to meet this condition could

¹³⁴ Paragraph 13.6 of Parties' response dated 29 May 2020 to CCCS' RFI dated 13 May 2020.

¹³⁵ Paragraph 5.1 of Parties' response dated 15 June 2020 to CCCS's RFI dated 9 June 2020.

¹³⁶ Paragraph 5.2 of Parties' response dated 15 June 2020 to CCCS's RFI dated 9 June 2020.

¹³⁷ Paragraph 13.7 of Parties' response dated 29 May 2020 to CCCS' RFI dated 13 May 2020.

¹³⁸ According to footnote 21 of the Parties' response dated 29 May 2020 to CCCS' RFI dated 13 May 2020, RBSL is designated as the administrator of regulated benchmarks for Refinitiv and is approved as an authorised administrator under the EU BMR by the FCA. RBSL currently administers the WM/R 4pm. RBSL was previously TRBSL.

lead to the FCA withdrawing or suspending its authorisation. In addition, the FCA has wide ranging enforcement powers which allow it to, *amongst other things*, issue public warnings, impose administrative fines, and impose cease and desist orders. The Parties also expect this commitment to remain applicable post-Transaction, as Refinitiv’s authorisation was not provided or conditional on the basis of its current ownership structure.¹³⁹

- c. CCPs relying on Refinitiv’s WM/R FX benchmarks are also now protected under Article 37 of the European Union Markets in Financial Instruments Regulation (“**MiFIR**”) since it came into force on 3 January 2020. In particular, Article 37(a) of the MiFIR requires that “a person with proprietary rights to a benchmark shall ensure that CCPs and trading venues are permitted, for the purposes of trading and clearing, non-discriminatory access to: (i) relevant price and data feeds and information on the composition, methodology and pricing of that benchmark for the purposes of clearing and trading; and (ii) licences” where the value of any financial instrument is calculated by reference to a benchmark. Therefore, an attempt to frustrate rival clearing houses by refusing access to benchmarks can be expected to provoke an immediate and forceful market reaction, including via regulatory intervention and/or clearing house customers seeking legal recourse (through injunctions).¹⁴⁰ According to the Parties¹⁴¹, any EU CCP or trading venue would benefit from Article 37 of the MiFIR without regard to where its customers are based. A number of non-EEA CCPs, while not authorised under European Market Infrastructure Regulation (“**EMIR**”), have been recognised by the European Commission as equivalent under EMIR and could thus also benefit from Article 37 of the MiFIR in circumstances where there has been a finding of equivalence and reciprocal access rights under Article 38 of the MiFIR. The list¹⁴² of the merged entity’s key clearing competitors in Singapore and their authorisation or recognition status in the European Union (“**EU**”) includes SGX and CME (which the Parties have identified to be important players in OTC clearing in Singapore) as well as several others¹⁴³. This would mean that many of the merged entity’s key competitors at both the trading and clearing level could directly benefit from Article 37 due to the fact that they operate a CCP or trading venue that is authorised or recognised in the EU. Currently no equivalence decisions have been made under Article 38 MiFIR and so

¹³⁹ Paragraphs 13.8 and 13.9 of the Parties’ response dated 29 May 2020 to CCCS’ RFI dated 13 May 2020.

¹⁴⁰ Paragraph 36.39.3 of Form M1.

¹⁴¹ Paragraph 15.4 of the Parties’ response dated 5 June 2020 to CCCS’ RFI dated 13 May 2020.

¹⁴² Paragraph 6.1 of Parties’ response dated 15 June 2020 to CCCS’s RFI dated 9 June 2020.

¹⁴³ Australian Securities Exchange, JSCC, Korea Exchange (KRX), and OTC HK.

Singaporean CCPs and trading venues do not currently have the benefit of Article 37 MiFIR.¹⁴⁴

- d. Although the Parties are not aware of any specific regulations in Singapore (or elsewhere that apply to Singapore) that are directly equivalent to Article 37 of the MiFIR or that provide for access to benchmarks on FRAND terms for Singapore customers, the Parties submitted that one of the key objectives of the Monetary Authority of Singapore (“MAS”)’s financial sector oversight is “*fair, efficient and transparent organised markets*”, where “*fair market*” is characterised by proper trading practices, fair access to market facilities and information, and structures that do not tilt the playing field in favour of some market users over others. According to the Parties, MAS has broad powers to impose conditions or issue directions to a benchmark owner which is a licensed financial institution that prevents or restricts fair access to market facilities and information, or engages in any other behaviour that is against the public interest. Therefore, whilst there is no direct regulation requiring the merged entity to provide FRAND access in Singapore, MAS retains broad supervisory powers to protect fair access to market information.¹⁴⁵

The Parties submitted that while the Refinitiv’s Singaporean subsidiary i.e. Refinitiv Asia Pte Ltd (although the WM/R FX benchmark is administered by Refinitiv Benchmark Services (UK) Limited) that licenses Refinitiv’s WM/R FX benchmark licences to customers in Singapore is not currently an entity licensed by the MAS (i.e. a regulated financial institution), pursuant to section 28 of the Monetary Authority of Singapore Act (Cap. 186) (“**MAS Act**”)¹⁴⁶, MAS may require the entity to be licensed¹⁴⁷ and consequently exercise greater supervisory oversight over its activities.¹⁴⁸

¹⁴⁴ Footnote 21 of Parties’ response dated 5 June 2020 to CCCS’ RFI dated 13 May 2020.

¹⁴⁵ Paragraph 4.2 of Parties’ response dated 15 June 2020 to CCCS’s RFI dated 9 June 2020.

¹⁴⁶ MAS may require any financial institution or class or classes of financial institutions whose operations are considered by MAS to affect (a) monetary stability and credit and exchange conditions in Singapore; (b) the development of Singapore as a financial centre; or (c) the financial situation of Singapore generally, to be approved by MAS for the purpose of carrying on business in Singapore.

¹⁴⁷ Paragraph 4.2 to 4.4 of Parties’ response dated 18 June 2020 to CCCS’s RFI dated 16 June 2020.

¹⁴⁸ For instance, under section 28(3) of the MAS Act, MAS may, if it thinks it necessary or expedient in the public interest, give directions either of a general special nature, to approved financial institutions or any class or classes of approved financial institutions in relation to: (a) the range of activities that they may engage in or the range of services that they may provide; (b) the terms and conditions under which they may carry on a particular activity or provide a particular service; and (c) all matters in which it appears to MAS that the activities that they engage in or the services that they provide affect or are likely to affect monetary or economic policy or credit conditions or the development of Singapore as a financial centre, and the financial institutions concerned are required to comply with such directions. More generally, under section 27 of the MAS Act, MAS may request information from, make recommendations to and issue directions where required, to regulated financial institutions if it thinks it necessary in the public interest.

In addition, the Parties highlighted that MAS has general oversight over all financial benchmarks under the Securities and Futures Act (the “SFA”) in Singapore.¹⁴⁹ If in fact the WM/R FX benchmarks were considered significant to the extent that it “has systemic importance in the financial system of Singapore”, MAS would have broad powers to designate it as a financial benchmark for regulation under the SFA¹⁵⁰ and this will attract additional supervisory scrutiny by MAS.¹⁵¹

60. According to the Parties, Refinitiv’s global policy commits the company to applying its FRAND commitments universally across all WM/R 4pm licences and is guided by strong business considerations. Thus, WM/R 4pm customers’ licence contracts include specific terms which implement Refinitiv’s FRAND policies. Among other factors, any deviation or switch away from a global pricing policy for the WM/R 4pm would create confusion and present reputational issues with clients. Refinitiv’s global pricing policy is known to customers, particularly those with users in multiple locations. Further, there would be administrative challenges in tracking multiple pricing structures, accounting, and legal terms based on geography. Therefore, Refinitiv’s commitment to license the WM/R 4pm on a FRAND basis has been extended to all WM/R 4pm customers globally, including any CCPs and trading venues located in Singapore.¹⁵²
61. In addition, the Parties also submitted that the importance of the WM/R FX benchmarks to derivatives clearing service providers should not be overstated as

¹⁴⁹ Paragraph 4.5 of Parties’ response dated 18 June 2020 to CCCS’s RFI dated 16 June 2020.

¹⁵⁰ Paragraph 4.6 of Parties’ response dated 18 June 2020 to CCCS’s RFI dated 16 June 2020. MAS could also designate benchmarks for regulation if any of the following conditions are met - a disruption in the determination of the financial benchmark could affect public confidence in the financial benchmark of the financial system of Singapore, or the determination of the financial benchmark could be susceptible to manipulation; or is otherwise in the interests of the public to do so. Footnote 3 of Parties’ response dated 18 June 2020 to CCCS’s RFI dated 16 June 2020.

¹⁵¹ Under section 123O of the SFA, the administrator of designated financial benchmark must prepare and issue a code which sets out the standards to be maintained by the administrator for that designated financial benchmark. Such code is required to be in line with practices and developments in the market and will be subject to MAS’s approval. Paragraph 4.7 of Parties’ response dated 18 June 2020 to CCCS’s RFI dated 16 June 2020.

¹⁵² Paragraph 15.10 of the Parties’ response dated 5 June 2020 to CCCS’ RFI dated 13 May 2020.

there are at least three competing providers (i.e. Bloomberg¹⁵³, New Change¹⁵⁴ and Hong Kong Treasury Market Association (“HKTMA”)¹⁵⁵) with FX benchmarks that would be suitable alternatives for rival CCPs. The Parties submitted that at a basic level, Bloomberg BFIX and New Change FX benchmarks both offer FX benchmark rates produced at different times through the day (including at 4pm), in a range of currencies. Consequently, from a functional perspective, both are viable alternatives for customers of Refinitiv’s WM/R FX benchmarks, including for use in the creation and calculation of indices and determining the final settlement reference price of derivative products. Although more limited in its offering, the HKTMA rates are also a credible alternative for customers in the Asia-Pacific region in, for example, the trading and clearing of derivatives. According to the Parties, both Bloomberg BFIX and New Change have in fact been referenced in numerous news articles as alternatives to the WM/R product suite.¹⁵⁶ Notably, LCH’s ForexClear uses [☒] for FX options real time spot rates. LCH started using [☒] when it began clearing FX options for real-time spot rates. The [☒] are used by ForexClear for NDFs, a different type of FX contract that settles using [☒].¹⁵⁷ The availability of equivalent FX benchmarks from rival sources underlies that Refinitiv’s inputs are clearly not important to any CCP, and any attempt to gain a competitive advantage at the derivatives clearing level by refusing to supply Refinitiv’s FX benchmarks to rival CCPs would be futile given that these CCPs could readily

¹⁵³ The Bloomberg FX Fixings (“BFIX”) family of benchmarks covers spots, forward and NDF rates for a comprehensive global coverage of currencies. The benchmark includes a 4pm spot rate and is already being used by market participants who need to use foreign exchange rates for a variety of purposes, including index construction. BFIX is aligned with IOSCO principles and administered by Bloomberg’s subsidiary, Bloomberg Index Services Limited, an authorised administrator under the EU BMR and listed on the ESMA Register for approved benchmark administrators.

¹⁵⁴ Please refer to <https://www.newchangeafx.com/> for more information about New Change in particular. New Change FX provides live spot FX benchmarks, including the NCFXMI family of FX benchmarks. It describes itself as an “award winning FX data company” and its customers include sovereign wealth funds, pension schemes, banks, asset managers, asset consultants and major corporations globally. New Change FX is administered by a New Change subsidiary, New Change Currency Consultants Limited, an authorised administrator under the EU BMR. New Change FX has been vocal in the online promotion of its FX benchmarks as a preferable alternative to the WM/R 4pm. Specifically, New Change FX states that its SIREN benchmark, launched in February 2020, is designed to provide “an alternative to the 4pm Fix”, as the “only provider of independent live spot FX benchmarks”, noting that it is “harder to manipulate, has a long observation window and can be calculated in real time”, and “seeks to address the excessive market impact that inevitably arises when executing large transactions over a short 5-minute fixing window”.

¹⁵⁵ Parties submitted that HKTMA is a third viable alternative for customers in the Asia-Pacific region (particularly given that these rates are made available for free on the HKTMA website). Although HKTMA offers limited FX benchmark coverage, with only two currency pairs (namely, US\$/HKD and US\$/CNY(HK)), Refinitiv considers HKTMA’s offering to be a viable alternative for customers in the Asia-Pacific region for those currencies.

¹⁵⁶ See Profit & Loss, “P&L Talk Series with Raidne’s Jamie Walton”, 13 Feb 2020, available at <https://www.profit-loss.com/pltalk-series-jamie-walton/>; Finextra, “Bloomberg FX benchmark now available on NEX eFix Matching Service”, 29 May 2018, available at <https://www.finextra.com/pressarticle/74057/bloomberg-fx-benchmark-now-available-on-nex-efix-matchingservice>; FX Markets, “Best Bank Awards: Bloomberg”,

¹⁵⁷ Paragraph 4.7 Parties’ response dated 31 August 2020 to CCCS’s Issues Letter dated 2 July 2020.

turn to alternative and equally suitable FX benchmark providers.¹⁵⁸ By way of example, Refinitiv submitted that following initial discussions with Refinitiv about licencing the WM/R FX benchmarks, [X] ultimately opted to obtain its FX rates from [X].¹⁵⁹ In addition, the Parties also submitted¹⁶⁰ that Refinitiv has heard on several occasions from customers (who have cancelled their purchase of Refinitiv’s FX benchmarks) that they are moving to an alternative provider, with several mentioning [X] as the alternative they are switching to.¹⁶¹

62. The Parties also submitted that from a CCP’s perspective, there is nothing uniquely attractive about Refinitiv’s WM/R FX benchmarks in the context of ensuring the overall quality and attractiveness of the clearing services it provides. Observable market conduct also provides further compelling evidence that Refinitiv’s WM/R FX benchmarks are not a must-have input, as illustrated by the fact that LCH’s ForexClear uses [X] for FX options real time spot rates and SwapClear does not use Refinitiv’s WM/R FX benchmarks for its clearing services (and this is also the case for numerous rival OTC IRD CCPs). The Parties submitted that of the many rival CCPs, only [X] has a WM/R licence which permits the use of WM/R in respect of all derivatives. On the other hand, [X] (a CCP of global importance) does not currently make use of the WM/R FX benchmarks for clearing purposes. The Parties further submitted that there is no evidence to suggest that a lack of access to Refinitiv’s WM/R FX benchmarks (which, if used, would be a minor input to any CCP’s overall clearing services) could affect a rival CCP’s ability to compete vigorously in the derivatives clearing market or that competition in clearing services could otherwise be harmed.¹⁶² Taking LCH’s ForexClear which uses the WM/R spot rates for the clearing of six G10 currency NDFs as an example, LCH has contingency fall-back measures in place which are to be followed in case the WM/R spot rate benchmarks become unavailable for any reason. This is a requirement pursuant to Article 28(2) of the EU BMR which states that “*supervised entities that use a benchmark shall produce and maintain robust written plans setting out the actions that they would take in event that a benchmark materially changed or ceases to be provided.*” In other words, the need for a fall-back applies regardless of the FX benchmark used. ForexClear’s fall-back would be to rely on [X] or

¹⁵⁸ Paragraph 4.15 Parties’ response dated 31 August 2020 to CCCS’s Issues Letter dated 2 July 2020.

¹⁵⁹ Paragraph 4.9 Parties’ response dated 31 August 2020 to CCCS’s Issues Letter dated 2 July 2020.

¹⁶⁰ Paragraph 4.10 Parties’ response dated 31 August 2020 to CCCS’s Issues Letter dated 2 July 2020.

¹⁶¹ By way of example, [X], [X], and [X] are all customers that have switched from WM/R to [X]. Refinitiv has also been made aware of opportunities with potential new customers that have been lost to [X] (including [X], [X] and [X]).

¹⁶² Paragraph 4.16 Parties’ response dated 31 August 2020 to CCCS’s Issues Letter dated 2 July 2020.

[X] to clear the relevant NDFs. If none of these rates are available in turn, then [X].¹⁶³

No foreclosure of access to Refinitiv's WM/R FX benchmarks to competing index licensing providers

63. The Parties submitted that FX benchmarks are also used to express indices in different currencies or construct indices comprising international securities with different currency denominations.¹⁶⁴
64. The Parties submitted that post-Transaction, the merged entity will be present downstream in index licensing sales to customers in Singapore. This is through Refinitiv's sale of the WM/R FX benchmarks and to a lesser extent, fixed income (excluding hybrids) indices (such sales amounting to US\$[X] (approximately S\$[X]) in FY18), and LSEG's sale of equities indices and to a lesser extent, fixed income (excluding hybrids) indices (such sales amounting to £[X] (approximately S\$[X]) in FY18).¹⁶⁵
65. The Parties submitted that Refinitiv's WM/R FX benchmarks, specifically the WM/R 4pm is comparatively more important as an "input" for index licensing services, compared to other upstream products and services which the Parties have identified to have non-horizontal links with index licensing services, for the purpose of their notification. Nevertheless, LSEG's expenditure on Refinitiv's WM/R FX benchmarks (of which WM/R 4pm is the only one) is low.¹⁶⁶ The Parties submitted that irrespective of LSEG's spend on Refinitiv's WM/R FX benchmarks, in view of the regulatory commitments given by Refinitiv relating to the WM/R 4pm, and the large revenue pool from customers other than LSEG (i.e. LSEG accounts for only [0-10]% of Refinitiv's total revenue from FX benchmarks in the same year¹⁶⁷) that Refinitiv currently draws from, the Transaction will not give rise to any input foreclosure concerns in relation to Refinitiv's WM/R FX benchmarks, including the WM/R 4pm.¹⁶⁸
66. In addition, the Parties also submitted that FX benchmarks (and more specifically, Refinitiv's WM/R FX benchmarks) are in fact not an important input for the creation and calculation of all indices.¹⁶⁹ According to the Parties,

¹⁶³ Paragraph 4.17 Parties' response dated 31 August 2020 to CCCS's Issues Letter dated 2 July 2020.

¹⁶⁴ Paragraph 36.58.2 of Form M1.

¹⁶⁵ Paragraphs 36.50 and 36.60 of Form M1.

¹⁶⁶ Paragraph 19.3 of the Parties' response dated 29 May 2020 to CCCS' RFI dated 13 May 2020.

¹⁶⁷ Paragraph 13.5 of the Parties' response dated 29 May 2020 to CCCS's RFI dated 13 May 2020.

¹⁶⁸ Paragraph 19.4 of the Parties' response dated 29 May 2020 to CCCS' RFI dated 13 May 2020.

¹⁶⁹ Paragraph 4.12 of the Parties' response dated 31 August 2020 to CCCS's Issues Letter dated 2 July 2020.

FX benchmarks are primarily used to express indices in different currencies or construct indices comprising international securities with different currency denominations (they may also be used for calculating hedged indices). Therefore, the relevance of FX benchmarks (and Refinitiv's FX benchmarks) as an input depends on the index in question and how it is commercialised.¹⁷⁰ Even for the indices that do use FX benchmarks as an input, Refinitiv's FX benchmarks are not "critical" as they are not the only choice for FX reference rates used by index licensing providers for the creation and calculation of indexes. As explained above, the Parties submitted that the Bloomberg BFIX and New Change FX benchmarks are functional alternatives for customers of Refinitiv's WM/R FX benchmarks (including for use in the creation and calculation of indices) and there have been index licensing providers who have used other FX benchmarks instead of Refinitiv's. For example, in August 2017, ING launched its global emerging market FX indices. In addition to selecting Bloomberg to provide the calculation and administration services for these indices, ING selected Bloomberg BFIX to provide the FX benchmark rates, as "an independent benchmark for currency rates that is regularly updated and widely used by the FX market".¹⁷¹ Accordingly, the Parties submitted that the merged entity has no ability to foreclose index licensing providers in relation to the WM/R FX benchmarks, since at least two functionally substitutable products are available to index licensing providers if access to the WM/R FX benchmarks were to be withdrawn or compromised.¹⁷²

67. The Parties also noted that choice of index licensing providers by end-users is not driven by the index licensing provider's use of FX benchmarks and there is no evidence that a switch to other FX benchmarks could cause serious disruptions to the business of clients.¹⁷³ According to the Parties, some index licensing providers already choose not to use Refinitiv's WM/R FX benchmarks (as confirmed in the ING example above), which means that end-customers must also be willing to accept the use by index licensing providers of alternative FX benchmarks.¹⁷⁴
68. The Parties also submitted that a theory that the merged entity would foreclose or marginalise downstream index licensing providers by refusing access to Refinitiv WM/R FX benchmarks is not credible for the following reasons:

¹⁷⁰ Paragraph 4.13 of the Parties' response dated 31 August 2020 to CCCS's Issues Letter dated 2 July 2020.

¹⁷¹ Paragraph 4.9 of the Parties' response dated 31 August 2020 to CCCS's Issues Letter dated 2 July 2020.

¹⁷² Paragraph 4.14 of the Parties' response dated 31 August 2020 to CCCS's Issues Letter dated 2 July 2020.

¹⁷³ Paragraph 4.2.3 of the Parties' response dated 31 August 2020 to CCCS's Issues Letter dated 2 July 2020.

¹⁷⁴ Paragraph 4.18 of the Parties' response dated 31 August 2020 to CCCS's Issues Letter dated 2 July 2020.

- a. Refinitiv is already vertically integrated in the provision of its FX benchmark and licenses it (and all of its indices) to rival data vendors / index licensing providers including S&P, MSCI, Bloomberg, FactSet, SIX Financial and others.¹⁷⁵ Not only is this a result of the high levels of regulatory scrutiny in the supply of benchmarks, which exists regardless of Refinitiv's downstream presence in indices, it also accords with the incentives of a benchmark provider to maintain attractiveness and wide adoption of the benchmark. This provides further evidence that there would be no incentive or ability post-merger to refuse access to Refinitiv's WM/R FX benchmarks or make such access more expensive to competing index licensing providers, regardless of the merged entity's downstream position.¹⁷⁶

The Parties submitted that [X] is Refinitiv's [X] largest input contributor (in terms of amount spent by Refinitiv in 2018) but is also a customer of Refinitiv. [X] supplies data from the [X] (in the [X], [X] and [X]), as well as data from [X], and many of Refinitiv's customers require data from multiple exchanges for their workflows. [X] also provides fixed income data (including municipal bonds reference data and pricing) that supplements data from other sources. Any attempt by the merged entity to refuse access to Refinitiv's WM/R FX benchmarks or make such access more expensive to its customers / competing index licensing providers (such as [X]) could result in retaliation with similar strategies (for example [X] refusing to supply their data to Refinitiv) which would damage Refinitiv's (and the merged entity's) businesses. While these levers exist in theory, the fact that these vertically integrated players, including Refinitiv, do not today leverage their indices or benchmarks in this manner is clear evidence of the strong commercial incentive to prioritise the wide distribution of indices and benchmarks over attempting to gain a competitive advantage downstream by restricting access to the provider's benchmarks. The Parties also submitted that these dynamics will continue to exist post-merger.¹⁷⁷

- b. As explained in paragraph 59 above, Refinitiv has committed to the FCA that it would operate the WM/R 4pm as if it were a critical benchmark under the EU BMR. As a result, Refinitiv is obliged to license the WM/R 4pm to all users on reasonable and non-discriminatory terms, in accordance with Article 22 of the EU BMR. This is evident in Refinitiv's existing licensing

¹⁷⁵ Paragraph 36.59.3 of Form M1 and Paragraph 20.1 of the Parties' response dated 5 June 2020 to CCCS' RFI dated 13 May 2020.

¹⁷⁶ Paragraph 20.1 of the Parties' response dated 5 June 2020 to CCCS' RFI dated 13 May 2020.

¹⁷⁷ Paragraph 20.2 of the Parties' 5 June 2020 responses to CCCS's RFI dated 13 May 2020.

practices with respect to the WM/R 4pm i.e. Refinitiv applies this principle more broadly and licences the WM/R 4pm to all third-parties on this same basis, including to competitors such as Bloomberg, FactSet and SIX Financial in practice.¹⁷⁸

69. The Parties also submitted that a theory of harm suggesting that the merged entity could potentially supply the WM/R FX benchmarks with errors or in a delayed manner, and/or not offer to update/troubleshoot these issues, in an attempt to foreclose its competitors post-Transaction, is completely unfounded. According to the Parties, there are technical and practical barriers to implementing a partial foreclosure strategy based on degrading of the quality of the WM/R benchmark data to customers, or to provide preferential delivery in terms of latency of its WM/R FX benchmark data to any customers which Refinitiv's systems do not allow for. In particular, the mechanism for delivering the benchmark data is such that, once Refinitiv's operations team has completed its validation process and is ready to publish the FX benchmarks, a single "publish" button is pressed within Refinitiv's application, which automatically generates the data file and publishes the data simultaneously onto Refinitiv's desktop services, via datafeed (FTP) and also by email. This set-up – which precludes Refinitiv's ability to discriminate against any recipient in the distribution of its FX benchmark data – was in place before Refinitiv acquired the WM/R 4pm business in 2016, and will remain in place post-Transaction.¹⁷⁹ In addition, Refinitiv has no ability (nor any plausible incentive) to selectively degrade the quality of its WM/R benchmark data, for example by including calculation errors. At the time of publication, only one WM/R FX benchmark rate exists per currency pair. This means that if there were any errors in the WM/R FX benchmark rate, this would be an error for all clients (including for those parts of the merged entity's business that would also be using WM/R FX benchmark data). If an error becomes known, it is not feasible for Refinitiv to leave this uncorrected or correct this only for a subset of clients; not only is ensuring accuracy a core part of Refinitiv's obligations as a benchmark administrator, but as previously explained, WM/R FX benchmarks' commercial reputation is built on providing accurate and consistent rates for all users – leaving aside Refinitiv's public commitment to operate the WM/R 4pm on FRAND terms. Moreover, even if the merged entity were to seek to provide different FX rates to different users – or if it left an obvious error uncorrected – this would be highly visible to the market within a short period of time given the ways that benchmarks are used, risking significant reputational damage and

¹⁷⁸ Paragraph 14.2 of the Parties' response dated 29 May 2020 to CCCS' RFI dated 13 May 2020.

¹⁷⁹ Paragraph 2.11 of Form M2 submission dated 31 August 2021.

scrutiny from regulators.¹⁸⁰ The Parties submitted that in the absence of an ability to partially foreclose access to WM/R FX benchmarks via either a degradation in quality to certain users or preferential access, such a theory of harm is simply not plausible. According to the Parties, even if technical degradation were possible, it would diminish the accessibility / value of the WM/R FX benchmarks (which as explained above, would not be expected to generate any material upside for the merged entity given the alternatives available to index providers, who could not be foreclosed). This is in addition to the regulatory response and damage to customer relationships that such a strategy would provoke. Accordingly, the Parties would therefore not have an incentive to adopt such a strategy in any event.¹⁸¹

CCCS's assessment

Ability to foreclose competition

70. In assessing whether the concerns raised by third-parties would arise post-Transaction, CCCS considered whether the merged entity would possess the **ability** to foreclose its downstream rivals in clearing and/or index licensing services by either refusing access to Refinitiv's WM/R FX benchmarks or adopting discriminatory pricing practices for Refinitiv's WM/R FX benchmarks against competing clearing and/or index licensing providers. According to paragraph 6.13 of the CCCS's Guidelines on the Substantive Assessment of Mergers 2016 ("CCCS's **Merger Assessment Guidelines 2016**"), a firm is generally only able to foreclose competitors if it has market power at one or more levels of the supply chain. If a firm does not have market power, its competitors could switch to other suppliers or purchasers. This would mean that the firm is unlikely to have the ability to foreclose its competitors.
71. As information available from third-party feedback indicated that the WM/R FX benchmarks are the "*de facto*" benchmark for FX reference rates (for which there is no viable alternative) used by (a) clearing service providers to determine the final settlement reference price for derivative products as well as to facilitate the clearing of NDFs and FX futures contracts¹⁸²; and (b) index licensing providers as part of the wide range of essential data/input for the creation and calculation

¹⁸⁰ Paragraph 2.12 of Form M2 submission dated 31 August 2021.

¹⁸¹ Paragraph 2.13 of Form M2 submission dated 31 August 2021.

¹⁸² [X]’s response dated 21 April 2020 to Question 6g of CCCS’s Invitation for Comments dated 9 April 2020. See also, paragraph 4a of Notes of Call between [X] and CCCS dated 5 May 2020.

of indices¹⁸³, CCCS considers it appropriate to consider the merged entity's market power for the supply of the WM/R FX benchmarks instead of the supply of FX benchmarks in general.

72. As it relates to the relevant downstream markets that will be affected by any restriction in the supply of WM/R FX benchmarks, CCCS proceeded to assess whether the Transaction could give rise to input foreclosure of WM/R FX benchmarks for the following competitors:
- a. clearing service providers (including those supplying OTC IRD and/or FX counterparty risk management) globally (including to and from Singapore); and
 - b. index licensing providers globally (including to and from Singapore).
73. In view of: (a) the absence of information suggesting that competitors are able to deploy effective and timely strategies against the merged entity's refusal to supply WM/R FX benchmarks to competitors post-Transaction, (b) the information from the Parties' submissions and third-party feedback indicating the importance of Refinitiv's WM/R FX benchmarks which cannot be easily replaced with other benchmarks and that (c) competitors of index licensing and clearing services are unable to easily switch to alternative suppliers since Refinitiv is the only supplier of its proprietary WM/R FX benchmarks,¹⁸⁴ CCCS assesses that the merged entity **will possess the ability** to foreclose its downstream rivals in clearing and/or index licensing services by either refusing access to Refinitiv's WM/R FX benchmarks or adopting discriminatory pricing practices for Refinitiv's WM/R FX benchmarks against competing clearing services and/or index licensing providers.
74. In view of the Parties' submission in paragraph 69 and the lack of information to suggest otherwise, CCCS is of the view that the merged entity would **unlikely possess the ability** to implement a partial foreclosure strategy based on latency/quality degradation of the WM/R FX benchmarks to competitors. As such, CCCS considers it not necessary to assess the merged entity's incentive to do so and the effects of such a foreclosure strategy.

Incentive to foreclose

¹⁸³ [X]’s response dated 20 April 2020 to CCCS’ Invitation for Comments dated 9 April 2020; Notes of Call with [X] dated 22 April 2020; [X]’s response dated 21 April 2020 to question 27 of CCCS’ Invitation for Comments dated 9 April 2020; [X]’s response dated 21 April 2020 to Question 27 of CCCS’s Invitation for Comments dated 9 April 2020. See also, [X]’s response dated 21 April 2020 to Question 6g of CCCS’s Invitation for Comments dated 9 April 2020; and paragraph 4f of Notes of Call between [X] and CCCS dated 5 May 2020.

¹⁸⁴ [X]’s response dated 21 April 2020 to question 27 of CCCS’ Invitation for Comments dated 9 April 2020.

75. In assessing whether the concerns raised by third-parties would arise post-Transaction, CCCS also considered whether the merged entity would possess the **incentive** to foreclose its downstream rivals in derivatives clearing services and/or index licensing services by either refusing access to Refinitiv's WM/R FX benchmarks or adopting discriminatory pricing practices for Refinitiv's WM/R FX benchmarks against competing clearing and/or index licensing providers. Paragraph 6.13 of the CCCS's Merger Assessment Guidelines 2016 states that a firm will only rationally foreclose competitors if it is profitable to do so. For example, if a firm forecloses access to an input, the firm must weigh an increase in profits in a downstream market against a decrease in profits in the upstream market where the foreclosure occurs. This is because the firm's profits in the input market falls as the number of units sold falls but the firm's profits in the downstream market may increase if it can win a proportion of the sales its competitors lose as a result of the foreclosure.¹⁸⁵

Incentive to distribute indices and benchmarks

76. CCCS is of the view that while information available suggests some commercial incentives for the Parties to distribute indices and benchmarks widely, such information is insufficient for CCCS to conclude if these commercial incentives are sufficiently strong to outweigh the gain in competitive advantage by the merged entity downstream by restricting access of the WM/R FX benchmarks to its competitors given the importance of the WM/R FX benchmarks and lack of viable alternatives from the perspectives of several market players.

Change in incentive to supply indices and benchmarks

77. While CCCS notes the Parties' submission that Refinitiv is already vertically integrated in the provision of its WM/R FX benchmarks and licenses it (and all of its indices) to rival data vendors and index licensing providers pre-Transaction, CCCS is cognisant that pre-Transaction, Refinitiv (a) is not active in the provision of clearing services; (b) is not affiliated to any clearing service provider; (c) is not a major competitor of index licensing services to MSCI and Bloomberg based on feedback received; and (d) is not affiliated to any major index licensing provider. In this regard, CCCS is of the view that the Transaction is likely to change Refinitiv's incentive to continue supplying these benchmarks to competing clearing service and index licensing providers post-Transaction as it would now be merged and/or affiliated to a major clearing provider (i.e. LCH)

¹⁸⁵ Paragraph 6.13 of CCCS Guidelines on the Substantive Assessment of Mergers 2016.

as well as a major index licensing provider (i.e. FTSE Russell) downstream. Further, CCCS is also of the view that the lack of incentive for Refinitiv to foreclose WM/R FX benchmarks to competing data vendors and index licensing providers pre-Transaction does not reflect that Refinitiv will continue to distribute its benchmarks widely to competing clearing service providers and index licensing providers given that the potential net profit for the merged entity as a result of foreclosing these downstream competitors could increase post-Transaction.

Other factors

78. CCCS notes that an examination of the merged entity's incentive to foreclose actual or potential rivals downstream in clearing and/or index licensing services may depend on factors liable to reduce, or even eliminate, those incentives, including the possibility that the conduct is unlawful and the possibility of retaliation by market participants. In this aspect, CCCS notes the Parties' submission that an attempt to frustrate rival clearing houses by refusing access to benchmarks can be expected to provoke an immediate and forceful market reaction, including via regulatory intervention and/or clearing house customers seeking legal recourse (through injunctions). CCCS notes that there is no regulation in Singapore directly equivalent to Article 37 MiFIR requiring persons with proprietary rights to a benchmark to ensure non-discriminatory access to information and licences regarding the benchmark. The Parties also submitted that there are no applicable regulations in Singapore that would apply to the Parties' indices (which would include the WM/R FX benchmarks) that generate revenues from customers in Singapore.
79. While the Parties submitted that MAS has broad powers under the MAS Act and SFA to impose conditions or issue directions should the Parties engage in anti-competitive behavior or otherwise act against the public interest,¹⁸⁶ CCCS notes that the WM/R FX benchmarks are not currently designated benchmarks in Singapore. Although MAS has broad powers to designate the WM/R FX benchmarks as a financial benchmark for regulation under the SFA if it were considered significant to the extent that it "has systemic importance in the financial system of Singapore", and MAS could also go on to impose requirements on the merged entity to supply the designated benchmarks on FRAND terms to competitors who are providing index licensing and clearing services to customers in Singapore, CCCS notes that information available suggests that the likelihood of the WM/R FX benchmarks being designated as a

¹⁸⁶ Paragraph 15.12 of the Parties' response dated 5 June 2020 to CCCS' RFI dated 13 May 2020.

financial benchmark for regulation under the SFA is low. Specifically, information available suggests that the designation of benchmarks is based on considerations of a benchmark's systemic importance to the public and its susceptibility to manipulation. Examples of benchmarks of systemic importance to the public are the Singapore Interbank Offered Rate (“**SIBOR**”) and Swap Offer Rate (“**SOR**”), which are used widely for retail mortgages and in the loan market. On the other hand, WM/R FX benchmarks are used primarily in the institutional market and that changes adopted in 2014 on the methodology for computing FX benchmarks has greatly reduced the possibility of manipulation of the WM/R FX benchmarks. Furthermore, the part of the SFA dealing with financial benchmarks (see Section 123(A)) does not include competition as one of the objectives of regulation of financial benchmarks, and instead states as the objectives the reduction of systemic risk and the fair and transparent determination of the financial benchmark (i.e. whether the benchmark is an accurate depiction of transactions that go on in the marketplace, and not how it is sold or how access to the benchmark is made available).¹⁸⁷ Therefore, it is not clear if the risk of foreclosure strategies relating to WM/R FX benchmarks access would be addressed by the regulatory environment in Singapore.

80. In relation to Refinitiv's commitments to the FCA and the regulatory requirements under Article 37 of MiFIR, the Parties also did not submit information to sufficiently substantiate how the enforcement and disciplinary measures as a result of a failure to comply with the commitments given to FCA would result in “very severe reputational implications and damaging spill-over effects for the wider operations of the merged entity **in Singapore...**”. While CCCS is of the view that these regulatory commitments and requirements would mitigate the risk of input foreclosure of the WM/R FX benchmarks for competitors with index licensing and clearing activities in the UK and Europe, the available information does not suggest that these measures would ensure that index providers and clearing service providers performing indexing and clearing activities outside of Europe to customers in Singapore or for Singapore-traded activities would be accorded similar protection. Specifically, CCCS notes the Parties' submission in paragraph 59c that while many of the merged entity's key competitors at both the trading and clearing level could directly benefit from Article 37 of the MiFIR due to the fact that they operate a CCP or trading venue that is authorised or recognised in the EU, no equivalence decisions have been made under Article 38 of the MiFIR and so Singaporean CCPs and trading venues do not currently have the benefit of Article 37 of the MiFIR. In addition, information available to CCCS suggests that there may be jurisdictional issues

¹⁸⁷ [X]’s response dated 29 October 2020 to CCCS’s RFI dated 28 September 2020.

around the FCA investigating or potentially providing a remedy in case of non-compliance in jurisdictions outside the UK where the WM/R 4pm is designated as critical.¹⁸⁸ Therefore, CCCS is of the view that information available suggests that some competing clearing service providers may not be able to seek any recourse from the FCA or under Article 37 of the MiFIR if its inability to provide clearing services affects customers outside of the UK or indirectly affects customers in UK or Europe. Furthermore, CCCS also notes that the FCA commitment relates only to the WM/R 4pm and does not cover Refinitiv's other WM/R FX benchmarks.¹⁸⁹

81. According to information available, the implementation of a regulation that is similar to Article 37 of the MiFIR in Singapore would also likely not address the competition concerns raised. This is because although Article 37 of the MiFIR imposes requirements on the IP owner to grant FRAND access to clearing houses and trading venues, the focus is more on disclosing the valuation and calculation methodology, and not so much about ensuring access to the licence.¹⁹⁰ In this regard and in the absence of further information, CCCS is of the view that the effectiveness of Article 37 of the MiFIR as a sufficient measure to ensure access to the WM/R FX benchmarks anywhere (including Singapore) could be limited.
82. Although the Parties submitted that Refinitiv's policy is to ensure that all the WM/R FX benchmarks customers (including clearing service providers and index licensing providers), wherever located, are provided the WM/R FX benchmarks on a FRAND basis and that this applies to any CCPs and trading venues in Singapore, CCCS notes that this represents "Refinitiv's policy" and not the outcome of the requirements under its commitments to FCA or under Article 37 of the MiFIR. Accordingly, CCCS is of the view that Refinitiv's policy in this regard could change post-Transaction with LSEG taking ownership of Refinitiv, with no clear consequence that could mitigate such a risk. CCCS also notes that the EC has taken the decision that competitors in index licensing could be denied access to WM/R FX benchmarks post-merger, despite Article 22 of the EU BMR and Refinitiv's policy.¹⁹¹
83. Based on the abovementioned considerations including that Refinitiv would be merged and/or affiliated to a major clearing service provider (i.e. LCH) as well as a major index licensing provider (i.e. FTSE Russell), the lack of sufficient information for CCCS to conclude that the commercial incentive to distribute the

¹⁸⁸ [§<].

¹⁸⁹ Paragraph 5.2 of Parties' response dated 15 June 2020 to CCCS's RFI dated 9 June 2020.

¹⁹⁰ [§<]'s response dated 29 October 2020 to CCCS's RFI dated 28 September 2020.

¹⁹¹ See https://ec.europa.ec/commission/presscorner/detail/en/ip_21_103.

WM/R FX benchmarks outweighs the gain in competitive advantage by the merged entity downstream by restricting access of it to competitors, and inherent limitations in respect of existing regulations (both local and overseas) in addressing competition concerns arising from the Transaction in respect of the global supply of WM/R FX benchmarks, CCCS is of the view that the Transaction will likely increase the incentive for the merged entity (that is merged / affiliated with a major clearing and index licensing provider) to engage in a foreclosure strategy involving a refusal to supply the WM/R FX benchmarks to competing index licensing service providers and clearing service providers.

Effect on competition

84. According to paragraph 6.13 of the CCCS's Merger Assessment Guidelines 2016, a key consideration is whether the competition lost from potentially foreclosed competitors is sufficient to have the effect of leading to a SLC. This may arise when foreclosure makes entry and expansion for competitors more difficult, or otherwise reduces a competitor's ability to provide a competitive constraint to the merged entity. Foreclosure does not need to force a competitor or competitors to exit the market to have such an effect.

Barriers to entry and competitors' ability to compete

85. Since CCCS has identified the WM/R FX benchmarks as critical for clearing and index licensing providers and that the WM/R FX benchmarks are proprietary to Refinitiv, this would suggest that any foreclosure of access to WM/R FX benchmarks will make the barriers to entry for the supply of clearing and index licensing services to customers in Singapore significantly higher. Specifically, without access to these benchmarks, new players will find it very difficult to provide clearing and index licensing services in order to enter and compete in these markets. Based on feedback received, CCCS is also of the view that any foreclosure strategy relating to the access of the WM/R FX benchmarks could potentially remove competitors or affect their ability to compete with the merged entity, as competitors would either be unable to produce the relevant indices and clearing services which rely on the benchmarks, or only be able to produce them at less competitive prices.

Conclusion on effect on competition

86. Based on the above, CCCS is of the view that information available suggests that a strategy relating to the denied/restricted access of the WM/R FX benchmarks

to competing clearing and index licensing competitors would likely lead to an SLC in the supply of index licensing and clearing services (including those supplying OTC IRD and/or counterparty risk management services) to customers globally (including to and from Singapore).

ii. Foreclosure of access to Refinitiv’s indicative IRS prices and BBA LIBOR

Concern(s) raised by third-parties

87. CCCS received feedback from a competitor of clearing services indicating concerns in relation to continued access to Refinitiv’s indicative IRS prices necessary for deriving yield curves and critical for calculating daily settlement prices for cleared OTC IRS, as well as BBA LIBOR rates for some currencies used to perform OTC IRS clearing services post-Transaction.¹⁹²

The Parties’ submission

BBA LIBOR

88. The Parties submitted¹⁹³ that “BBA LIBOR” is not a Refinitiv product. LIBOR is administered by ICE and is only redistributed by Refinitiv, as well as by other data vendors. In any case, LIBOR is being phased out and will no longer be published from the end of 2021. In addition, in relation to the LIBOR rates, non-real-time LIBOR rates are also made publicly available at no cost.¹⁹⁴

Indicative IRS pricing data

89. The Parties also submitted¹⁹⁵ that “indicative IRS prices” are data made available by Refinitiv generally in real-time, but also to a lesser extent in non-real-time. Refinitiv includes these data in its desktop solution (Eikon), real-time datafeed (Elektron), tick history and non-real-time datafeed (DataScope Select). The Parties therefore submitted that it is not appropriate to consider indicative IRS prices as a stand-alone data product as this is an extremely granular view and inconsistent with the market definition in respect of real-time datafeeds, non-real-time datafeeds and desktop solutions which have been used by the EC in its investigation of the Transaction. However, the Parties submitted that it is correct

¹⁹² [Redacted]’s response dated 16 October 2020 to Question 6 of CCCS’s RFI dated 7 October 2020.

¹⁹³ Paragraph 4.1 of Parties’ response dated 24 November 2020 to CCCS’ RFI dated 18 November 2020.

¹⁹⁴ For example, see <https://www.global-rates.com/en/interest-rates/libor/libor.aspx> and <https://www.homefinance.nl/english/international-interest-rates/libor/libor-interest-rates-usd.asp>.

¹⁹⁵ Paragraph 4.1 of Parties’ response dated 24 November 2020 to CCCS’ RFI dated 18 November 2020.

to say that, along with a range of other data inputs, indicative IRS prices can be used by clearing houses, for example to derive yield curves and calculate daily settlement prices. LCH for example receives indicative IRS pricing data from [REDACTED] as well as from [REDACTED].¹⁹⁶

90. Given that indicative IRS prices can be made available to clearing houses through consolidated real-time datafeeds, non-real-time datafeeds or desktop solutions, the Parties submitted¹⁹⁷ the following reasons on why no foreclosure theory is possible in respect of any of these inputs for clearing houses. In particular:

- a. Consolidated real-time-datafeeds are not an important input for any CCP clearing services. There is also nothing uniquely attractive or important about Refinitiv's consolidated real-time datafeed from a CCP's perspective. This is evidenced by the fact that LCH SwapClear uses [REDACTED] consolidated real-time datafeeds, as well as data from [REDACTED]. An attempt to gain a competitive advantage by refusing to supply Refinitiv's consolidated real-time datafeeds to rival clearing houses would be a futile effort given that these customers could turn to alternative providers of real-time datafeeds such as Bloomberg and ICE.
- b. Regarding non-real-time datafeeds, a foreclosure strategy is not plausible given that Refinitiv only has a moderate market share in this service ([10-20]% globally). Refinitiv's main competitors are all active in the supply of multiple content sets and large global data vendors, including Bloomberg, ICE, and IHS Markit, which have comparable or greater market shares than would the merged entity, both globally and in Singapore. SIX Financial and S&P also have a material presence in this segment and compete closely with Refinitiv. In this scenario, clearing house customers would have a large number of competitors to switch to.
- c. Similarly, for desktop solutions, any foreclosure strategy would not be successful as clearing house customers would simply switch to one of Refinitiv's rivals. Refinitiv's global market share in desktops of [10-20]% is moderate at best and shows that input foreclosure concerns are unwarranted in any case.

¹⁹⁶ Paragraph 4.2 of Parties' response dated 24 November 2020 to CCCS' RFI dated 18 November 2020.

¹⁹⁷ Paragraph 4.3 of Parties' response dated 24 November 2020 to CCCS' RFI dated 18 November 2020.

91. For all these categories, the Parties submitted that clearing house spend by LCH on data services is low, representing only around [0-10]% of revenues. This indicates that desktop services, consolidated real-time datafeeds and non-real-time datafeeds, are a minor input for suppliers of clearing services which cannot be leveraged in order to produce any foreclosure effects.¹⁹⁸
92. In relation to indicative IRS pricing data specifically, clearing houses have a wide choice on where to source it. Data vendors (across desktop, real-time and non-real-time feeds) carry similar IRS data sourced from futures exchanges as well as interdealer brokers (e.g. Tradition, TP-ICAP, BGC Partners), such that CCPs should have no problem finding another source for the same data. There is ample choice where to buy this data from – even if a clearing house were hypothetically foreclosed from indicative IRS pricing data via consolidated real-time-datafeeds (which is unrealistic for the reasons stated above), it could still obtain IRS pricing data via a non-real-time datafeed or desktop solution, in addition to direct sourcing from brokers. This is because the real-time vs. non-real time distinction is of no practical relevance for indicative IRS pricing data.¹⁹⁹
93. Finally, the Parties submitted that any attempt to withhold such data from rival clearing houses can be expected to provoke an immediate and forceful reaction, as LSEG currently operates and will continue to operate under close regulatory scrutiny post-Transaction. It is therefore implausible that the merged entity would proactively seek to engage in any strategy that would likely result in such backlash by rival clearing houses.²⁰⁰

CCCS's assessment

Ability to foreclose competition

94. As the competition concern was raised by a clearing service provider in relation to access to BBA LIBOR specifically, CCCS considered whether the merged entity would possess the **ability** to foreclose its downstream rivals in clearing services by either refusing access to BBA LIBOR and indicative IRS prices or adopting discriminatory pricing practices for these data against competing clearing service providers.

BBA LIBOR

¹⁹⁸ Paragraph 4.4 of Parties' response dated 24 November 2020 to CCCS' RFI dated 18 November 2020.

¹⁹⁹ Paragraph 4.5 of Parties' response dated 24 November 2020 to CCCS' RFI dated 18 November 2020.

²⁰⁰ Paragraph 4.6 of Parties' response dated 24 November 2020 to CCCS' RFI dated 18 November 2020.

95. In view of the fact that Refinitiv is not the licensor of the BBA LIBOR but one of its redistributors, the impending phasing out of the BBA LIBOR and the information suggesting various channels which users can access the BBA LIBOR from (e.g. through ICE Benchmark Administrator, or its other third party redistributor), CCCS is of the view that the Parties are unlikely to have the ability to foreclose competing clearing service providers through foreclosing access to the BBA LIBOR.

Indicative IRS pricing data

96. In view of information suggesting alternative sources which competitors are already procuring and can potentially procure the indicative IRS prices from besides Refinitiv (e.g., Bloomberg, Tradition, TP-ICAP, BGC Partners), CCCS is of the view that the Parties are unlikely to have the ability to foreclose competing clearing service providers through foreclosing access to the indicative IRS prices.

Conclusion

97. As CCCS is of the view that the merged entity would not have the ability to foreclose access to the BBA LIBOR and indicative IRS price data post-Transaction, CCCS is of the view that it is not necessary to assess the Parties' incentive to do so post-Transaction, or the effect on competition.
98. Accordingly, CCCS considers that any foreclosure of access to these data products by the merged entity post-Transaction is unlikely to lead to a SLC in any market involving Singapore for clearing services. CCCS notes that the exact product market definition for BBA LIBOR and indicative IRS price data can be left open, as no competition concerns would arise under any likely way that the product markets could be defined. There is also no need for any precise product market definition for the market of clearing services to which BBA LIBOR and indicative IRS price data could be inputs for. As the merged entity does not have the ability to foreclose access to the data products, there will be no SLC in **any** market for clearing services.

iii. Foreclosure of access to Refinitiv reference data to competing trading venues and packaged solutions

Concern(s) raised by third-parties

99. CCCS received feedback from one (1) third-party which raised the concern that competing trading venue operators may not be able to access Refinitiv's reference data (static data by which financial instruments and entities can be referenced and categorised, including the T&Cs of the instruments) or do so at a fair and reasonable basis post-Transaction.²⁰¹ The concern raised is corroborated by feedback²⁰² from a financial information provider who noted that the Transaction, which will reduce the number of suppliers for T&Cs datasets, might also make it more challenging for competitors to collect data on terms and conditions and financial statements from Refinitiv, as the merged entity may wish to limit the availability of such data to establish a stronger position for its own offerings.

The Parties' submission

100. Pricing and reference data (which refers to information that describes the financial instrument other than the price itself), are used to execute trades, and T&Cs of a bond are a form of reference data which are released by the issuer of a bond when the bond is issued.
101. The Parties also submitted that no input foreclosure concerns could arise with respect to Refinitiv's fixed income pricing and reference data (which includes amongst others the identifier used for the instrument and the description of the security, as well as the T&Cs of a financial instrument e.g., bonds)²⁰³ given Refinitiv's lack of market power upstream (whether in relation to trading services downstream or any of the other downstream products and services for which either one or both parties are active in supplying currently).²⁰⁴

²⁰¹ [X]’s response dated 24 April 2020 to CCCS’s Invitation for Comments dated 19 April 2020 and the enclosed Minutes document; [X]’s response dated 15 May 2020 to question 4b of CCCS’s Further Questions dated 9 May 2020.

²⁰² Paragraph 7 of Notes of Call between [X] and CCCS dated 24 April 2020.

²⁰³ The Parties submitted in paragraph 11.1 of its response dated 29 May 2020 to CCCS’ RFI dated 13 May 2020 that at the most basic level, pricing and reference data are used to execute trades. For example, an Apple share will come with instrument identification data, such as a MIC, which may identify where the instrument is traded. Much of that is trade information (price and quantity), but some is reference data, such as the identifier used for the instrument, the short name, the long name and the description of the security. This data is used not only by a venue’s front office to execute the relevant trade, but also by the middle office for risk analysis and evaluation pricing, and by the back office for confirmation, processing and bookkeeping. According to the Parties submission in paragraph 20.3 of its response dated 4 May 2020 to CCCS’s RFI dated 20 April 2020, the issuer of a bond would release a prospectus detailing the terms and conditions of the financial instrument (e.g., bond interest rate, maturity date) when the bond is issued. The terms and conditions of a bond are therefore a form of reference data (i.e. information that describes the financial instrument other than the price itself). Such data may be relevant to the construction of a fixed income index which tracks the performance of a basket of fixed income instruments i.e. bonds.

²⁰⁴ Paragraph 11.8 of Parties’ response dated 29 May 2020 to CCCS’ RFI dated 13 May 2020.

102. The Parties submitted that Refinitiv collates and distributes consolidated non-real-time pricing and reference data relating to a broad range of asset classes primarily through one of its non-real-time datafeed products i.e. Datascope.²⁰⁵ According to the Parties, Refinitiv's estimated²⁰⁶ worldwide market share in consolidated non-real-time pricing and reference data is [10-20]%, and that for fixed income pricing and reference data, it is well below 30%.²⁰⁷ The Parties also submitted that anyone can compile bond terms and conditions based on publicly available bond prospectuses, meaning index licensing providers can create new indices requested by customers practically at will.²⁰⁸

CCCS's assessment

Ability to foreclose competition

103. In assessing whether the concerns raised by third-parties would arise post-Transaction, CCCS first considers whether the merged entity will possess the **ability** to foreclose its downstream rivals in electronic institutional credit trading services by either refusing access to Refinitiv's reference data or adopting discriminatory pricing practices for Refinitiv's reference data against competing trading venue operators and packaged solutions providers.
104. As the concerns raised by trading venue operators relate to access to specifically reference data which includes T&Cs, CCCS considers it appropriate to consider the merged entity's market power for the supply of reference data only and not packaged solutions.
105. CCCS notes that the concerns raised by a rival trading venue operator and a packaged solutions provider relate to the former's ability to operate its electronic trading venues which focuses mostly on institutional credit markets (e.g., trading of US corporate bonds, municipal bonds and government bonds), and the latter's

²⁰⁵ Paragraph 11.2 of Parties' response dated 29 May 2020 to CCCS' RFI dated 13 May 2020.

²⁰⁶ According to the Parties submission in paragraph 11.5 and 11.6 of its responses dated 29 May 2020 to CCCS's RFI dated 13 May 2020, Refinitiv does not, in the normal course of business, track revenues or analyse segment shares for consolidated non-real-time pricing and reference data with reference to asset class. It is common for customers to multi-source consolidated non-real-time pricing and reference data to ensure they have a back-up source. While providers may have certain strengths in, for example, an asset class or geography, invariably, most customers will source consolidated non-real-time pricing and reference data across all asset classes. As customers frequently multi-source their consolidated non-real-time pricing and reference data requirements, it is impossible to calculate market shares by asset class. Therefore, the Parties are not able to provide granular market share information (estimated or otherwise) specifically relating to Refinitiv's fixed income pricing and reference data (or any other asset class).

²⁰⁷ Paragraph 11.7 of Parties' response dated 29 May 2020 to CCCS' RFI dated 13 May 2020.

²⁰⁸ Paragraph 20.4 of Parties' response dated 4 May 2020 to CCCS's RFI dated 20 April 2020.

ability to collate financial data respectively. For this reason, CCCS focused its assessment on the merged entity's ability to foreclose its downstream rivals in the global markets for (a) the supply of electronic institutional credit trading venues and (b) packaged solutions to customers globally (including to and from Singapore). With regard to (a), as mentioned in paragraph 27a above, exchanges and venues trading different asset classes are unlikely to be substitutable, therefore CCCS considers it appropriate to consider the effects of any foreclosure strategy by the merged entity only in the market for the global supply of electronic institutional credit trading services globally (including to and from Singapore).

106. Given the Parties' submission and third-party feedback suggesting the availability of alternative sources of reference data (such as ICE, IDC and Bloomberg)²⁰⁹, CCCS is of the view that the risk of the Parties gaining the ability to foreclose access of reference data (including terms and conditions data) to competitors in any of the downstream markets is not high as customers would be able to obtain the necessary reference data from alternative suppliers besides the merged entity post-Transaction.²¹⁰

Conclusion

107. As CCCS is of the view that the merged entity would not have the ability to foreclose access to Refinitiv's reference data post-Transaction, CCCS is of the view that it is not necessary to assess the Parties' incentive to do so post-Transaction, or the effect on competition.
108. Accordingly, CCCS considers that foreclosure of access to Refinitiv's reference data by the merged entity post-Transaction is unlikely to lead to a SLC in any market involving Singapore for trading services and packaged solutions. CCCS notes that the exact product market definition for reference data can be left open, as no competition concerns would arise under any likely way that the product markets could be defined. There is also no need for any precise product market definition for the markets comprising trading services and packaged solutions to which reference data may be used as an input. As the merged entity does not

²⁰⁹ Paragraph 4f of Notes of Call between [X] and CCCS dated 24 April 2020. See also, Paragraph 10 and 21 of Notes of Call between [X] and CCCS dated 16 April 2020, [X]'s response to Question 4 of CCCS's Further Questions dated 9 May 2020.

²¹⁰ Paragraph 4f of Notes of Call between [X] and CCCS dated 24 April 2020. See also, Paragraph 10 and 21 of Notes of Call between [X] and CCCS dated 16 April 2020, [X]'s response to Question 4 of CCCS's Further Questions dated 9 May 2020.

have the ability to foreclose access to the data products, there will be no SLC in any market for trading services and packaged solutions.

b. Foreclosure of access to Refinitiv’s packaged solution and distribution services in general

i. Foreclosure by the merged entity of access (including denied access, slower access, degraded data and services quality) to Refinitiv’s products and packaged solutions for competing index licensing providers and clearing service providers

Concern(s) raised by third-parties

109. CCCS received feedback from competing index licensing providers on concerns relating to foreclosure of access to Refinitiv’s financial data and feeds post-merger.²¹¹ CCCS also received feedback from a competitor of clearing services that the merged entity could be incentivised to (a) provide competing clearing organizations with slower access to Refinitiv data feeds or otherwise degrade the quality of inputs, or (b) change operational/technical requirements at short notice or delay competitors’ access to service upgrades in favor of LCH.²¹²

The Parties’ submission

110. According to the Parties, the merged entity will not have the ability or the incentive to foreclose downstream competitors in index licensing, by restricting access to Refinitiv’s packaged solutions post-Transaction for the following reasons.

- a. First, any input foreclosure strategy would be defeated by Refinitiv’s rivals who can satisfy demand in the downstream market (i.e. index licensing). In particular,
 - i. With respect to consolidated real-time datafeeds, while Refinitiv has an estimated market share of approximately [40-50]% in the supply of consolidated real-time datafeeds globally, it faces strong competition from other providers, in particular Bloomberg and ICE. Attempting to gain a competitive advantage in index licensing by refusing to supply Refinitiv’s consolidated real-time

²¹¹ Notes of Call with [§<] dated 22 April 2020; [§<]’s response dated 20 April 2020 to CCCS’ Invitation for Comments dated 9 April 2020; [§<]’s response dated 21 April 2020 to question 6 of CCCS’ Invitation for Comments dated 9 April 2020.

²¹² [§<]’s response dated 16 October 2020 to Question 8 of CCCS’s RFI dated 7 October 2020.

datafeeds to these firms would be a futile effort given that these index licensing providers could turn to alternative providers of real-time datafeeds such as Bloomberg and ICE, who have broad coverage in terms of real-time data necessary to produce real-time indices.²¹³

ii. With respect to non-real-time datafeed services, Refinitiv only has a moderate market share in this service of [10-20]% globally. Refinitiv's main competitors are all active in the supply of multiple content sets (whether sold on a discrete or packaged basis) and large global data vendors including Bloomberg, ICE, and IHS Markit, have comparable or greater market shares than would the merged entity, both globally and in the EEA. SIX Financial and S&P also have a material presence in this segment and compete closely with Refinitiv.²¹⁴

b. Secondly, there are overriding regulatory and competitor retaliation risks that mean that any input foreclosure strategy is highly unlikely. Post-Transaction, the merged entity will continue to be subject to close regulatory scrutiny, and any attempt to frustrate rival index licensing providers access to their existing datafeeds – either directly or indirectly – can be expected to provoke immediate and forceful market reaction, including via regulatory intervention and/or index licensing providers seeking legal recourse (e.g. through injunctions), for example where the supply or liquidity of underlying products using indices is disrupted as real-time indices are used for trading.²¹⁵

111. According to the Parties, the merged entity will not have the ability or the incentive to foreclose competing clearing houses, by refusing to supply, or worsening the conditions of access or terms of supply of, Refinitiv's datafeed for the following reasons.

a. **Consolidated real-time datafeeds.** The Parties submitted that among other things, consolidated real-time datafeeds are technically used as an input for clearing services (for example clearing houses use real-time trading data for option pricing and margin interval calculation).²¹⁶ However, consolidated real-time datafeeds are not a main input to

²¹³ Paragraph 36.63.1 of Form M1.

²¹⁴ Paragraph 36.65 of Form M1.

²¹⁵ Paragraph 36.63.2 of Form M1.

²¹⁶ Paragraph 36.40 of Form M1.

clearing services. The principal function of these services is to facilitate trading activity. The use of other real time price data as an input (such as consolidated feeds) is therefore of a secondary nature to the services being provided – being used only as a reference in certain circumstances.²¹⁷ According to the Parties, a theory that the merged entity would seek to foreclose clearing houses by refusing to supply – or worsening the conditions of access or terms of supply of – consolidated real-time datafeeds is implausible.²¹⁸ The reasons are as follows:

- i. First, attempting to gain a competitive advantage by refusing to supply Refinitiv’s consolidated real-time datafeeds to rival clearing houses would be a futile effort given that these customers could turn to alternative providers of real-time datafeeds such as Bloomberg and ICE. In addition, any foreclosure strategy attempted by the merged entity involving real-time datafeeds could never disadvantage Bloomberg, its principal rival in trading data services in a number of asset classes, because Bloomberg has its own real-time datafeed business.
 - ii. Second, an attempt to restrict access to Refinitiv’s consolidated real-time datafeeds would jeopardise its commercial relationships with important inbound partners, who could retaliate by not providing their data to Refinitiv, thereby weakening the Refinitiv offering. A theory that the merged entity would adopt a strategy that would pose a direct threat to both of the merging Parties’ core commercial propositions is not credible.
 - iii. Third, CCPs are systemically critical, and any attempt to foreclose rival clearing houses can be expected to provoke immediate and forceful market reactions via regulatory intervention, and clearing house customers seeking legal recourse (through injunctions).
- b. **Desktop services.** The Parties submitted that clearing houses may use a desktop service to access or download market data, for example to conduct spot risk analysis or to verify market prices.²¹⁹ The Parties also

²¹⁷ Paragraph 36.41 of Form M1.

²¹⁸ Paragraph 36.42 of Form M1.

²¹⁹ Paragraph 36.43 of Form M1.

submitted that it is implausible that post-Transaction, the merged entity would seek to foreclose rival clearing houses by limiting access or otherwise worsening the terms of access to its desktop services.²²⁰ The reasons are as follows:

- i. First, LSEG is vertically integrated today in the supply of trading services and the downstream supply of clearing services, and maintains an open access policy. Any attempt to marginalise or exclude clearing house rivals would run counter to this core commercial policy and prompt customer and regulatory retaliation.
 - ii. Second, any such foreclosure strategy would not be successful in any event. Post-Transaction, the merged entity will continue to face strong competition in the provision of desktop services. Clearing house customers would simply switch to one of Refinitiv's rivals. Clearing house spend by LCH on data services is low, representing only around [0-10]% of revenues. This indicates that desktop data services, along with other data services, are a minor component of offering clearing services which cannot be leveraged in order to produce any foreclosing effects.
 - iii. In addition, CCPs are systemically critical, and any attempt to foreclose rival clearing houses can be expected to provoke immediate and forceful market reactions via regulatory intervention, and clearing house customers seeking legal recourse (through injunctions).
- c. **Non-real-time datafeed services.** The Parties submitted that clearing houses may procure non-real-time content sets in the form of a packaged solution (i.e. non-real-time datafeed services).²²¹ The Parties also submitted that non-real-time datafeed services include consolidated non-real-time pricing and reference data as well as other discrete datafeeds. Refinitiv only has a moderate market share in this service ([10-20]% globally), whereas LSEG has a *de minimis* presence through Mergent. Refinitiv's main competitors are all active in the supply of multiple content sets (whether sold on a discrete or packaged basis) and large

²²⁰ Paragraph 36.44 of Form M1.

²²¹ Paragraph 36.45 of Form M1.

global data vendors including Bloomberg, ICE, and IHS Markit, have comparable or greater market shares than would the merged entity, both globally and in the EEA. SIX Financial and S&P also have a material presence in this segment and compete closely with Refinitiv.

CCCS's assessment

Ability to foreclose competition

112. In assessing whether the concerns raised by third-parties would arise post-Transaction, CCCS first considers whether the merged entity would possess the **ability** to foreclose its downstream rivals in index licensing services and clearing services by either refusing access to Refinitiv's packaged solutions or adopting discriminatory price and non-price practices for Refinitiv's packaged solutions.
113. As the concerns raised by index licensing providers and a clearing service provider relate to access to Refinitiv's financial datafeeds (without specifying any content or datasets) which are mostly sold in a package, and in the absence of further information that refutes the Parties' submission that the most appropriate framework by which to analyse competitive dynamics in financial information products is by reference to packaged solutions, CCCS considers it appropriate to consider the merged entity's market power for the supply of packaged solutions instead of individual datasets or specific data.
114. CCCS notes that rival index licensing providers²²² who raised concerns provide a wide range of indices e.g., fixed income, non-fixed income indices and white-label indices and rely on a wide range of financial information provided by Refinitiv as inputs to provide index licensing to customers worldwide (including Singapore). CCCS did not receive feedback to indicate that packaged solutions are used to produce any specific type(s) of indices or clearing services only. Specifically, while CCCS notes that one rival clearing service provider provides clearing service for IRS denominated in one currency to global banks and investors, other global multi-assets clearing service providers also use packaged solutions for such services.
115. CCCS is of the view that the merged entity is unlikely to possess the ability to foreclose competitors of index licensing and clearing services by restricting

²²² Paragraphs 9 to 11 of [§<]’s response dated 21 April 2020 to CCC’s RFI dated 9 April 2020; [§<]’s response dated 22 April 2020 to Question 4 of CCCS’s Invitation for Comments dated 9 April 2020.

access to Refinitiv’s packaged solutions. This is because feedback²²³ from competing index licensing providers and clearing service providers generally support the Parties’ submission that Refinitiv will continue to face competition by several other international and major providers of packaged solutions (who are likely to also possess significant market power) which competing indexers and clearing houses are able to procure packaged solutions from post-Transaction, e.g. Bloomberg, ICE, Morningstar and SIX Financial.

Conclusion

116. As CCCS is of the view that the merged entity would not have the ability to foreclose access to Refinitiv’s packaged solutions post-Transaction, CCCS considers it not necessary to assess the Parties’ incentive to foreclose competition, or the effect on competition.

117. Accordingly, CCCS considers that foreclosure of access to Refinitiv’s packaged solutions post-Transaction is unlikely to lead to a SLC in any market involving Singapore for index licensing services or clearing services. CCCS notes that the exact product market definition for packaged solutions can be left open, as no competition concerns would arise under any likely way that the product markets could be defined. There is also no need for any precise product market definition for the markets of index licensing services or clearing services to which packaged solutions could be used as an input. As the merged entity does not have the ability to foreclose access to packaged solutions, there will be no SLC in any market for index licensing services or clearing services.

ii. Foreclosure of rival trading venues through Refinitiv’s refusal to distribute venue data of rival trading venues post-Transaction

Concern(s) raised by third-parties

118. Given rival trading venues’ reliance on Refinitiv as a customer and distributor of venue data (please see paragraph 27a above for more information on venue data), a trading venue operator²²⁴ highlighted the concern that Refinitiv would either stop purchasing data or purchase data from it on impaired terms post-Transaction, due to increased market power in the supply of trading data through the

²²³ [X]’s response dated 21 April 2020 to question 3 of CCCS’ Invitation for comments dated 9 April 2020; Paragraph 4 of Notes of Call between [X] and CCCS dated 22 April 2020. [X]’s response dated 21 April 2020 to question 5d of CCCS’ Invitation for comments dated 9 April 2020; [X]’s email response dated 6 May 2020. [X]’s response dated 6 November 2020 to Question 3a of CCCS’s RFI dated 30 October 2020.

²²⁴ [X]’s Response dated 13 November 2020 to Q3 of CCCS’s RFI dated 6 November 2020.

integration of MTS, which may result in rival trading venues being foreclosed from the market for the supply of such data post-Transaction.

CCCS's assessment

119. CCCS notes that LSEG has committed to the EC that it will divest the majority stake it has held in MTS via Borsa Italiana to Euronext as a precondition to EC approving the Transaction.²²⁵ Therefore, any competition concerns arising from the integration of MTS and Refinitiv would be addressed by the proposed divestment.
120. Even without the proposed divestment, CCCS is of the view that the merged entity would not have the ability to foreclose rival trading venues through a refusal to distribute rival trading venues data via Refinitiv as there exist many other direct and indirect distribution channels besides Refinitiv through which such data can be or are already being distributed. CCCS also notes that the third-party that provided this feedback is also distributing its venue data via Bloomberg. In addition to distributing venue data indirectly via data vendors such as Refinitiv, CCCS also notes that venue data can be distributed directly by the trading venue.²²⁶

Conclusion

121. As CCCS is of the view that the merged entity would not have the ability to foreclose access to rival trading venues by refusing to distribute their trading venue data given the divestment of MTS and the availability of alternative modes of distribution which trading venues can distribute venue data, CCCS considers it not necessary to assess the Parties' incentive to do so post-Transaction, or the effect on competition.
122. Accordingly, CCCS is of the view that the Transaction will not lead to a SLC in any market for the supply of trading data by trading venues. CCCS notes that the exact product market definition for the supply of trading venue data to distributors such as Refinitiv can be left open, as no competition concerns would arise under any likely way that the product markets could be defined. As the merged entity does not have the ability to foreclose trading venues in their supply of trading data, there will be no SLC in any of those markets.

²²⁵ <https://www.lseg.com/resources/media-centre/press-releases/proposed-divestment-borsa-italiana-group-euronext-n-v-%E2%82%AC4-325-billion?accepted=16c3ac6402384c857fb70e128b428d01>

²²⁶ Paragraph 45.2 and 49.6 of Parties' response 4 May 2020 in response to CCCS's RFI dated 20 April 2020.

c. Foreclosure of access to specific LSEG's products and services

i. Foreclosure of access to LSEG's real-time venue data to providers of competing packaged solutions

Concern(s) raised by third-parties

123. CCCS received feedback from competitors of packaged solutions indicating concerns in relation to continued access to LSEG's real-time venue data post-Transaction. The feedback²²⁷ raised the concern that post-Transaction, the merged entity would restrict the supply of its trading venue data among other important financial information (e.g. FTSE Russell indices) or charge a higher price for the venue data to other packaged solution providers which compete with Refinitiv.

The Parties' submission

124. Venue data describes data generated by trading activity on trading venues. This includes pre-trade data such as order book data, bid/ask quotes, and post-trade data such as traded prices and trading volumes for various types of financial instruments (e.g. equities, bonds, currencies and commodities). Such data can be collected and distributed, sometimes for a fee, by the trading venues on which the instruments are traded. The data can take the form of individual data points (e.g., the price of Rolls Royce shares traded on the London Stock Exchange on Friday, 1 April 2019 at 10.05 pm) or comprehensive sets of trading data comprising multiple individual data points.²²⁸ The uses of venue data are wide-ranging. For example, venue data are used by market participants including fund managers, traders, retail brokers and sell-side institutions and other third-party service providers in the financial and corporate sector in support of their capital markets activities (e.g. to actively trade securities and inform investment strategy). Depending on the use case, customers may require real-time (less than 15 minutes old) venue data (for example, in order to inform and execute transactions) or non-real-time/delayed (older than 15 minutes) venue data (for example, where data are used for research, to back-test an investment model or for compliance purposes).²²⁹

²²⁷ Paragraph 9 of Notes of Call between [X] and CCCS dated 23 April 2020; [X]'s response dated 3 May 2020 to Question 7 of CCCS's Further Questions dated 21 April 2020.

²²⁸ Paragraph 49.1 of Parties' response dated 4 May 2020 to CCCS' RFI dated 20 April 2020.

²²⁹ Paragraph 49.2 of Parties' response dated 4 May 2020 to CCCS' RFI dated 20 April 2020.

125. In addition, venue data is used by the Parties and other third-party service providers in a number of services, including:²³⁰

- a. Data vendors who incorporate and distribute venue data through real time datafeeds, non-real-time datafeeds and desktop services;
- b. Index licensing providers who use venue data in the calculation of indices;
- c. Exchange venue data may be used as a reference price by other trading venues offering trading services for securities traded in the exchange in question;
- d. Clearing houses who license venue data for the purpose of obtaining the price of a given instrument; and
- e. Providers of order management systems and execution management systems who display venue data on users' screens to inform their trading strategy and trade execution decisions.

126. The Parties submitted that as a general matter, depending on the use case in question, venue data may be considered an essential input into the services listed in paragraphs 124 and 125 above. However, venue data of a specific venue may not be. For example, venue data in general are an essential input into the provision of consolidated real-time datafeeds (which collate venue data from a broad range of sources) but providers of consolidated real-time datafeeds may vary in their coverage of venues and asset classes. As such, the venue data of a single venue is unlikely to be considered an “essential” input into a consolidated real-time datafeed. The Parties estimate that LSEG venue data accounts for approximately [0-10]%²³¹ of all real-time data supplied by Refinitiv (irrespective of the mode of delivery). In the case of non-real-time product, the Parties submitted that [70-80]% of Datascope (Refinitiv's highest revenue generating non-real-time product) users did not access LSEG's venue data in 2018.²³² This underscores that LSEG's venue data is not used – let alone considered essential – by the vast majority of Refinitiv's customers.²³³ According to the Parties, customers can select which venue's data they wish to access: while some customers take the full range of datafeeds offered by a consolidated real-time datafeed provider, customers more typically purchase the subset of datafeeds

²³⁰ Paragraph 49.3 of Parties' response dated 4 May 2020 to CCCS' RFI dated 20 April 2020.

²³¹ According to footnote 81 of Form M1, Eikon usage data from the top [x] Eikon customers in 2018 indicates that LSEG's trading venues cumulatively account for [x][0-10]% of all real-time venue data supplied through Eikon, measured as the number of hits. Similarly, LSEG's venues only accounted for [x][0-10]% of all real-time data feeds distributed through Elektron Real Time in 2018, measured by the number of unique instruments.

²³² Footnote 81 of Form M1.

²³³ Paragraph 49.7 of Parties' response dated 4 May 2020 to CCCS' RFI dated 20 April 2020.

relevant to their business. This is similarly the case for non-real-time datafeeds.²³⁴

127. As mentioned in paragraph 27a, LSEG supplies venue data generated from its capital markets activities, which primarily consists of real-time venue data from its UK and Italian trading venues. LSEG's venue data is made available to the public on a non-discriminatory and reasonable commercial basis. Prices and the terms and conditions for the venue data are disclosed to the public. Delayed data are made available to end-users free of charge. According to the Parties, the supply (i.e. distribution) of both real-time and non-real time data from an LSEG trading venue can be direct (i.e. through LSEG) or indirect (i.e. via data vendor). The delivery of such data could be through either a real-time or non-real-time datafeed or via a desktop.²³⁵
128. The Parties submitted that the merged entity would not have the ability or the incentive to foreclose downstream competitors in packaged solutions (i.e. consolidated real-time datafeed, non-real-time datafeed and desktop solutions) by restricting access to LSEG's venue data Post-Transaction for the following reasons:
- a. First, any input foreclosure strategy would pose a direct threat to LSEG's core capital markets as broad distribution of LSEG's venue data²³⁶ is a key factor in the success of LSEG's venues from a trading perspective,²³⁷ as well as Refinitiv's data vendor business. In particular,
 - i. LSEG's customers are highly sophisticated buy-side and sell-side institutions. Therefore, they would be highly resistant to any post-merger strategy that disrupts their current working arrangements and the manner in which they currently access LSEG venue data. A

²³⁴ Paragraph 49.5 of Parties' response dated 4 May 2020 to CCCS' RFI dated 20 April 2020.

²³⁵ Paragraph 45.2 and 49.6 of Parties' response dated 4 May 2020 to response to CCCS's RFI dated 20 April 2020.

²³⁶ The Parties also submitted that broad distribution is a key factor in creating a broad ecosystem of distributors who can add value to the LSEG data, thus increasing its commercial attractiveness to end customers and increasing demand of the venue data. See paragraph 36.2.4 of Form M1.

²³⁷ According to the paragraph 48.1 and 48.2 of the Parties' response dated 28 April 2020 to CCCS's RFI dated 20 April 2020, trading venues (including exchanges and other trading venues) compete to attract liquidity on their platforms. Market participants executing trades on a given venue require that venue's data inter alia in order to execute trades and for middle and back office processes. Competition between trading venues to attract liquidity is therefore reflected in (indirect) competition with respect to the generation of venue data. The broad distribution of LSEG's venue data makes its venues more attractive for potential trading customers. To some extent, the demand for real-time venue data will follow demand for trading activity on the venue. Hence, restricting access to its venue data would negatively impact LSEG's important capital markets division.

straightforward means of retaliation would be to switch their trading away from LSEG's trading venues to competing venues.²³⁸

- ii. Refinitiv's customers are in many cases important contributors of data,²³⁹ and could retaliate through refusing to supply their data to Refinitiv. Owing to the interconnected nature of the financial markets infrastructure ecosystem, there are numerous touch points with customers through which they could punish and damage the merged entity's business.²⁴⁰
- b. Second, venue data is an area of intense regulatory scrutiny, and any attempt to adopt a foreclosure strategy (in particular one that causes detriment to market users) would attract immediate regulatory concern and could be expected to lead to regulatory action to prevent it. Moreover, exclusive distribution of LSEG venue data via Refinitiv would run directly counter to LSEG's core principles of open access and customer partnership.²⁴¹
 - c. Third, the Parties submitted that it is implausible that the merged entity could use its control over LSEG venue data to marginalise or exclude rival providers of packaged solutions. The vast majority of users of desktop solutions or datafeeds do not use LSEG real-time venue data and therefore would be unaffected even if the merged entity hypothetically made Refinitiv the exclusive redistributor of LSEG real-time venue data. As mentioned in paragraph 126 above, LSEG venue data accounts for approximately [0-10]% of all real-time data supplied by Refinitiv (irrespective of the mode of delivery).²⁴² In this regard, the Parties submitted that:
 - i. Bloomberg is a dominant provider of desktops. Moreover, the majority of Bloomberg terminal users who access LSEG real-time venue data will be users of Bloomberg's equities and/or fixed income trading desktops. These customers will be very reluctant to give up the functionality of Bloomberg terminals, especially the Instant Bloomberg ("IB") messaging functionality on which many traders rely. Rather than replacing their Bloomberg terminals if these terminals hypothetically no longer offered LSEG venue data, many of these users could be expected to retain desktop

²³⁸ Paragraph 36.82.1 of Form M1.

²³⁹ For example, Refinitiv spent €[><] (approx. S\$[><]) in 2018 on inputs from [><], one of its top ten customers by revenue.

²⁴⁰ Paragraph 36.82.2 of Form M1.

²⁴¹ Paragraph 36.82.3 of Form M1.

²⁴² Paragraph 49.7 of Parties' response dated 4 May 2020 to CCCS' RFI dated 20 April 2020.

access to LSEG venue data by adding an Eikon desktop or, in the case of users who already have an Eikon desktop alongside their Bloomberg terminal, turning to their Eikon desktop when they need access to LSEG venue data.²⁴³ This is for three principal reasons:²⁴⁴

Reason one: It is common for large²⁴⁵ clients to have access to multiple desktop solutions and Refinitiv's largest²⁴⁶ global customers generally have desktop solutions from all the main providers (Bloomberg, Refinitiv, FactSet, S&P and ICE) as well as a host of specialist desktop providers, mainly to have a back-up in the case of outages and because of differences in the coverage and functionalities of different providers. The extent to which having multiple desktop solutions is common in the finance industry is illustrated in Annex D.

Refinitiv's internal surveys (conducted as part of Refinitiv's Experience Monitor programme)²⁴⁷ found, on average, for the years between 2016 and 2018, (a) [%] of all Eikon users use a competitor product, (b) [%] of users who are using a competitor product used Bloomberg Terminal, (c) [%] of all Eikon users also used Bloomberg Terminal and (d) in [%] of cases they use Bloomberg more often than any other competitor as set out in Annex E.

Reason two: Availability and affordability of specialised Eikon variants,²⁴⁸ the "slimmed down" versions of the Eikon Premium desktop. It would therefore be more attractive, and keeping with market practice,

²⁴³ Paragraph 36.84 of Form M1.

²⁴⁴ Paragraph 35.7 of the Parties submission dated 5 June 2020 to CCCS's RFI dated 13 May 2020.

²⁴⁵ According to paragraph 35.9 of the Parties submission dated 5 June 2020 to CCCS's RFI dated 13 May 2020, the largest customers tend to be multi-segment businesses and use different desktop solutions across various divisions to suit their specific needs. The precise number of desktop providers will however vary from customer to customer. The medium-size category of customers tends to be more specialised businesses and hence typically have a need for fewer desktop solutions (often in the range of two or three). The smallest clients tend to be boutique and niche firms with very specific business requirements and usually source their desktop requirements from a single vendor.

²⁴⁶ According to footnote 32 of the Parties' submission dated 5 June 2020 to CCCS's RFI dated 13 May 2020, the reference to "large" customers is used in relation to Refinitiv's customers. Refinitiv's customer base is diverse and Refinitiv considers customer "size" in terms of revenues that Refinitiv achieves from them, although it does not formally categorise customers in this way.

²⁴⁷ According to footnote 33 of the Parties' submission dated 5 June 2020 to CCCS's RFI dated 13 May 2020, this is an annual internal survey which goes out to all Refinitiv customers and covers all of Refinitiv's products.

²⁴⁸ Refinitiv currently offers the following slimmed down variants of Eikon: (a) Variants of Eikon that include LSEG's most comprehensive venue data for users in the equity trading, asset management or wealth segments for between €[%] and €[%] (approximately S\$[%] and S\$[%]) per month, (b) A variant of Eikon (which includes access to LSEG venue data) for fixed income traders for €[%] (approximately S\$[%]) per month, (c) Variants of Eikon that include FTSE Russell index data for users in the asset management or wealth segments for between €[%] and €[%] (approximately S\$[%] and S\$[%]) per month.

for customers to multisource their requirements, e.g. via cheaper versions of Eikon, if LSEG venue data was no longer available via Bloomberg, as opposed to switching their primary desktop from Bloomberg to Refinitiv or subscribing to the full-feature versions of both desktops.²⁴⁹ In any event, in addition or as an alternative to subscribing to a slimmed down variant of Eikon, the end user could source the venue data directly from LSEG.²⁵⁰

Reason three: The significance of Bloomberg's instant messaging services (including access to its directory of users) to Bloomberg users who access LSEG venue data, particularly for traders, makes it indispensable, and Bloomberg's pricing practices force customers to subscribe to the full Bloomberg Terminal to access its instant messaging service. The fact that IB is the industry standard (based on the volume of daily messages sent²⁵¹) can be seen in Annex F, which sets out an estimated number of enabled users on each of the four "main" financial services industry instant messaging services. Furthermore, the Parties understand that Bloomberg only provides access to the IB community for users who pay for a desktop (i.e. the service is provided for as part of the price paid for the standard Bloomberg desktop package), which costs US\$24,000 (approximately S\$35,000) per year.²⁵² Therefore, even in the hypothetical situation where a customer only required Bloomberg Terminal for access to the IB community, Bloomberg's flat rate charging model means it is not possible, or at least not commercially viable, to use the full-version of Eikon as a primary desktop solution while using Bloomberg Terminal on the side just to access IB.²⁵³ As a result of these users' preference for IB, its corresponding network effects, and Bloomberg's pricing practices, customers would not be willing to replace the Bloomberg Terminal with Eikon as their primary, or sole, desktop solution if LSEG venue data was no longer available via Bloomberg.

²⁴⁹ Paragraph 35.16 of Parties' submission dated 5 June 2020 to CCCS's RFI dated 13 May 2020.

²⁵⁰ Paragraph 35.17 of Parties' submission dated 5 June 2020 to CCCS's RFI dated 13 May 2020.

²⁵¹ In the Parties' view, the volume of daily messages sent is a more representative means of assessing the competitive positions of the main instant messaging services as it demonstrates the level of day-to-day usage of a particular messaging service. The Parties have identified approximate average numbers of daily messages sent for each of IB and Symphony, which are included in Annex F above along with the equivalent usage information for Eikon Messenger. Annex F clearly shows the strength of IB with more than three times the volume of daily messages being sent through its messaging service compared to its rivals. Bloomberg's position in comparison with Symphony is understated if one refers only to the number of enabled users. While Symphony has an overall greater number of enabled users, Bloomberg's position in the messaging services is more entrenched, as evidenced by the higher number of active users and daily number of messages sent. See Paragraph 35.23 of the Parties submission dated 5 June 2020 to CCCS's RFI dated 13 May 2020.

²⁵² Paragraph 35.24 of the Parties submission dated 5 June 2020 to CCCS's RFI dated 13 May 2020.

²⁵³ Paragraph 35.25 of the Parties submission dated 5 June 2020 to CCCS's RFI dated 13 May 2020.

They would instead be more likely to multi-source their desktop requirements, e.g. via cheaper versions of Eikon.²⁵⁴

- ii. With respect to the subset of users of Bloomberg terminals who currently access LSEG real-time venue data but who do not already have an Eikon desktop, the option of adding an Eikon desktop (rather than replacing the customer's Bloomberg terminal) would be facilitated by the ability to use "slimmed down" variants of the Eikon desktop that were tailored to users in the trading, asset management or wealth segments.²⁵⁵
- iii. In sum, even if users did replace their Bloomberg terminals and switched to Refinitiv's Eikon desktop (which is extremely unlikely for the reasons above), this would be such a small proportion of Bloomberg terminal users that even if LSEG real-time venue data were no longer available through the Bloomberg terminals, there is no realistic prospect that a hypothetical input foreclosure strategy of this type could marginalise or exclude Bloomberg from the market for terminals.²⁵⁶ According to the Parties, Bloomberg reports that it has approximately 325,000 terminals in use, and LSEG reports that only about [X] ([X]%) of these Bloomberg terminals are licensed to access LSE real-time data. This implies that approximately [X]% of Bloomberg terminal users do not access LSE real-time venue data. While there may be some Bloomberg terminal users who license access to real-time venue data from other LSEG venues but not from LSE, the fact that approximately [X]% of Bloomberg terminal users do not access LSE real-time venue data by itself makes it highly unlikely that Bloomberg could be marginalised or excluded from the desktop market if it hypothetically (and implausibly) were no longer able to offer LSEG real-time venue data.²⁵⁷

129. The Parties also highlighted that the Markets in Financial Instruments Directive (i.e., the MiFIR together with the recast Markets in Financial Instruments Directive of 2014) ("**MiFID II**")²⁵⁸ significantly increased the scope of transparency obligations and requires regulated trading venues to make public transparency data which are significant in the context of venue data as an

²⁵⁴ Paragraph 35.26 of the Parties submission dated 5 June 2020 to CCCS's RFI dated 13 May 2020.

²⁵⁵ Paragraph 36.85 of Form M1.

²⁵⁶ Paragraph 36.86 of Form M1.

²⁵⁷ Footnote 81 of Form M1.

²⁵⁸ The requirements of MiFID I were incorporated into and updated by MiFID II and MiFIR. Consequently, it is MiFID II and MiFIR which now govern the regulatory framework for investment activities within the EU. See paragraph 4.2 of Parties' response dated 4 May 2020 to CCC's RFI dated 20 April 2020.

essential input.²⁵⁹ MiFID II introduces new requirements relating to transparency, transaction reporting, and non-discriminatory access to information regarding trading in financial instruments. Broadly, in the asset classes²⁶⁰ to which MiFID II applies, this means information regarding orders submitted to, and transactions executed on, the Parties' venues have to be distributed to third-parties on non-discriminatory and reasonable commercial terms. Core elements of venue data are referred to as transparency data which are required to be published under the MiFID II transparency regime. According to the Parties, data generated from trading activity on a regulated trading venue (prior to being processed, analysed and/or manipulated to create 'derived' data products) are referred to as venue data, whereas core elements of this data are referred to as transparency data and are required to be published under the MiFID II transparency regime.²⁶¹ In practice, LSEG makes no distinction between venue data and transparency data, and, as a general matter, supplies its venue data on non-discriminatory and reasonable commercial terms in accordance with MiFID II transparency requirements.²⁶² Article 13 of MiFIR requires trading venues to make information available free of charge 15 minutes after publication. This obligation applies to the originator of the transparency data (i.e. the regulated trading venue or investment firm) and not to redistributors of this data (e.g. data vendors). In order to meet the obligation to provide transparency data on a reasonable commercial basis, regulated trading venues must ensure that the price of transparency data (unless free) is based on the cost of producing and disseminating such data, which may include an appropriate share of joint costs for other relevant services provided by the regulated trading venue (such as trading services). This includes not only end-user charges (for which non-real-time data must be provided for free), but also prices charged to data vendors for redistributing transparency data (in both real-time and non-real-time).²⁶³ The Parties also submitted that the transparency requirements under MiFIR and MiFID II are not limited to the provision of information to EU customers only. Rather, the obligations under MiFIR and MiFID II are broad and apply to the activities of EU trading venues regardless of where their customers are located (including Singapore).²⁶⁴

CCCS's assessment

²⁵⁹ Paragraph 49.9 of Parties' response dated 4 May 2020 to CCCS' RFI dated 20 April 2020.

²⁶⁰ All instruments traded on LSEG's EEA trading venues (apart from repos and money markets instruments) now fall within the scope of the MiFID regime (i.e. MiFIR disclosure obligations). See footnote 25 of Parties' response dated 5 June 2020 to CCCS's RFI dated 13 May 2020.

²⁶¹ Footnote 2 of Parties' response dated 4 May 2020 to CCCS' RFI dated 20 April 2020.

²⁶² Paragraph 49.10 of Parties' response dated 4 May 2020 to CCCS' RFI dated 20 April 2020.

²⁶³ Paragraph 49.11 of Parties' response dated 4 May 2020 to CCCS' RFI dated 20 April 2020.

²⁶⁴ Paragraph 4.10 of Parties' response dated 4 May 2020 to CCCS' RFI dated 20 April 2020.

Ability to foreclose competition

130. In assessing whether the concerns raised by third-parties would arise Post-Transaction, CCCS considered whether the merged entity will possess the **ability** to foreclose its downstream rivals in packaged solutions by either refusing access to LSEG’s venue data or adopting discriminatory pricing practices for LSEG’s venue data against competing packaged solution providers.
131. Information available from the Parties (see paragraph 27a) and third-party feedback indicate that LSEG’s real-time venue data cannot be replaced with other venue data as venue data generated by different exchanges and other trading venues are generally not close substitutes due to legacy reasons²⁶⁵ and differences in liquidity on different trading venues.²⁶⁶ As such, CCCS considers it appropriate to only consider the merged entity’s market power for the supply of LSEG’s real-time venue data instead of the supply of real-time venue data in general. In this regard, while the Parties are not able to provide market share estimates for the supply of venue data²⁶⁷, CCCS is of the view that the merged entity (through LSEG) will be the sole supplier of LSEG’s venue data. Third-parties indicated that all trading venues (or exchanges) have monopoly power over their respective trading venue data given the exclusive nature of venue data to its trading venue provider.²⁶⁸ Feedback from another provider of packaged solutions also indicated that the speed at which venue data changes and updates (every millisecond) requires competitors of packaged solutions to obtain low latency venue data, which would only be possible if the venue data are obtained directly from LSEG and not from other third-party platforms. Therefore, second-hand sources of LSEG’s real-time venue data (such as Refinitiv’s products) would not be a viable alternative source for competitors to obtain LSEG’s real-time venue data.²⁶⁹
132. CCCS notes the concerns raised by Refinitiv’s competitors supplying financial information products and for this reason focused its assessment on the merged entity’s ability to foreclose its downstream rivals in the market for packaged

²⁶⁵ The Parties submitted that “legacy reasons” in this context refers to the historic status of exchanges as the only (or one of only one or two) trading venues on which a given asset could be traded.

²⁶⁶ Paragraph 15.2.1 of Form M1. See also, Paragraph 12 of Notes of Call with [§<] dated 23 April 2020.

²⁶⁷ This is because of myriad uses of venue data (which means it is not possible to demarcate the scope of such markets precisely), and due to other reasons (including the lack of transparency regarding competitors’ revenues for sale of venue data).

²⁶⁸ Paragraph 12 of Notes of Call with [§<] dated 23 April 2020, [§<]’s response dated 3 May 2020 to Question 7 of CCCS’s Invitation for Comments dated 21 April 2020.

²⁶⁹ Paragraph 12 of Notes of Call with [§<] dated 23 April 2020.

solutions to customers globally (including to and from Singapore). As mentioned in paragraphs 27b above, Refinitiv's products are mainly sold as a package and information available does not refute the Parties' submission that the most appropriate framework in which to analyse competitive dynamics in financial information products is by reference to packaged solutions.

133. Based on third-party feedback and the information submitted by the Parties in paragraphs 42, 126 and 128ciii above on the low use case of LSEG's real-time venue data by Singapore customers of packaged solutions and some overseas users, CCCS is of the view that the information available supports the Parties' submission that the vast majority of users of desktop solutions or datafeeds globally (and more so in Singapore) do not use LSEG real-time venue data and therefore would be unaffected even if the merged entity hypothetically makes Refinitiv the exclusive distributor of LSEG real-time venue data, and would be unlikely to switch away from rival products which do not include access to LSEG real-time venue data.

Customer behavior

134. In assessing the possible impact of any foreclosure of access to LSEG's real-time venue data on competing packaged solutions providers, CCCS also considered the extent to which users would likely switch away from competing packaged solutions to the merged entity's packaged solutions if the former no longer provides access to LSEG's real-time venue data. Feedback from customers and competitors of packaged solutions supports the Parties' submission that users of alternative platforms would be reluctant to switch away from alternative platforms given the preference and reliance on the user interfaces and functions of such alternative platforms,²⁷⁰ as well as a certain level of stickiness to the solutions that they are using and would likely seek to minimise drastic changes such as terminating the use of these solutions completely in favour of Refinitiv's.²⁷¹
135. Given that feedback from Singapore users of packaged solutions suggest that LSEG's real-time venue data is of little importance to them, users' stickiness to alternative packaged solutions, as well as the wide range of unique features provided by rival packaged solutions that may appeal to Singapore users, CCCS is also of the view that there is no compelling reason for packaged solutions providers to be forced to accept any discriminatory offers for LSEG's real-time

²⁷⁰ [Redacted]'s response dated 15 May 2020 to Q7a and Q7c of CCCS's Further Questions dated 7 May 2020.

²⁷¹ [Redacted]'s response dated 11 May 2020 to Questions 10 and 11 of CCCS's Further Questions dated 9 May 2020.

venue data that could result in severe damage to their ability to compete with the merged entity.

136. Based on the above, CCCS is of the view that the merged entity is unlikely to possess the ability to foreclose competition.

Conclusion

137. As CCCS is of the view that the merged entity would not have the ability to foreclose competition post-Transaction, CCCS considers it not necessary to assess the Parties' incentive to do so post-Transaction. In terms of the effect on competition, as set out above in paragraph 133, the vast majority of users of desktop solutions or datafeeds globally (and more so in Singapore) do not use LSEG real-time venue data and therefore would be unaffected. Similarly, the users of packaged solutions are unlikely to switch away from rival packaged solution providers due to any lack of access to LSEG's venue data. Accordingly, this is unlikely to significantly affect the ability of rival packaged solution providers to compete with the merged entity post-Transaction.
138. Accordingly, CCCS considers that foreclosing of access by the merged entity to LSEG' real time venue data would be unlikely to lead to a SLC in any market involving Singapore for packaged solutions. CCCS notes that the exact product market definition for LSEG's venue data can be left open, as no competition concerns would arise under any likely way that the product markets could be defined. There is also no need for any precise product market definition for the market for packaged solutions to which LSEG's real time venue data could be used as an input. As the merged entity does not have the ability to foreclose access to LSEG's venue data, there will be no SLC in any market for packaged solutions.

ii. Foreclosure of access to LSEG's SEDOL to competing packaged solutions providers

Concern(s) raised by third-parties

139. CCCS received feedback from some competitors of packaged solutions indicating concerns in relation to continued access to LSEG's SEDOL post-Transaction.²⁷²

²⁷² Paragraph 12 of Notes of Call between [§<] and CCCS dated 23 April 2020; [§<]'s response dated 23 April 2020 to Question 21 of CCCS's Invitation for Comments dated 13 April 2020.

The Parties' submission

140. The Parties submitted that SEDOL is a global multi-asset class numbering system which provides reference data and unique identification codes for global equity, derivatives and fixed income securities. Customers use SEDOL to map and connect disparate datasets or software services, facilitate global trading activities and link their management systems and workflows. There are currently approximately 88 million SEDOL codes in existence. LSEG's revenues from SEDOL sales to customers in Singapore for FY2018 was £[X] (approximately S\$[X]) which made up [0-10]% of its total revenue in Singapore.²⁷³
141. The Parties submitted that the merged entity would not have the ability or the incentive to foreclose downstream competitors in packaged solutions by restricting access to LSEG's SEDOL post-Transaction for the following reasons:
- a. A hypothetical strategy of refusing to license SEDOL to rival packaged solution providers would likely elicit the strongest customer reaction and possible regulatory response. In particular:
 - i. Although SEDOL is not itself subject to a regulatory FRAND requirement, either in Europe or in Singapore,²⁷⁴ data providers and vendors, like LSEG and Refinitiv, are subject to the intense regulatory scrutiny following both the broadening of regulation (MiFID I to MiFID II) and the interest of competition authorities in data-driven markets. So while there are no specific provisions of EU or Singapore law which would expressly bar the merged entity from licensing SEDOL to rival data vendors on terms other than FRAND, the merged entity would in any event be constrained by the fact that it operates in a highly regulated environment where such a move would attract customer complaints and regulatory scrutiny, and damage to its reputation. These are factors which are clear impediments to the adoption of such a strategy, in addition to the fact that it would be ineffective.²⁷⁵

²⁷³ Paragraph 14.1 of Form M1.

²⁷⁴ A competing security identifier, ISIN, which are issued in accordance with ISO standard 6166:2013 (see <https://www.iso.org/standard/44811.html>) must be allocated either for free or at cost recovery only. LSEG is the National Numbering Authority for Great Britain, Jersey, Guernsey and the Isle of Man and in this role, issues UK ISIN. As a matter of practice, the first UK issued ISIN will have a SEDOL code embedded into it. This embedded SEDOL code does not require a separate licence unless it is extracted from the ISIN code and used on a standalone basis.

²⁷⁵ Paragraph 31.1 of Parties' response dated 29 May 2020 to CCCS' RFI dated 13 May 2020.

- ii. In addition, the FCA also uses its objective to promote effective competition as a guide in its supervision of regulated entities. If LSEG refused to license SEDOL to rival index licensing providers, it is likely that the FCA would consider the use of all of its supervisory tools to address that decision – and may end up using its enforcement tools if it was not satisfied with the outcome of its supervisory intervention. In addition to applying “soft” pressure, the FCA could impose conditions or threaten the removal of relevant operating licences.²⁷⁶
- iii. The Parties also submitted that trying to divert customers from its competitors to Refinitiv’s packaged solutions by refusing to license SEDOL to these competitors would be a futile business strategy and would actually be counter-productive, as it would invite a potential retaliation by some of its competitors who themselves supply the merged entity with benchmarks and indices and real-time data (fixed income) and a range of other data for redistribution as set out in **Annex G**.
- iv. With respect to consolidated real-time datafeeds, there are significant costs associated with switching primary providers. Even if an organisation uses a market data platform to manage its real-time datafeeds, the application programs that customers develop to use real-time datafeeds will have elements that are specific to the datafeed provider. Because of this, switching the primary consolidated datafeed provider tends to be a complex task as it requires identifying and adjusting all the applications or solutions the customer has developed that use the primary real-time datafeed provider’s data. Against this background, it is unlikely that many customers who use Bloomberg or ICE as their primary provider of consolidated real-time datafeeds would decide to replace their primary provider if this provider hypothetically was no longer able to supply LSEG’s SEDOL.²⁷⁷
- v. With respect to desktop solutions, many of the Bloomberg terminal users who currently obtain SEDOL from their Bloomberg terminals would continue to use their Bloomberg terminals even if, hypothetically, they could no longer use their Bloomberg terminals to obtain SEDOL. Many users of Bloomberg terminals have been using the product for many years and, in addition to being accustomed to its user interface,

²⁷⁶ Paragraph 31.3 of Parties’ response dated 29 May 2020 to CCCS’ RFI dated 13 May 2020.

²⁷⁷ Paragraph 36.95.1 of Form M1.

rely on various services available through Bloomberg terminals, including the instant messaging service (including access to Bloomberg Messaging Directory) used especially by traders and Bloomberg news. Against this backdrop, it is unlikely that very many users of Bloomberg terminals would be willing to replace their Bloomberg terminals with Refinitiv's Eikon desktops if they, hypothetically, were no longer able to obtain SEDOL through their Bloomberg terminals.²⁷⁸

vi. With respect to non-real-time datafeeds, the Parties believe that there are many customers of non-real-time datafeeds for which SEDOL are not critical to their work flow. If SEDOL is not important to a customer's work flow, then a customer clearly would be unlikely to switch to Refinitiv in order to have access to SEDOL. Even with respect to customers of rival non-real-time datafeeds who currently rely on SEDOL in their work flow, based on the Parties' experience, very few would be likely to drop their current providers of non-real-time datafeeds and switch all or the bulk of their purchases of non-real-time products to Refinitiv's product offerings.²⁷⁹

b. Further, the Parties also submitted that the entire purpose of a global reference data service is to help clients both internally and externally align datasets and services across multiple different platforms and providers. If SEDOL could be used only on one platform (e.g. Refinitiv's platform), its use case would be diminished significantly because users would not be able to utilise this key alignment feature (i.e. a mapping tool that aligns different vendor content sets and which allows access to clients and third-parties in downstream tools and applications). Consequently, if hypothetically LSEG were to make SEDOL only available from Refinitiv's product offerings, LSEG would be creating friction to its customers' workflow, frustrating customers and compelling them to seek alternatives to SEDOL. In other words, such a strategy would have the opposite effect – rather than pulling customers towards Refinitiv, it would push them away to competing data providers.²⁸⁰ The Parties submitted that the merged entity (through LSEG) is incentivised to distribute SEDOL as widely as possible. This is because

²⁷⁸ Paragraph 36.95.2 of Form M1 and paragraph 7.3.2 of the Parties' response dated 29 May 2020 to CCCS' RFI dated 13 May 2020.

²⁷⁹ Paragraph 36.95.3 of Form M1.

²⁸⁰ Paragraph 9.3 of the Parties' response dated 5 June 2020 to CCCS' RFI dated 13 May 2020.

rival security identifiers such as ISIN²⁸¹ and CUSIP²⁸² are also widely used. Therefore, the merged entity is naturally incentivised to distribute SEDOL as widely as possible in order to increase the number of end users and to ensure that the user-base considers SEDOL as their prime identifier. A foreclosure strategy would run counter to this aim.²⁸³

CCCS's assessment

Ability to foreclose competition

142. CCCS first considered whether the merged entity would possess the **ability** to foreclose its downstream rivals in packaged solutions either by refusing access to LSEG's SEDOL or adopting discriminatory pricing practices for LSEG's SEDOL against competing packaged solution providers.
143. As information available suggests that there are other substitutes to SEDOL, CCCS considers it appropriate to consider the merged entity's market power for the supply of security identifiers generally.
144. CCCS notes that competitors of Refinitiv who are in the supply of financial information have raised concerns relating to access to SEDOL. For this reason, CCCS focused its assessment on the merged entity's ability to foreclose its downstream rivals in the markets for packaged solutions to customers in Singapore. As discussed above, CCCS notes that Refinitiv's products are mainly sold as a package and information available does not refute the Parties' submission that the most appropriate framework in which to analyse competitive dynamics in financial information products is by reference to packaged solutions.
145. CCCS is of the view that the merged entity would not possess the ability to foreclose its downstream rivals in packaged solutions either by refusing access

²⁸¹ ISIN stands for International Securities Identification Number, which is a code that uniquely identifies a specific securities issue. In 2004 the European Union mandated the use of instrument identifiers in some of its regulatory reporting, which included ISIN as one of the valid identifiers. Further, Commission Delegated Regulation (EU) No 2017/585 of 14 July 2016 establishes ISIN as the identification standard for all instruments and obligates companies with transaction reporting obligations to use ISIN.

²⁸² CUSIP stands for Committee on Uniform Securities Identification Procedures and is the national securities identifying number for North America. A CUSIP number identifies most financial instruments, including stocks of all registered U.S. and Canadian companies, commercial paper and U.S. government and municipal bonds. The CUSIP system (formally known as CUSIP Global Services) — owned by the American Bankers Association and managed by Standard & Poor's — facilitates the clearance and settlement process of securities. As with SEDOL in the UK, CUSIP is embedded in the ISIN of North American issued securities. While CUSIP is used for U.S. and Canadian securities, the same organization also issues CINS (CUSIP International Numbering System) to identify securities in international markets

²⁸³ Paragraph 36.17 of Form M1.

to SEDOL or adopting discriminatory pricing practices for SEDOL against competing packaged solutions providers. Specifically, third-party feedback noted several other security identifiers which users are already using or could potentially use, and some of these alternative security identifiers are more widely adopted than SEDOL.²⁸⁴

146. Furthermore, feedback available from Singapore users of packaged solutions generally suggests that the lack of access to SEDOL on packaged solutions will not prompt any switch to alternative packaged solutions and is unlikely to raise non-horizontal concerns.
147. Based on the above, CCCS is of the view that the merged entity is unlikely to possess the ability to foreclose competition.

Conclusion

148. As CCCS is of the view that the merged entity would not have the ability to foreclose competition post-Transaction by restricting access to SEDOL completely or through the supply of SEDOL on discriminatory terms, CCCS considers it not necessary to assess the Parties' incentive to do so post-Transaction, or the effect on competition.
149. Accordingly, CCCS is of the view that any foreclosure of access to SEDOL or discriminatory pricing practices for LSEG's SEDOL against competing packaged solution providers by the merged entity is unlikely to lead to a SLC in any market involving Singapore for packaged solutions. CCCS notes that the exact product market definition for the supply of SEDOL can be left open, as no competition concerns would arise under any likely way that the product markets could be defined. There is also no need for any precise product market definition for the market for packaged solutions to which LSEG's SEDOL could be used as an input. As the merged entity does not have the ability to foreclose access to the SEDOL, there will be no SLC in any market for packaged solutions.

iii. Foreclosure of access to LSEG's FTSE Russell indices to competing packaged solution providers

Concern(s) raised by third-parties

²⁸⁴ [X]’s response dated 11 May 2020 to Question 7 of CCCS’s Further Questions dated 9 May 2020. See also, [X]’s response dated 13 May 2020 to Question 5d of CCCS’s Further Questions dated 8 May 2020.

150. CCCS received feedback from competitor packaged solutions providers indicating concerns in relation to continued access to LSEG’s FTSE Russell indices post-Transaction. The concern raised is that the merged entity would potentially have the incentive to favour Refinitiv’s packaged solutions (i.e. Eikon services) in the supply of FTSE Russell indices post-Transaction,²⁸⁵ or make such access more costly for competing packaged solutions providers such that it is no longer feasible for these competing packaged solutions providers to supply the FTSE Russell indices.²⁸⁶

The Parties’ submission

151. The Parties submitted that post-Transaction the merged entity would not have the ability or the incentive to foreclose downstream competitors in packaged solutions, by restricting access to LSEG’s FTSE Russell indices for the following reasons:

- a. Although the Parties submitted that there is no specific regulation under Singapore law requiring persons with proprietary rights to a benchmark to ensure non-discriminatory access to information and licences regarding the benchmark,²⁸⁷ they also noted that any attempt to frustrate rival data vendors’ access to their existing datafeeds – either directly or indirectly (e.g. where rivals access these feeds via other data vendors) – could provoke regulatory intervention. These regulatory obligations and regulatory scrutiny comprise the following elements:²⁸⁸
 - i. As authorised administrators (defined in the EU BMR as the natural or legal person who has control over the provision of a benchmark),²⁸⁹ the Parties’ benchmark licensing activities are under the supervision of the FCA. The kind of discriminatory access implied by a hypothetical foreclosure strategy would likely attract regulatory scrutiny and potential sanctions. In addition, robust governance arrangements and conflicts of interest policies – put in place by the Parties for their respective benchmark businesses pursuant to the requirements of the EU BMR – have, in practice, made the prospect of the Parties leveraging their benchmarks to harm rivals to other parts of their businesses (such as other

²⁸⁵ [X]’s response dated 3 May 2020 to Question 7 of CCCS’s Further Questions dated 21 April 2020.

²⁸⁶ Paragraph 9 of Notes of Call between [X] and CCCS dated 23 April 2020.

²⁸⁷ Paragraph 28.4 of the Parties’ response dated 5 June 2020 to CCCS’ RFI dated 13 May 2020.

²⁸⁸ Paragraph 28.3 of the Parties’ response dated 5 June 2020 to CCCS’ RFI dated 13 May 2020.

²⁸⁹ In relation to FTSE Russell, FTSE International Limited is authorised as an administrator by the FCA. In relation to Refinitiv, RBSL is designated as the administrator of regulated benchmarks for Refinitiv and is approved as an authorised administrator by the FCA.

data vendors, index licensing providers or clearing houses) even more remote. This is evidenced by the fact that the Parties are, to a large degree, vertically integrated, and have consistently licensed their benchmarks on a fair, reasonable and consistent basis.²⁹⁰

- ii. One of the FCA’s operational objectives is the promotion of “effective competition in the interests of consumers in the markets for regulated financial services”. In addition to its competition enforcement powers, the FCA also uses its objectives in order to guide its supervision of regulated entities. If FTSE International Limited (FTSE Russell’s UK entity) took a decision that affected the interests of UK consumers, it is likely that the FCA would consider the use of all of its supervisory tools to address that decision – and may end up using its enforcement tools if it was not satisfied with the outcome of its supervisory intervention. As a supervisor, beyond talking to the regulated entity and applying “soft” pressure, the FCA could impose conditions on the relevant LSEG entity’s licence or threaten the removal of that licence.
- b. Any input foreclosure strategy would fundamentally go against an index licensing provider’s core objective in making its indices widely available to end-customers.
 - i. Even if one were to disregard the potential consequences of customer/competitor retaliation, reputational harm and possible regulatory reaction that could be triggered by an attempted foreclosure strategy, there is simply no commercial incentive for the merged entity to attempt to foreclose upstream or downstream rivals post-Transaction. This is particularly so in light of Refinitiv’s modest presence and competitive position in supplying downstream platforms to asset managers (who are the largest customers of indices) today.²⁹¹ The more widely used an index is, the greater the demand to employ the index as a benchmark for investment performance or in the construction of ETFs or other securities linked to the performance of an index. In order to drive adoption, index licensing providers will therefore want to make their indices available across all desktop products that customers rely on in their workflow to interact with their

²⁹⁰ FTSE Russell, for example, maintains a vendor-agnostic policy, whereby it is committed to: (i) facilitating ease of use across distribution channels; (ii) ensuring new index data is available across distribution channels in a consistent, accurate and timely manner; (iii) achieving and maintaining a high level of visibility and availability of content across distribution channels; and (iv) maintaining a consistent and transparent vendor pricing model.

²⁹¹ Paragraph 7.4.1 of the Parties’ response dated 29 May 2020 to CCCS’ RFI dated 13 May 2020.

indices and across all datafeeds that customers use to provide inputs into their application programs that make use of index data. This incentive to make indices widely available is clearly evidenced by wider market practice today. By way of example, Bloomberg, MSCI and S&P all have strong index offerings and desktop applications, but choose to distribute their indices through rival platforms.²⁹² Customers tend to use multiple platforms (i.e. desktops and applications) that each offer specific functionality not available from other vendor platforms (and would be difficult for other vendors to replicate). This limited substitutability between the functionality on different platforms – even though they may compete with each other in the broader sense – as well as the (significant) incremental value that index licensing providers derive from customers using each additional platform to access its indices, mean index licensing providers will make their indices available across all desktops, including rival platforms.²⁹³

- ii. It is also for this reason that FTSE Russell has always maintained a “vendor agnostic” global distribution policy in the consideration and active promotion of the availability of index content, which it currently makes available through more than [X] vendor and distributor firms globally, including its competitors (e.g. Bloomberg PORT, MSCI’s Barra and RiskMetrics, S&P’s Cap IQ and Morningstar). End users might choose to use an application due to it being “best in class” in a particular area such as asset management, risk metrics, or end-to-end integration, or the choice may be due to the speed or latency of the service.²⁹⁴
- iii. Any input foreclosure strategy which attempts to restrict the distribution of FTSE Russell indices through Refinitiv’s competitors would strongly undermine the FTSE Russell commercial model. In particular, FTSE Russell faces strong competition from other major index licensing providers such as S&P, MSCI and Bloomberg. Reducing the availability of FTSE Russell indices on rival platforms used by asset managers (which would cause significant disruption to their workflow) is likely to result in the eventual switching by funds and asset managers to indices which can be accessed through the asset managers’ chosen platforms, resulting in a loss of significant revenues

²⁹² Paragraph 35.30 of the Parties’ response dated 5 June 2020 to CCCS’ RFI dated 13 May 2020.

²⁹³ Paragraph 36.89 of Form M1.

²⁹⁴ Paragraph 36.90 of Form M1.

relating to FTSE Russell multi-use applications policy from these managers,²⁹⁵ diminishing the relevance of FTSE Russell indices in the long-run and undermining the merged entity's ability to maintain such a strategy. This is in addition to the very real risk of causing irreparable harm to client relationships and brand.²⁹⁶

152. A hypothetical foreclosure strategy leveraging FTSE Russell indices would not have the effect of foreclosing rival packaged solutions providers. In particular:

- a. Customers would still be able to access FTSE Russell indices without needing to switch away from their current desktop provider – for example, by accessing FTSE Russell data directly from LSEG (e.g. by adding a direct feed for real-time data or receiving a direct file for end of day data via FTSE Russell's Data Delivery Service), or they could obtain a slimmed down version of the Eikon variant.²⁹⁷In respect of desktops, given Bloomberg's leading position in desktops, including in the asset management and wealth segments, as well as the fact that many users of Bloomberg terminals have been using the product for many years and, in addition to becoming accustomed to its user interface, rely on various services available through Bloomberg terminals, including the instant messaging service used especially by traders, only a small percentage of Bloomberg terminal users could be expected to replace their Bloomberg terminals with Refinitiv's Eikon desktop, even if FTSE Russell index data (for context, the core users of indices include asset managers and wealth managers²⁹⁸) were no longer available through Bloomberg terminals.²⁹⁹ The Parties estimated that Bloomberg has a global market share of [20-30]% and [20-30]% for desktop in the asset and wealth management segment in 2018 respectively as compared to [0-10]% and [10-20]% for Refinitiv.³⁰⁰ Please refer to **Annex H** for more information on the market shares for other key global competitors.
- b. For non-real-time datafeeds, with respect to users that use FTSE Russell indices and who cannot easily substitute with other indices, very few would be likely to drop their current providers and to switch all or the bulk of their purchases of non-real-time products to Refinitiv's product offerings. In the

²⁹⁵ Paragraph 35.31 of the Parties' response dated 5 June 2020 to CCCS' RFI dated 13 May 2020.

²⁹⁶ Paragraph 36.91 of Form M1.

²⁹⁷ Paragraph 35.33 of the Parties' response dated 5 June 2020 to CCCS' RFI dated 13 May 2020.

²⁹⁸ Paragraph 35.34 of the Parties' response dated 5 June 2020 to CCCS' RFI dated 13 May 2020.

²⁹⁹ Paragraph 36.92.1 of Form M1.

³⁰⁰ Table 8 and Table 9 of the Parties' response dated 5 June 2020 to CCCS' RFI dated 13 May 2020.

Parties' experience, many customers of non-real-time datafeeds (particularly larger customers) multi-source, primarily because of differences in the scope and/or quality of coverage. Because there are costs associated with switching from one provider to another for a large number of datafeeds, it is highly unlikely that a customer who accessed FTSE Russell indices from a rival non-real-time feed provider would replace that provider for all the feeds obtained from that provider. If the customer was taking FTSE Russell indices from a rival provider but was already using one or more of Refinitiv's non-real-time data products for other feeds, the customer would be more likely to add FTSE Russell index data to the non-real-time data it was already taking from Refinitiv rather than replacing its current providers of non-real-time data products with Refinitiv products. Based on Refinitiv's experience, there would still be some migration costs but migrating just the applications that were dependent on FTSE Russell index data would be much less costly than switching all its consolidated non-real-time feed requirements to Refinitiv.³⁰¹

- c. For consolidated real-time datafeeds, similar arguments on switching costs that apply to non-real-time datafeeds would apply.

CCCS's assessment

Ability to foreclose competition

153. As third-party feedback indicated that there are special use cases of FTSE Russell indices and that FTSE Russell index data cannot be replicated by any other indices to serve the unique use cases of FTSE Russell indices, CCCS considers it appropriate to consider the merged entity's market power in the supply of FTSE Russell indices only.
154. CCCS notes that concerns relating to access to FTSE Russell indices were raised by competitors of Refinitiv who are active in the supply of financial information products. For this reason, CCCS focused its assessment on the merged entity's ability to foreclose its downstream rivals in the market for the global supply of packaged solutions. As mentioned above, Refinitiv's products are mainly sold as a package and information available does not refute the Parties' submission that the most appropriate framework in which to analyse competitive dynamics in financial information products is by reference to packaged solutions.

³⁰¹ Paragraph 36.92.2 of Form M1.

155. CCCS is of the view that the merged entity is unlikely to have the ability to foreclose competition. CCCS noted actual instances of market participants switching indices, as well as feedback suggesting that FTSE Russell indices are critical inputs for only certain specific financial products which may not be of significant commercial importance such that users of packaged solutions would switch away from competing packaged solutions to the merged entity's for the purpose of accessing LSEG's FTSE Russell indices. Furthermore, the consideration that financial market participants could be managing other financial products apart from those that rely on FTSE Russell indices suggests that post-Transaction these market participants may still rely on competing packaged solutions to access a wide range of non-FTSE Russell related information through interfaces and features provided on these platforms. It is therefore unlikely that the lack of access to LSEG's FTSE Russell indices would prevent competing packaged solutions providers from offering viable alternatives to their customers.
156. Further, feedback from Singapore customers³⁰² supports the Parties' submission in paragraph 43 that LSEG's index licensing services such as the FTSE Russell indices are not of significant importance to customers in Singapore. For example, feedback from some Singapore-based customers of Refinitiv's packaged solutions noted that they are not using FTSE Russell indices, and feedback from a Singapore customer of packaged solutions who is currently accessing FTSE Russell indices noted that it would consider using financial information services provided by other information service providers (besides LSEG and Refinitiv) even if these services do not provide access to FTSE Russell indices as it could switch to alternative indices provided by other index providers. Accordingly, CCCS is of the view that competitors' competitiveness in providing packaged solutions to Singapore customers would not be greatly impacted even if they are unable to provide LSEG's real-time venue data to Singapore customers post-Transaction.
157. CCCS is of the view that competing packaged solution providers would likely be able to counter the risk of being excluded and marginalised arising from any potential difficulties with accessing LSEG's FTSE Russell indices as information available suggests that they are able to continue providing unique content and solutions that customers of packaged solutions require and rely on.³⁰³

³⁰² [X]’s response dated 15 May 2020 to Q2b of CCCS’s Further Questions dated 11 May 2020. See also, [X]’s response dated 20 April 2020 to Question 14 of CCCS’s Invitation for Comments dated 9 April 2020. [X]’s response dated 13 May 2020 to Questions 2b and 7c of CCCS’s Further Questions dated 8 May 2020.

³⁰³ Paragraphs 5f and 14 of Notes of Call between [X] and CCCS dated 24 April 2020.

158. In this regard, CCCS is of the view that the merged entity is unlikely to have the ability to foreclose competition.

Conclusion

159. As CCCS is of the view that the merged entity would not have the ability to foreclose rival packaged solutions providers by refusing or restricting access to LSEG's FTSE Russell indices post-Transaction, CCCS considers it not necessary to assess the Parties' incentives to foreclose competition, or the effect on competition.

160. Accordingly, CCCS is of the view that any foreclosure of access to FTSE Russell indices or discriminatory pricing practices for FTSE Russell indices against competing packaged solution providers is unlikely to have any significant impact on downstream competitors' ability to compete with the merged entity post-Transaction or raise SLC concerns. Specifically, there is no compelling reason for packaged solutions providers to accept the higher cost of FTSE Russell indices as their ability to compete with the Parties even without access to FTSE Russell indices is unlikely to be harmed. CCCS also notes that the exact product market definition for supply of FTSE Russell indices can be left open, as no competition concerns would arise under any likely way that the product markets could be defined. There is also no need for any precise product market definition for the market of packaged solutions to which FTSE Russell indices could be used as an input. As the merged entity does not have the ability to foreclose access to FTSE Russell indices, there will be no SLC in any market for packaged solutions.

d. Foreclosure of rival clearing houses and trading venues arising from the non-horizontal link in trading, clearing services and packaged solutions

i. Foreclosure of rival OTC clearing houses and rival trading venues (including rival OTC IRDs trading venues and FX trading venues) arising from the non-horizontal link in trading and clearing services

Concerns raised by third-parties

161. CCCS received feedback from a competing clearing service provider who noted that the Transaction would have substantial impact on clearing services to customers who engage in trading unless the merged entity continues to offer its trading and clearing services on a fair, reasonable and non-discriminatory basis and unbundled to customers in Singapore. For example, a customer who uses

Tradeweb³⁰⁴ for trading should be able to continue to clear their OTC derivatives transactions with an OTC clearing house of their choice without any discriminatory pricing.³⁰⁵

162. CCCS also received feedback from trading venue competitors that a potential concern arising from the Transaction relates to the possibility that LCH provides preferential treatment to customers using the trading venues of (a) Tradeweb; (b) Refinitiv and (c) MTS by offering lower clearing fees, preferred access, or other advantages for customers trading on Tradeweb and Refinitiv's venues post-Transaction, which could disadvantage competing trading venues.³⁰⁶

The Parties' Submission

163. With respect to trading and clearing activities, the possible non-horizontal relationships between the Parties are in relation to:
- a. OTC IRDs traded on Tradeweb's venue, which traders may choose to clear on LCH's SwapClear; and
 - b. OTC FX products traded on Refinitiv's venue, which traders may choose to clear on LCH's ForexClear.

Foreclosure of rival OTC IRD clearing houses

164. The Parties submitted that the merged entity will not have the ability or incentive to foreclose rival OTC IRD clearing houses either by forcing Tradeweb customers to clear only through SwapClear, or by providing access to the flow from Tradeweb's trading venue on disadvantageous conditions (vis-à-vis the conditions of access to SwapClear) post-Transaction for the following reasons:
- a. First, in order to pursue a customer foreclosure strategy, the merged entity would need Tradeweb (in which Refinitiv has a 54% interest) to implement it on its behalf. Tradeweb is an independent publicly-listed company whose officers owe fiduciary duties to all Tradeweb's shareholders, including the minority shareholders. Tradeweb's pricing strategy, in particular, is determined by its senior management without

³⁰⁴ Tradeweb is an operator of electronic trading platforms for OTC trading of fixed income and derivatives products and offers price discovery, order execution and trade workflows services to more than 2,500 clients of a global network of the world's largest banks, asset managers, hedge funds, insurance companies, wealth managers and retail clients. Tradeweb's revenues from customers in Singapore come mainly from trading services for IRDs (in particular, swaps/swaptions). See Paragraph 14.4 of Form M1.

³⁰⁵ [3<]'s response dated 28 April 2020 to Question 6c of CCCS's Further Questions dated 19 April 2020.

³⁰⁶ Paragraph 12 of notes of call between CCCS and [3<] dated 5 May 2020 and Paragraph 7 of [3<]'s submission dated 7 October 2020 pursuant to CCCS's public consultation dated 16 September 2020.

interference or monitoring from Refinitiv. Discussions at board level typically focus on [REDACTED] (e.g. [REDACTED], [REDACTED]), [REDACTED] (e.g. [REDACTED]), [REDACTED], [REDACTED] and [REDACTED]. Furthermore, Tradeweb's commercial strategy reflects its views on market dynamics and constraints from competitors, and is not based on instructions received from Refinitiv. While it is reasonable to assume that the merged entity will take into account the effect of its business decisions on the value of its 54% economic interest in Tradeweb, there is no basis for assuming that the Transaction will have any effect on Tradeweb's business decisions. If Tradeweb agrees to require its customers to use only the merged entity for clearing (or, alternatively, to charge higher trading fees or provide lower quality if a customer did not use the merged entity for clearing), the competitiveness of Tradeweb's offering would be diminished. Customers self-select their clearing houses and would typically clear all transactions on their self-selected clearing houses because of margin posting requirements and significant netting efficiencies. Removing this choice of CCPs would significantly reduce its overall attractiveness as a venue, which would turn market participants to and would therefore favour other trading venues.³⁰⁷

- b. Second, the Parties submitted that any hypothetical attempt to refuse (or disadvantage) rival clearing houses would be prohibited by European regulation, which applies to the Parties' services to Singaporean customers. Specifically, MiFIR grants a right to non-discriminatory access of clearing houses to trade feeds³⁰⁸ for IRDs. Any strategy implemented by the merged entity that would give preferential treatment to SwapClear as compared to other clearing houses would be in conflict with Tradeweb's regulatory obligations. Not only would such a strategy be unlawful, it would also have very significant financial and reputational ramifications for Tradeweb. Given that CCPs are systemically critical, any attempt to frustrate rival clearing houses' access to existing datafeeds can be expected to provoke immediate and forceful market reaction via regulatory intervention, and trigger clearing house customers to seek legal recourse (through injunctions). It is therefore implausible that the merged entity would proactively seek to engage in any strategy that would likely result in regulatory reaction and customer backlash.³⁰⁹

³⁰⁷ Paragraph 36.32.1 of Form M1.

³⁰⁸ Also referred to as datafeeds by the Parties. See paragraph 17.1 of the Parties' response dated 29 May 2020 to CCCS's RFI dated 13 May 2020.

³⁰⁹ Paragraph 36.32.2 of Form M1.

- c. Third, the Parties submitted that rival clearing houses would continue to have access to sufficient trade volumes from a number of other OTC IRD D2C and/or dealer-to-dealer D2D trading venues to continue to compete vigorously against the merged entity. Tradeweb's market share on the global OTC IRD D2D trading market is lower than [0-10]%, and it is only around [10-20]% on the global OTC IRD D2C trading market. This means that, in any event, OTC IRD clearing houses could still access the remaining volumes which, collectively represent [90-100]% on the global OTC IRD D2D trading market, and [80-90]% on the global OTC IRD D2C trading market.³¹⁰

Foreclosure of rival OTC IRD trading venues

165. The Parties also submitted that the merged entity would not have the ability to foreclose rival OTC IRD trading venues because:³¹¹

- a. LCH operates in a regulatory environment which prevents it from refusing to clear OTC IRD trades originating from rival trading venues, or from offering clearing services to rival trading venues on a discriminatory basis.

This includes the open access, transparency and non-discrimination obligations imposed by MiFIR.³¹² The obligations under MiFIR apply to the trading and clearing services that the Parties provide to customers in Singapore.

LCH is also a "Recognised Clearing House" ("**RCH**") under the SFA, and pursuant to section 75(1)(d) of the SFA, is required to "*ensure that access for participation in its clearing facility is subject to criteria that are fair and objective, and that are designed to ensure the safe and efficient functioning of its facility and to protect the interests of the investing public*". In addition, the paragraph 6.2(d) of the MAS Guidelines on Regulation of Clearing Facilities (the "**RCH Guidelines**") further clarifies that the criteria should not be unnecessarily restrictive and access should not be limited other than on grounds of risks to the safe and efficient functioning of the clearing facility.

³¹⁰ Paragraph 36.32.3 of Form M1.

³¹¹ Paragraph 36.31 of Form M1.

³¹² See, for example, Article 35(1) MiFIR which provides that "*a CCP shall accept to clear financial instruments on a non-discriminatory and transparent basis, including as regards collateral requirements and fees relating to access, regardless of the trading venue on which a transaction is executed*".

If LCH Limited infringes section 75(1)(d) of the SFA or paragraph 6.2(d) of the MAS Guidelines on Regulation of Clearing Facilities, LCH Limited shall, pursuant to section 81A of the SFA, be guilty of an offence and liable on conviction to a fine not exceeding S\$150,000 and, in the case of a continuing offence, to a further fine not exceeding S\$15,000 for every day or part thereof during which the offence continues after conviction.³¹³

In addition to these legal and financial consequences, infringement of its open access obligations would have very severe reputational implications and damaging spill-over effects for the wider operations of the merged entity in Singapore and beyond, including the risk of retaliation from customers who have already proven their ability to sponsor the entry and expansion of alternative players as well as drawing significant concerns from regulators outside Singapore.³¹⁴

- b. The implementation of a foreclosure strategy that is reliant on some sort of discrimination of Tradeweb's rival trading venues would face material technical challenges. From an operational perspective, it is not feasible for SwapClear to validate the trading venue of a significant proportion of trades in a timely or reliable manner. LCH estimates that, in the first [X] of 2019, about half of the trades cleared by LCH's SwapClear business globally were not submitted directly by a trading venue to SwapClear but instead routed via third-party middleware providers such as Markitwire. Therefore, it would not be realistic for LCH to hypothetically foreclose rival trading venues by discriminating against Tradeweb's rivals without being able to properly identify the trades originating from such rivals.
- c. LSEG is publicly committed to open access clearing. Indeed, LSE was one of the first trading venues to introduce clearing interoperability. LSEG's open access principles are enshrined into LCH's governance model: services must be offered on terms that are fair, reasonable, open and non-discriminatory (with no trading venue, including those that are part of its own commercial group, or user group, favoured over any others). This open access business model is a long-established policy and is integral to the commercial success of LCH, and the merged entity would not have an incentive to adopt a foreclosure strategy that risks undermining this success.

³¹³ Paragraph 5.2 and 5.3 of the Parties' response dated 29 May 2020 to CCCS's RFI dated 13 May 2020.

³¹⁴ Paragraph 5.2 and 5.3 of the Parties' response dated 29 May 2020 to CCCS's RFI dated 13 May 2020.

- d. LCH’s SwapClear is supported by a collaboration model between LCH and key OTC dealer bank customers (the “**SwapClear Banks**”). The terms of this commercial partnership (which are reflected in contractual arrangements between LCH and the SwapClear Banks) give the SwapClear Banks significant countervailing power and influence over SwapClear’s commercial strategy. For instance:

SwapClear Banks have certain consultation rights in relation to certain strategic decisions of SwapClear, including [X]. SwapClear has a contractually established consultative committee, the majority of the members of which are nominated by the SwapClear Banks.

Furthermore, the SwapClear Banks are able to exercise termination rights under the contractual arrangements for SwapClear, including the right to [X] if they wish to do so. In case of termination, the SwapClear Banks are also entitled to a [X].

Finally, there are no material contractual protections [X], for example [X].

- e. In addition to the SwapClear Banks, other SwapClear customers will continue to exercise countervailing power on the merged entity, and have a track-record of successfully sponsoring the entry of a new or existing rival CCP. [X].³¹⁵ [X].
- f. Customers would simply switch (or credibly threaten to switch) to any one of the large number of credible, well-established global CCPs with whom SwapClear currently competes, including CME and Eurex. SGXDC, JSCC and OTCHK that offer clearing services for OTC IRDs in the EU (and are recognised as third country CCPs to offer clearing and settlement facilities by the European Securities and Markets Authority). The mere threat of a significant switch of clearing business away from SwapClear will continue to constrain the merged entity’s incentive to carry out a foreclosure strategy.
- g. The threat of customer switching will therefore remain a significant constraint on LCH. Indeed, a specific feature of competition in the OTC IRD clearing market is that customers generally prefer to have most of their clearing in one CCP due to the requirement to post margin, which can be required for many years depending on the length of the contract (given the long term of maturity of many OTC IRDs); and netting and portfolio-margining benefits. This means that if a customer decides or

³¹⁵ [X].

threatens to switch to another CCP, it has an incentive to switch the entirety (or most) of its business. Accordingly, any hypothetical benefit from a foreclosure strategy may harm LCH more than yield any potential benefit, as LCH's competitors would have a golden opportunity to significantly expand their share of OTC IRD clearing services, which could credibly result in significant losses for SwapClear.

- h. In practice, the operational costs of switching to a rival CCP are unlikely to be material. For example, [X] and [Y] already have the IT infrastructure and know-how to accommodate a switch in a customer's cleared portfolio away from SwapClear, as demonstrated by recent experiences involving the switch of [Z] from SwapClear to [Y].

Foreclosure of rival FX trading venues

- 166. Trading services on Refinitiv's FX trading venues may be considered to be in a non-horizontal relationship with LCH's FX clearing service. Following the Transaction, the merged entity would have an interest in both Refinitiv's trading services for FX products and LCH's FX clearing service. In this scenario, the merged entity may, in theory, favour Refinitiv's FX trading services and LCH's FX clearing service, or attempt to foreclose or discriminate against rival trading services or CCPs in respect of those services.³¹⁶
- 167. However, the Parties submitted that such a concern is theoretical, as the merged entity would not have the ability or incentive to engage in such a strategy for the following reasons:³¹⁷
 - a. LCH operates in a regulatory environment which prevents it from refusing to clear OTC FX trades originating from rival trading venues, or from offering clearing services to rival trading venues on a discriminatory basis. The same regulatory constraints described at paragraph 165.a apply as regards FX trades.
 - b. LCH is constrained by alternative ways of managing counterparty risk, such as bilateral management. The vast majority of FX traders voluntarily elect not to clear, meaning the clearing of OTC FX products is very limited globally. Indeed, the Parties estimate that less than 1%³¹⁸ of all

³¹⁶ Paragraph 36.34 of Form M1.

³¹⁷ Paragraph 36.35 of Form M1.

³¹⁸ The publicly available 2019 Triennial BIS Survey (see <https://www.bis.org/statistics/rpfx19.htm>.) indicates that the average daily volume ("ADV") of OTC FX derivatives traded in April 2019 was EUR 4.1 trillion (approximately S\$6.4 trillion). The Parties estimate that the size of the clearing market was approximately EUR 31 billion (approximately S\$48 billion) ADV in 2018 (single-counted). FX spots are cleared only in de minimis

OTC FX trades are cleared globally. The focus of clearing houses, including LCH, therefore, is on capturing volumes from the vast amount of OTC FX trades that are bilaterally managed. Should the merged entity attempt to foreclose rival trading venues by clearing only trades executed on Refinitiv's venues, FX trading customers³¹⁹ would respond to any foreclosure attempt by opting to settle their trades bilaterally (as the majority already do) or by switching to an alternative CCP. Even if the merged entity was successful in gaining the entire volume of cleared trades from rival trading venues, those rival venues would still have access to approximately 99% of trading volume. Given the negligible amount of trade volume from which rival trading venues would be excluded, those venues could not reasonably be considered to be foreclosed.

- c. Neither Refinitiv nor LCH would have the market position at its respective level of the FX value chain to successfully pursue a foreclosure strategy. There are a large number of competing trading venues for OTC FX products, such as FXGO, 360T and EBS. Likewise, established CCPs such as CME, Eurex, SGX HKEX and Comder offer clearing services for such products. In addition, entry and expansion by rival trading venues and CCPs will continue to constrain the merged entity following the Transaction.
- d. The Parties would not be able to execute a foreclosure strategy targeted at competing FX trading venues. As explained in paragraph 165.b, it is difficult for LCH to reliably determine the execution venue where trades arriving for clearing have been executed. This means that it would not be possible for LSEG/LCH to foreclose rival trading venues by discriminating against the merged entity's rivals.

LCH's ForexClear receives nearly all of its FX trading volumes directly from MarkitWire, an IHS Markit-owned middleware provider for end-to-end trade processing and workflow solutions which support participants in OTC trading including in relation to post-trade notices of execution,

amounts. Even the OTC FX derivative contracts cleared in the highest proportion – Non-Deliverable Forwards (“NDFs”) – are not cleared in large volumes, with only around 20% of NDFs cleared through a CCP (Clarus Financial Technology; BIS). The percentage of bilaterally managed and cleared volumes relative to the overall market of OTC FX trades have been very stable in the last three years. See paragraph 3.1 of the Parties response dated 29 May 2020 to CCCS's RFI dated 13 May 2020.

³¹⁹ A FX trader's choice of trading venue is generally distinct from its choice of post-trade management services, including clearing. Some traders will choose to clear through a CCP, whereas others will choose to manage counterparty risk bilaterally (i.e. not clear with CCP) or use other forms of post-trade risk mitigation. These decisions are ultimately taken by the FX trader, and not the trading venue. See paragraph 4.3 of the Parties response dated 29 May 2020 to CCCS's RFI dated 13 May 2020.

trade confirmation and allocations to clearing and reporting. When a trade is submitted for clearing through a middleware provider such as MarkitWire (also known as MarkitServ), LCH's ForexClear cannot reliably determine the trading venue, if any, where the trade was executed.³²⁰

- e. No rival clearing house is reliant on OTC FX trade feeds from Refinitiv. Refinitiv has a low market share of approximately [0-10]% at the FX trading level globally. Therefore, rival CCPs have access to the volumes traded on other trading venues, and therefore would not be foreclosed by any strategies taken by the merged entity to discriminate against them.
- f. Refinitiv is required by regulation to supply trade feeds to CCPs on a non-discriminatory basis. Section 33(1)(d) of the SFA requires that a recognised market operator³²¹ must ensure that access for participation in its facilities is subject to criteria that are "*fair and objective*", and "*designed to...protect the interests of the investing public*". Paragraph 6.2 of the MAS Guidelines on the Regulation of Markets elaborates on this obligation and provides that access should not be limited on grounds other than that of risks to the fair, orderly and transparent operations of the market. Paragraph 2.5 of the aforementioned guidelines also states that a fair market is one that is characterised by non-discriminatory access to market facilities and information and one that does not tilt the playing field in favour of some participants over others. Accordingly, any discrimination against rival CCPs through the refusal to provide access to Refinitiv's trade feeds would be contrary to the SFA as well as the regulatory objectives of the MAS.
- g. Given that CCPs are systemically critical, any attempt to frustrate rival clearing houses' access to existing datafeeds can be expected to provoke immediate and forceful market reaction via regulatory intervention, including clearing house customers seeking legal recourse (through injunctions). It is therefore implausible that the merged entity would proactively seek to engage in any strategy that would likely result in regulatory reaction and customer backlash.
- h. A foreclosure strategy is contrary to LCH's fundamental open access operating principles, which have been crucial to the success of LCH.

³²⁰ Paragraph 4.5 of the Parties response dated 29 May 2020 to CCCS's RFI dated 13 May 2020.

³²¹ Financial & Risk Transaction Services Ireland Limited, a subsidiary of Refinitiv Holdings, is a recognised market operator pursuant to the SFA.

CCCS's assessment

Foreclosure of rival OTC IRD clearing houses

Ability to foreclose

168. In assessing whether the concerns raised by third-parties would materialise post-Transaction, CCCS first considered whether the merged entity would have the ability to foreclose rival OTC IRD clearing houses (that provides clearing services for OTC IRD D2C and D2D) by restricting the merged entity's trading customers to using LCH's clearing services, instead of rival clearing services.
169. CCCS notes that market feedback is silent on whether clearing services for OTC IRD D2C and D2D are part of the same market. However, for the purposes of the competition assessment, CCCS has adopted a prudent approach in considering OTC IRD D2C and OTC IRD D2D as two separate markets and to examine whether competition concerns are likely to arise in these narrower product markets.
170. In this case, CCCS is of the view that the ability of the merged entity to foreclose rival OTC IRD clearing houses exists only when the merger involves a company which has a dominant position with respect to its trading services customers. This may then provide scope for the merged entity to restrict its trading customers to using its clearing services, instead of rival clearing services. However, CCCS notes the Parties' submission that the merged entity does not have a significant degree of market power in trading services. Tradeweb's market share is estimated at [0-10]% and [10-20]% on the global OTC IRD D2D trading market and the global OTC IRD D2C trading market respectively. Hence, it is unlikely that the merged entity would have a dominant position with respect to trading services to leverage on and foreclose rival OTC IRD clearing houses. Furthermore, CCCS notes that no other third-party raised the concern of potential customer foreclosure in the clearing services market through restriction by the merged entity of access to Tradeweb's customer demand for clearing services.
171. Based on the abovementioned information, CCCS is of the view that the merged entity is unlikely to possess the ability to foreclose its rival OTC IRD clearing houses in the market for global supply of derivatives clearing services either by forcing Tradeweb customers to clear only through LCH's SwapClear, or by providing preferential treatment to the merged entity's trading customers for the use of LCH's clearing services post-Transaction.

Conclusion

172. As CCCS is of the view that the merged entity would not have the ability to foreclose its rival OTC IRD clearing houses post-Transaction, CCCS considers it not necessary to assess the Parties' incentives to foreclose competition, or the effect on competition.
173. Accordingly, CCCS considers that foreclosure of access by the merged entity to Tradeweb post-Transaction is unlikely to lead to a SLC in any markets involving Singapore for OTC IRD clearing services.

Foreclosure of rival OTC IRD trading venues

Ability to foreclose

174. In assessing whether the concerns raised by third-parties would materialise post-Transaction, CCCS first considered whether the merged entity would have the ability to foreclose rival OTC IRD trading venues by providing preferential treatment to Tradeweb through bundling its trading and clearing services, or offering lower clearing fees, preferred access, or other advantages for customers trading on its trading venues post-Transaction.
175. CCCS notes the Parties' submission that there is a distinction between the D2C and D2D channels at the trading level but not at the clearing level.³²² According to the Parties, segmentation by trading channel is appropriate for the following reasons:³²³
- a. Venues are specifically dedicated to either the D2C or D2D trading channels. For example, in the D2C channel, Tradeweb Institutional and Bloomberg are dedicated to, and compete with each other for, trades between liquidity providers (dealers) and liquidity takers (typically institutional buy-side clients). By contrast, other OTC IRD venues like Tradeweb's venue Dealerweb are dedicated to trades between dealers, i.e. the D2D channel. D2C and D2D OTC IRD trading venues are thus complementary in nature. Even where the same provider offers both D2D and D2C IRD trading such as Tradition's Trad-X³²⁴, these venues need to develop D2C-specific functionalities/workflows for their D2C trading service (e.g. the need for pre-trade credit checks, allocations and

³²² Paragraph 3.1 of Parties' submission to CCCS dated 31 August 2021.

³²³ Paragraphs 3.2 and 3.3 of Parties' submission to CCCS dated 31 August 2021.

³²⁴ Trad-X has been active in D2D OTC derivatives since 2011, as part of Tradition. Recently, Trad-X introduced D2C CLOB trading and executed its first D2C IRD trade in January 2020. Trad-X registered as a MTF in 2018. See also: <https://www.finextra.com/pressarticle/81152/trad-x-shipsdealer-to-client-electronic-trading-platform>

workflows required for D2C trading), such that these services will remain distinct from its D2D services. Different players are active in each of these segments, and trading venues belonging to each respective trading channel serve a different purpose and attract different customer groups.

- b. D2D venues also offer specific functionalities to dealers, such as risk management and a more anonymous method of trading as D2D venues tend to operate on a central limit order book protocol (which allows users to see bid orders and sizes in real time, matching bids and offers anonymously and transparently) or are voice brokered.³²⁵

176. The Parties submitted that while Dealerweb permits buy-side customers to trade on its D2D OTC IRD trading venue, there are several reasons why a buy-side client would prefer to trade through a D2C platform rather than a D2D platform.

- a. First, some buy-side customers may lack the necessary expertise to achieve their desired outcome on a D2D venue. D2D platforms typically increase liquidity (and lower costs) by trading more standardised contracts. This means that if a dealer enters into an idiosyncratic IRD contract with a buy-side customer and then wants to offset the risk on the D2D platform, it may be necessary (if that IRD is not traded on the D2D platform) to try to offset the risks on the D2D platform by taking offsetting positions in a package of more standardised IRDs which, when considered together, have a risk profile that hedges the risk associated with the idiosyncratic IRD contract. Because most buy-side customers lack this analytic expertise, buy-side customers typically would not have the ability to re-create their desired IRD by taking positions in a package of more standardised IRDs.
- b. Second, buy-side firms typically want to trade on a fully disclosed basis with their chosen liquidity providers with which they have a long-term relationship. As explained above, buy-side customers typically are not experts at trading on D2D platforms.

177. On the other hand, the Parties submitted that segmentation by the D2C and D2D trading channels is artificially narrow from a clearing perspective and therefore not appropriate for market definition purposes. Rival CCPs have access to, and

³²⁵ A central limit order book is used by most exchanges globally. It is a transparent system that matches customer orders (e.g. bids and offers) on a “price-time priority” basis. A limit order is a type of order to buy or sell a security at a specific price or better: a buy limit order is an order to buy at a preset price or lower, while a sell limit order is an order to sell a security at a pre-specified price or higher.

compete for, the entire spectrum of OTC IRD trade flow – across both D2C and D2D trading, as well as electronic and voice trading (which together comprise the relevant ‘inputs’ for OTC IRD CCPs). Accordingly, the Parties submitted that product market at the clearing level is the market for clearing of OTC IRDs.³²⁶

178. In the absence of information suggesting otherwise, CCCS assessed the potential impact of the foreclosure strategy in the market for the supply of (a) D2D OTC IRD trading, (b) D2C OTC IRD trading and (c) clearing of OTC IRD.
179. In this aspect, CCCS is of the view that information available does not suggest that the Parties have the ability to foreclose rival D2D or D2C OTC IRD trading venues even though the Parties’ estimated combined worldwide market share for the clearing of OTC IRDs in 2018 appears to be high at [90-100]% based on notional cleared volumes and [70-80]% based on notional outstanding volumes³²⁷, for the following reasons:
- a. The presence of material operational and technical challenges to discriminate against Tradeweb’s rival.³²⁸
 - b. The presence of alternatives that rival trading venues could switch to for the purpose of clearing trades even if the Parties are able to identify the trade origins and discriminate against rival trading venues.
 - c. The presence of regulatory obligations in Singapore³²⁹ and elsewhere that prohibits LCH from refusing to clear OTC IRD trades originating from rival trading venues, or from offering clearing services to rival trading venues on a discriminatory basis.
180. Based on the abovementioned information, CCCS is of the view that the merged entity is unlikely to possess the ability to foreclose rival D2D or D2C OTC IRD trading venues by providing preferential treatment to Tradeweb through offering lower clearing fees, preferred access, or other advantages for customers trading on their trading venues post-Transaction.

³²⁶ Paragraphs 3.4 and 3.5 of Parties’ submission to CCCS dated 31 August 2021.

³²⁷ Paragraph 36.138 of Form M1.

³²⁸ Verbal explanation given during the technical briefing by the Parties to CCCS on 29 April 2020.

³²⁹ As it relates to the Parties’ submission on paragraph 6.2(d) of the MAS Guidelines on Regulation of Clearing Facilities at paragraph 163a, CCCS notes that breach of the Guidelines is not in itself an offence.

Conclusion

181. As CCCS is of the view that the merged entity would not have the ability to foreclose its rival D2D or D2C OTC IRD trading venues post-Transaction, CCCS considers it not necessary to assess the Parties' incentives to foreclose competition, or the effect on competition.
182. Accordingly, CCCS considers that foreclosure of access to LCH's SwapClear services or preferential treatment to Tradeweb for access to LCH's SwapClear services by the merged entity post-Transaction is unlikely and would not lead to a SLC in any market for OTC IRD trading services.

Foreclosure of rival FX trading venues

Ability to foreclose

183. In assessing whether the concerns raised by third-parties would materialise post-Transaction, CCCS first considered whether the merged entity would have the ability to foreclose rival FX trading venues by providing preferential treatment to Refinitiv by bundling trading and clearing services, or offering lower clearing fees, preferred access, or other advantages for customers trading on their trading venues post-Transaction.
184. In the absence of market feedback to suggest that there are further segmentations within FX trading, CCCS assessed the competition effects within the FX trading venue global market more generally.
185. As it relates to the Parties' ability to foreclose rival FX trading venues, information available to CCCS does not support the Parties' submission in paragraph 167.f that Refinitiv is required by regulation to supply trade feeds to CCPs on a non-discriminatory basis.³³⁰ Specifically, the requirements under section 33(1)(d) of the SFA and paragraph 6.2 of the MAS Guidelines on the Regulation of Markets relate to the operation of an organised market (e.g. the trading activities of an exchange, such as matching buy and sell orders), which the supply of trade feeds / data feeds does not fall under. There is also no other specific regulation under MAS that would require the supply of trade feeds to CCPs on a non-discriminatory basis. However, CCCS is of the view that the considerations set out in paragraph 179 above would largely apply given the presence of established competing CCPs who are providing clearing for OTC

³³⁰ [X]’s response dated 7 June 2021 to CCCS’s RFI dated 1 June 2021.

FX trades,³³¹ and the presence of material operational and technical challenges to discriminate against Refinitiv's rival.

186. In addition, market feedback supports the Parties' submission in paragraph 167.b above that there exists alternative ways that a FX trader can choose to manage counterparty risks with the vast majority of FX traders choosing not to clear OTC FX trades.³³² CCCS further notes the Parties' submission that a FX trader's choice of trading venue is generally distinct from its choice of post-trade management services, including clearing, and unlike certain credit default swaps or IRD swaps, there is no obligation to clear trades involving FX products.³³³ This suggests that clearing through a CCP is not an important feature for FX products and rival trading venues are unlikely to be significantly affected even if LCH imposes discriminatory clearing terms on their FX trading venues as traders on these venues could opt for any other alternative ways to manage the counterparty risks and are unlikely to be forced to switch away from trading on these FX trading venues. For trades that are not bilaterally managed and cleared through a CCP, CCCS notes that there are other established CCPs and solutions that customers can also switch to as noted in paragraph 185 above.
187. Furthermore, information available suggests that the LCH's market power for OTC FX clearing is even lower than that for OTC IRD clearing. Unlike the significantly higher global market shares of LCH in the market for OTC IRD clearing, the Parties' estimated global market shares for all OTC FX products and OTC FX derivatives in 2018 appear to be low at [0-10]% and [0-10]% respectively.³³⁴ This likewise suggests that there are likely alternative CCPs that rival trading venues are relying on and can switch to.
188. Based on the above, CCCS is of the view that the merged entity is unlikely to possess the ability to foreclose rival FX trading venues by providing preferential treatment to Refinitiv through offering lower clearing fees, preferred access, or other advantages for customers trading on their trading venues post-Transaction.

Conclusion

³³¹ For example, CME provides clearing services for interest rate swap, NDF swaps and clearing of options, future contracts across all asset classes to Singapore customers (see [§<]). CCCS notes from SGX's website that the SGX Titan platform is the new low-latency, high-throughput trading, trade registration and clearing platform to meet the growing needs for SGX equity index, FX and commodity derivative products.

³³² [§<]'s response dated 13 November 2020 to Question 8 of CCCS's RFI dated 30 October 2020.

³³³ Paragraphs 4.1 and 4.3 of Parties' response dated 29 May 2020 to CCCS's RFI dated 13 May 2020.

³³⁴ Paragraph 36.138 of Form M1.

189. As CCCS is of the view that the merged entity would not have the ability to foreclose its rival FX trading venues post-Transaction, CCCS considers it not necessary to assess the Parties' incentives to foreclose competition, or the effect on competition.
190. Accordingly, CCCS considers that any foreclosure of access to LCH's FX clearing services by the emerged entity post-Transaction is unlikely to lead to a SLC in any market involving Singapore for FX trading services.

Foreclosure of rival fixed income trading venues

191. As noted in paragraph 162, CCCS received a feedback from a trading venue competitor on concerns that post-Transaction, the Parties' increased market power in the execution of trades will give LCH the ability and incentive to offer preferential terms to MTS (as well as Tradeweb and FXall) over third-party trading platforms, thereby giving rise to an anti-competitive foreclosure effect on rival trading platforms.³³⁵ CCCS has discussed above why the merged entity will not have the ability to foreclose rival OTC IRD trading venues (like Tradeweb) and FX trading venues (like FXall). CCCS considers it not necessary to assess this concern in relation to MTS and/or other rival fixed income trading venues as LSEG was already integrated in fixed income trading venues and clearing services pre-merger. In addition, CCCS notes that competition concerns are unlikely to arise in view that LSEG has committed to the EC that it will divest the majority stake it has held in MTS via Borsa Italiana to Euronext as a precondition to EC approving the Transaction.³³⁶
192. For the assessment in paragraphs 168 to 191, CCCS notes that the exact product market definition for the relevant trading and clearing services can be left open, as no competition concerns would arise under any likely way that the product markets could be defined.
- ii. Foreclosure of rival packaged solutions arising from the vertical links in trading, clearing and packaged solutions, as well as restrictions on use of security identifiers*

Concern(s) raised by third-parties

³³⁵ Paragraph 21 of [X]'s submission dated 7 October 2020 pursuant to CCCS's public consultation dated 16 September 2020.

³³⁶ <https://www.lseg.com/resources/media-centre/press-releases/proposed-divestment-borsa-italiana-group-euronext-n-v-%E2%82%AC4-325-billion?accepted=16c3ac6402384c857fb70e128b428d01>

193. CCCS received feedback from a competing packaged solution provider who raised the concern that as a result of the Transaction, the merged entity may be incentivised to favour Refinitiv’s packaged solutions (such as Eikon) by allowing its customers to only use RICs for products that it wishes to clear on LCH, but not other security identifiers. Alternatively, the merged entity (through LSE) may also be incentivised to favour Eikon and the merged entity’s trading venue by bundling its licence for SEDOL with RICs which would effectively create a deeper dependency for customers to trade on Eikon and use RICs when clearing, which would be difficult to unwind. Ultimately, this would render it very difficult to clear instruments traded on competing trading venues (which may not have their instruments identified using RICs) on LCH. The feedback also suggested that the lack of interoperability would restrict customers from switching between different trading venues and/or data providers and may unfairly skew competition involving terminals.³³⁷

The Parties’ submission

194. The Parties submitted that the merged entity would not have the ability or incentive to engage in foreclosure strategy arising from the vertical links in trading, clearing and packaged solutions. First, LCH could not require customers to provide a RIC code for their trade to be cleared as:

- a. Traders first have to identify the security they wish to buy/sell before executing trades on a venue, which all takes place pre-clearing. Moreover, CCPs do not require their members to provide data in addition to that already provided by the trading venue. It is for this reason that SEDOL are not identified as a potential input into post-trade services (clearing services).³³⁸
- b. CCPs cannot impose additional requirements on their members for a trade to be cleared, for example, to require the use of a RIC code for the identification of their security. In this regard, the Parties noted that there are regulatory obligations on CCPs that would preclude this practice. LCH is a “RCH” under the SFA and, pursuant to Section 75(1)(d) of the SFA, is required to “*ensure that access for participation in its clearing facility is subject to criteria that are fair and objective, and that are designed to ensure the safe and efficient functioning of its facility and to protect the interests of the investing public*”. In addition, the Paragraph

³³⁷ [§<]’s response dated 3 May 2020 to Question 7 of CCCS’s Further Questions dated 21 April 2020.

³³⁸ Paragraph 36.15 of the Parties’ response dated 5 June 2020 to CCCS’s RFI dated 13 May 2020.

6.2(d) of the RCH Guidelines further clarifies that the criteria should not be unnecessarily restrictive and access should not be limited other than on grounds of risks to the safe and efficient functioning of the clearing facility. Imposing such additional requirements with the intention to favour Eikon customers and without any legitimate justification would be contrary to the SFA as well as the regulatory objectives of the MAS.³³⁹

- c. Furthermore, the MAS has the power to specify a RCH in Part I of the Third Schedule to the Securities and Futures (Clearing Facilities) Regulations 2013 (hereafter a “**Specified RCH**”) as a result of which the Specified RCH would need to obtain the MAS’ approval prior to imposing or changing any clearing fee imposed on its participants in respect of any of its services. The MAS further elaborates in the RCH Guidelines that a Specified RCH must seek the MAS’ approval for, among other things, an inclusion of an additional service which cost or fee was not previously covered or included in a clearing fee. In determining whether or not to specify an RCH as a Specified RCH, the MAS would take into account the level of competition in, or the contestability of, the market for clearing or settlement services provided by the RCH, as well as the ability of trading venues, financial intermediaries or other service providers to establish or operate in Singapore without fair access to the clearing or settlement services provided by the RCH, among other things. Accordingly, if a RCH imposes additional requirements on its members for a trade to be cleared which leads to a change in its clearing fee (for example, charging higher fees for members who do not make use of a RIC code) and this is an anti-competitive practice, the MAS has the power to designate the RCH as a Specified RCH and require it to seek approval for any change in its clearing fee. It bears highlighting that in determining whether to approve a clearing fee, the MAS will consider matters such as competition in the financial services industry and access to clearing or settlement services in Singapore.³⁴⁰
- d. Article 37 of the EMIR Participation Requirements mandates that a CCP’s membership criteria “be non-discriminatory, transparent and objective so as to ensure fair and open access to the CCP and that clearing members have sufficient financial resources and operational capacity to meet the obligations arising from participation in the CCP. Criteria that restrict access shall be permitted only to the extent that their objective is to control

³³⁹ Paragraph 36.17.1 of the Parties’ response dated 5 June 2020 to CCCS’s RFI dated 13 May 2020.

³⁴⁰ Paragraph 36.17.2 of the Parties’ response dated 5 June 2020 to CCCS’s RFI dated 13 May 2020.

the risk for the CCP.” This derogation would not apply to a requirement to specifically use a RIC as opposed to another security identifier.³⁴¹

- e. Article 38(1) of the EMIR Transparency Requirements mandates that a CCP and its clearing members shall publicly disclose the prices and fees associated with the services provided. They shall disclose the prices and fees of each service provided separately, including discounts and rebates and the conditions to benefit from those reductions. A CCP shall allow its clearing members and, where relevant, their clients separate access to the specific services provided. As such, charging higher fees for any member which does not make use of a RIC code would be quickly found out and made subject to regulatory sanctions under Article 37 mentioned above.³⁴²
- f. Even if such a practice is attempted, not only would LCH risk to be found in clear violation of global regulations by imposing discriminatory requirements, there would also be no way to effectively enforce it. LCH would not be the owner of RIC and would not be responsible for ensuring that clearing members or clients are licensed to use RIC, unless Refinitiv required LCH to do so. No CCP would agree to take on this legal risk, which it is obliged by regulation to mitigate, or put itself in the middle of a matter that is squarely between the user and the RIC owner. In other words, a CCP could not practically take any action to enforce a RIC licensing requirement because of the extraordinary systemic risks it would entail. For example, in the event of a RIC licensing breach, the CCP would not control the RIC data so it would not be able to cut off its access and suspending clearing services would be counterproductive to risk management - ultimately a CCP bears the market risk of any open positions held by a defaulting clearing member.³⁴³
- g. Furthermore, RIC are not consistently constructed in a standardised way like many other symbologies, where, for example, the first two digits might indicate date, while the second indicate location, etc. The degree of standardised construction of RIC in fact differs between use-cases and product areas, and in many cases, no particular meaning can be derived from the digits that constitute a given RIC code. Additionally, RIC are not necessarily completely unique as they get reused when a particular instrument is no longer in circulation, contrary to the majority of

³⁴¹ Paragraph 36.17.3 of the Parties’ response dated 5 June 2020 to CCCS’s RFI dated 13 May 2020.

³⁴² Paragraph 36.17.4 of the Parties’ response dated 5 June 2020 to CCCS’s RFI dated 13 May 2020.

³⁴³ Paragraph 36.18 of the Parties’ response dated 5 June 2020 to CCCS’s RFI dated 13 May 2020.

“traditional” identifiers. As a result, it is unlikely that RIC would currently be considered suitable internationally to be used as the code for clearing. They would need to be standardised much more systematically and be subject to acceptance by the market and regulators. That being said, RIC may currently get used for cross-referencing purposes, such that parties to a trade agree that they are talking about the same instrument. Even if the merged entity were to undertake the time and bear the financial cost to adapt RIC to be appropriate for use in clearing, it is difficult to see what added value RIC would provide that would encourage market participants to abandon the identifiers that are currently used, such as SEDOL. There is no commercial incentive for the merged entity to incur this cost, which would be a prerequisite to the foreclosure strategy.³⁴⁴

195. The Parties also submitted that any bundling of SEDOL and RICs to create a deeper dependency for customers to trade on Eikon and use RICs when clearing is a purely theoretical endeavour for the following reasons:
- a. It would be a highly complex task to bring SEDOL and RIC codes under a single data file as it requires a merging of their underlying methodologies which are very different. By way of illustration, the Parties noted that SEDOL are generated (since 2004) via an algorithm and are machine readable codes that are always 7 digits, whereas RIC are readable by humans and can be a range of digits depending on what they represent. Even if it were technically feasible to merge the underlying methodologies, it is unclear whether there would be any customer-driven reason to do so. While there could be a benefit from a data mapping perspective, this is already available to customers through the use of third-party aggregator services.³⁴⁵
 - b. While it is technically feasible for the merged entity to sell SEDOL and RIC licences together as a bundle to customers, there is no commercial incentive for the merged entity to do so. This is because, RICs are for the most part only available to customers making use of Refinitiv’s packaged solutions and not charged for separately. RICs are not commonly licensed on a stand-alone basis to third-parties. The Transaction does not change this dynamic. Further, RICs would not be of use to customers of SEDOL who do not use Refinitiv’s packaged solutions. As such, the merged entity would not have the incentive to bundle SEDOL with RICs, potentially

³⁴⁴ Paragraph 36.19 of the Parties’ response dated 5 June 2020 to CCCS’s RFI dated 13 May 2020.

³⁴⁵ Paragraphs 36.20 and 36.22 of the Parties’ response dated 5 June 2020 to CCCS’s RFI dated 13 May 2020.

raising the cost of access to its SEDOL (especially for its SEDOL customers who do not use RIC or Refinitiv's packaged solutions), as this would be completely at odds with the fact that LSEG is naturally incentivised to distribute SEDOL as widely as possible in order to increase the number of end users and, therefore, the user-base that consider SEDOL as their prime identifier.³⁴⁶

CCCS's assessment

Ability to foreclose

196. In assessing whether the concerns raised by this competing packaged solution provider would materialise post-Transaction, CCCS considered whether the merged entity would possess the ability to foreclose its rivals in packaged solutions by requiring its customers to only use RIC for products to clear on LCH; or bundling its licence for SEDOL with RIC in an attempt to create a deeper dependency for customers to trade on Eikon and use RIC when clearing.
197. CCCS is of the view that information available does not suggest that the abovementioned concerns are likely to materialise. CCCS notes the Parties' submission above that LCH could not require customers to provide a RIC code for their trade to be cleared because a trade would have already been identified by traders before trade execution at the pre-clearing stage and CCPs do not require their members to provide data in addition to that already provided by the trading venue. Further, for LCH to do so would also lead it to run the risk of rendering its clearing services uncompetitive (since other clearing services providers would technically be able to clear a trade without the use of any security identifiers or RICs). The merged entity is unlikely to be able to force clearing customers to buy the bundled RICs/SEDOL to have their trades cleared on LCH to favour Eikon, since there is no need for customers or CCPs to use any security identifiers to have their trades cleared.
198. In the absence of feedback that refutes the Parties' submissions that security identifiers are not considered as an input for clearing services, CCCS is of the view that the merged entity is unlikely to possess the ability to foreclose its downstream rivals in packaged solutions by allowing its customers to only use RICs for products to clear on LCH; or bundling its licence for SEDOL with RICs in an attempt to create a deeper dependency for customers to trade on Eikon and use RICs when clearing.

³⁴⁶ Paragraph 36.23 of the Parties' response dated 5 June 2020 to CCCS's RFI dated 13 May 2020.

Conclusion

199. As CCCS is of the view that the merged entity would not have the ability to foreclose its downstream rivals in packaged solutions by the abovementioned strategies post-Transaction, CCCS considers it not necessary to assess the Parties' incentives to foreclose competition, or the effect on competition.
200. Accordingly, CCCS considers that any foreclosure strategy arising from the abovementioned strategies post-Transaction is unlikely to lead to a SLC in any market involving Singapore for packaged solutions. CCCS notes that the exact product market definition for packaged solutions and security identifiers can be left open, as no competition concerns would arise under any likely way that the product markets could be defined.
- iii. Foreclosure of rival clearing service providers through bundling of Refinitiv's packaged solutions with LSEG's clearing services*
201. CCCS also received feedback from a rival clearing service provider that the merged entity could provide strong incentives and favorable conditions, to take advantage of its dominant position in the supply of packaged solutions to foreclose competition in the market for the supply of clearing services. For example, the merged entity could provide incentives for customers to purchase its bundled services across clearing, trade execution, and data provision services.³⁴⁷

CCCS's assessment

Ability to foreclose

202. In assessing whether the concerns raised by this competing clearing service provider would arise Post-Transaction, CCCS considered whether the merged entity would possess the ability to foreclose rivals in clearing service by dictating that customers who require access to Refinitiv's packaged solutions clear their trades using LCH. CCCS is of the view that the merged entity is unlikely to possess the ability to do so for the reasons set out below.
203. First, as mentioned in paragraph 115 above, CCCS notes that there are many other competing packaged solutions in the market that financial market participants could potentially switch to or are already using to access similar

³⁴⁷ [X]'s response dated 16 October 2020 to Question 8 of CCCS's RFI dated 7 October 2020.

financial information that Refinitiv supplies. Therefore, any bundling conduct by the merged entity that forces customers of packaged solutions to clear trades using LCH would likely drive customers to alternative packaged solutions in the market. This would render such bundling conduct designed to foreclose LCH's competitors ineffective and reduce the attractiveness of Refinitiv's packaged solutions.

204. In addition, CCCS notes that CCPs are obliged under the SFA to ensure that access for participation in their clearing facilities is subject to criteria that are fair and objective, and hence cannot impose additional requirements on their members to favour or restrict access for participation in their clearing facilities. For example, the merged entity will not be able to impose any requirement to use Refinitiv's packaged solutions that would be assessed to cause unfair access for participation in its clearing facility without breaching its obligation under the SFA.³⁴⁸

Conclusion

205. As CCCS is of the view that the merged entity would not have the ability to foreclose its downstream rivals in clearing services by the abovementioned strategy post-Transaction, CCCS considers it not necessary to assess the Parties' incentives to foreclose competition, or the effect on competition.
206. Accordingly, CCCS considers that any foreclosure strategy arising from the abovementioned strategies post-Transaction is unlikely to lead to a SLC in any market involving Singapore for clearing services. CCCS notes that the exact product market definition for packaged solutions and clearing services can be left open, as no competition concerns would arise under any likely way that the product markets could be defined.

Overall Conclusion on Non-Horizontal Effects

207. Based on the above, CCCS is of the view that the competition concerns identified for the assessment are unlikely to arise from the Transaction, save for the concern relating to the possible foreclosure of access to the WM/R FX benchmarks by competing index licensing service providers and clearing service providers post-Transaction.

³⁴⁸ [X]’s response dated 7 June 2021 to CCCS’s email for clarification dated 1 June 2021.

XI. Efficiencies

The Parties' submissions

208. The Parties submitted that the Transaction will result in material benefits for customers in the form of significant cost and revenue synergies, as well as the ability to offer new and innovative products.³⁴⁹ According to the Parties, the cost synergies over the 5 years following completion would be in excess of £350 million (approximately S\$595 million) as a result of de-duplication of back office and corporate functions (i.e. headcount reductions), IT systems, and other technology infrastructure.³⁵⁰ In addition, the merged entity will be able to develop and launch new products such as new [X] and [X] and [X] and enhance their existing products and services.³⁵¹ In relation to revenue synergies, the Parties submitted that the Transaction would provide the opportunity for revenue synergies of at least £225 million (approximately S\$382 million) over the 5 years following completion as a result of:

- a. **cross-selling opportunities**, such as the distribution of LSEG's [X] and [X] via Refinitiv's [X] and the distribution of Refinitiv's [X] to LSEG's index customers;³⁵²
- b. **enhancing existing products**, including the provision of [X] to LSEG's [X] customers, through the addition of Refinitiv's [X], and LCH's [X], as well as extending LSEG's suite of [X], and improving and increasing the number of Refinitiv's [X] by utilising LSEG's [X],³⁵³ and
- c. **developing and launching new products**, for example, developing new [X] and [X] and [X] using Refinitiv's [X] and [X].³⁵⁴

CCCS's assessment

209. CCCS notes that in the assessment of net economic efficiencies, merger parties are required to show that these efficiencies will be sufficient to outweigh the adverse effects resulting from SLC caused by the merger.³⁵⁵

³⁴⁹ Paragraph 42.1 of Form M1.

³⁵⁰ Paragraph 42.3 of Form M1.

³⁵¹ Paragraph 42.3 of Form M1.

³⁵² Paragraph 42.4.1 of Form M1.

³⁵³ Paragraph 42.4.2 of Form M1.

³⁵⁴ Paragraph 42.4.3 of Form M1.

³⁵⁵ Paragraphs 7.3 of the *CCCS Guidelines on the Substantive Assessment of Mergers 2016*.

210. In assessing claimed efficiencies, the merger parties must demonstrate that the efficiencies are:³⁵⁶
- a. Demonstrable;
 - b. Merger specific, that is, they are likely to arise from the merger;
 - c. Timely, in that the benefits will materialise within a reasonable period of time; and
 - d. Sufficient in extent.
211. CCCS is of the view that there is insufficient evidence from the Parties or third-parties to ascertain that the claimed efficiencies will either avert a SLC or be sufficient to outweigh the detriment to competition caused by the Transaction in Singapore. This is in view of CCCS's concern that the Transaction will lead to foreclosure of access to Refinitiv's WM/R FX benchmarks for competing clearing service providers and index licensing providers.

XII. Ancillary Restraints

212. Paragraph 10 of the Third Schedule to the Act provides that, “[t]he section 34 prohibition and the section 47 prohibition shall not apply to any agreement or conduct that is directly related and necessary to the implementation of a merger” (the “**Ancillary Restriction Exclusion**”). To benefit from the Ancillary Restriction Exclusion, a restriction must be both (a) directly related, and (b) necessary, to the implementation of the merger. In order to be directly related, the restriction must be connected with the merger, but be ancillary or subordinate to its main object. In determining the necessity of a restriction to the implementation of the merger, considerations such as whether its duration, subject matter and geographical field of application are proportionate to the overall requirements of the merger will be taken into account in the context of each case.

The Parties' submissions

213. The Parties submitted that the relevant ancillary restrictions in the SPA are the non-compete restriction on Refinitiv Holdings and the non-solicitation restriction that applies to both Parties.³⁵⁷

³⁵⁶ Paragraph 7.9 of the CCCS *Guidelines on the Substantive Assessment of Mergers 2016*.

³⁵⁷ Paragraph 43.1 of Form M1.

214. The non-compete restriction is set out in Sections 5.13(a) and (b) of the SPA (the “**Non-Compete Restriction**”):³⁵⁸

“(a) Except as otherwise provided in this Section 5.13 for a period of **3 years** following the Closing, Seller will not, and will cause its Subsidiaries not to, directly or indirectly: **(i) offer or sell any products, services, software or solutions that are, or can serve as reasonable substitutes for, the Covered Products;**³⁵⁹ or **(ii) manage, operate, advise, or acquire or own equity or voting interests in any Person that engages in any business that would be prohibited under Section 5.13(a).** The parties acknowledge and agree that Seller has granted the covenants set forth in this Section 5.13(a) to maintain and preserve the fair market value of the Company Group transferred to Buyer pursuant to this Agreement.

(b) Nothing in Section 5.13(a) shall: (i) prohibit Seller or any of its Subsidiaries from directly or indirectly acquiring or owning equity interests of a Public Company constituting less than 5% of the outstanding voting power thereof; (ii) prohibit Seller or any of its Subsidiaries from acquiring (through merger, stock purchase or purchase of assets or otherwise) ownership of or equity interests in, and thereafter managing, operating, or advising any Person, provided that (A) in the most recently completed full fiscal year, such Person derived no more than \$50,000,000 of revenues from products, services, software or solutions that can serve as reasonable substitutes for Covered Products; and (B) if the Person engaging in the business that would otherwise be prohibited under Section 5.13(a) becomes a Subsidiary of Seller immediately after such acquisition, then Seller will, as soon as reasonably practicable, but in any event within one year after the closing of such acquisition terminate or divest, in whole, the business of such Person which would otherwise be prohibited under Section 5.13(a).” (emphasis added)

215. The non-solicitation restriction is set out in Section 5.13(c) of the SPA (the “**Non-Solicitation Restriction**”):

“Each of Buyer and Seller agrees that, for a period of two (2) years following the Closing, it will not, and will cause its Subsidiaries not to, directly or indirectly, solicit the services of or employ, as an employee, consultant or otherwise (or cause or seek to cause to leave the employ of Seller (in the case of the restrictions

³⁵⁸ Paragraph 43.2 of Form M1.

³⁵⁹ “Covered Products” are defined in Article 1 of the SPA to include any products, services, software and solutions and extensions, expansions, modifications and replacements thereof offered by the Parties and the subsidiaries as at 1 October 2018.

on Buyer) and the Buyer Group (in the case of the restrictions on Seller) **any officer of the Buyer Group or Seller or any member of the Buyer Group’s Executive Committee or Seller’s Executive Leadership Team or any Management Level Employee of any member of the Buyer Group or Seller that is a direct report to any member of the Executive Committee of Buyer or Executive Leadership Team of Seller**, as the case may be.” (emphasis added)

216. The Parties submitted that that the restrictions above are directly related to and necessary for the implementation of the Transaction.³⁶⁰ Specifically, they submitted that the ancillary restrictions would protect the full value of the transferred business and are not overly restrictive because they are limited to the goods/services of the acquired business.³⁶¹ In relation to the Non-Compete Restriction, they submitted that the duration of the restriction is 3 years, which falls within the time period accepted by CCCS in previous merger cases (i.e. 2 to 5 years),³⁶² and that the restriction pertains to the relevant products of the transferred business.³⁶³
217. As for the Non-Solicitation Restriction, the Parties submitted that it will only last for 2 years and is limited to certain key employees on the part of Refinitiv Holdings.³⁶⁴ According to the Parties,³⁶⁵ the term “officer” in Section 5.13(c) of the SPA, or other clauses, cannot be construed as capturing all employees of the Buyer Group or Seller. The term “officer” is not defined in the SPA but should be construed in accordance with Delaware law, which does not explicitly define the notion of “officer”.³⁶⁶ However, the term is generally understood to capture those holding the most senior level of managerial responsibilities.³⁶⁷ The Parties also submitted that Section 3114(b) of Title 10 of the Delaware Code (10 Del. C. 3114(b), which does not provide a general definition of officer but rather addresses service of process in Delaware courts) includes a list of persons who can be regarded as an “officer”.³⁶⁸ These are: (i) the president, chief executive officer, chief operating officer, chief financial officer, chief legal officer, controller, treasurer or chief accounting officer of the corporation, or (ii) a person identified in public filings with the United States Securities and Exchange Commission because such person is or was one of the most highly compensated

³⁶⁰ Paragraph 43.6 of Form M1.

³⁶¹ Paragraphs 43.6.1 and 43.6.2 of Form M1.

³⁶² Paragraph 9.12 of the *CCCS Guidelines on the Substantive Assessment of Mergers 2016*.

³⁶³ Paragraph 43.6.2b of Form M1.

³⁶⁴ Paragraphs 43.6.2c and 43.6.2d of Form M1.

³⁶⁵ Paragraphs 9.1, 9.2 and 9.3 of Parties’ response dated 15 June 2020 to CCCS’s RFI dated 9 June 2020.

³⁶⁶ Paragraph 5.1 of Parties’ response dated 18 June 2020 to CCCS’s RFI dated 16 June 2020.

³⁶⁷ Paragraph 5.1 of Parties’ response dated 18 June 2020 to CCCS’s RFI dated 16 June 2020.

³⁶⁸ Paragraph 5.2 of Parties’ response dated 18 June 2020 to CCCS’s RFI dated 16 June 2020.

executive officers of the corporation. Generally speaking, this illustrative statutory example underscores that the officers are typically the persons to whom the primary functions of management are delegated by the Board. Accordingly, the number of officers will in any event be small relative to the overall number of employees, especially in corporations like LSEG or Blackstone.³⁶⁹ Accordingly, the Parties submitted that the term officers in the non-solicitation clause contained in 5.13(c) of the SPA should therefore not be construed to capture all employees, regardless of their designation or role, but rather more specifically members of upper management of the Buyer Group or the Seller, such as the CEO, CFO, COO, etc.³⁷⁰ In other words, it would only apply to senior managers and the company secretary.³⁷¹

CCCS's assessment

218. The *CCCS Guidelines on the Substantive Assessment of Mergers 2016* state that non-compete clauses, if properly limited, are generally accepted as essential if the purchaser is to receive the full benefit of any goodwill and/or know-how acquired with any tangible assets, and that CCCS will consider the duration of the clause, its geographical field of application, its subject matter and the persons subject to it.³⁷² The said Guidelines also state that any restriction must relate only to the goods and services of the acquired business and apply only to the area in which the relevant goods and services were established under the previous/current owner.³⁷³ CCCS notes that the EC Notice on Restrictions Directly Related and Necessary to Concentrations states that non-solicitation clauses have a comparable effect to non-compete clauses, and are thus evaluated in a similar way to non-compete clauses.³⁷⁴
219. At the outset, CCCS notes that during the course of the review, LSEG has divested its 99.9% stake in the Borsa Italiana group (which includes MTS), having entered into a definitive and binding sale and purchase agreement on 9 October 2020 with Euronext. As such, CCCS will not assess whether the Non-Compete and Non-Solicitation Restrictions insofar as they relate to the Borsa Italiana group (which includes MTS) benefit from the Ancillary Restriction Exclusion.

³⁶⁹ Paragraph 5.2 of Parties' response dated 18 June 2020 to CCCS's RFI dated 16 June 2020.

³⁷⁰ Paragraph 5.3 of Parties' response dated 18 June 2020 to CCCS's RFI dated 16 June 2020.

³⁷¹ Paragraph 5.3 of Parties' response dated 18 June 2020 to CCCS's RFI dated 16 June 2020.

³⁷² Paragraph 9.12 of the *CCCS Guidelines on the Substantive Assessment of Mergers 2016*.

³⁷³ Paragraph 9.12 of the *CCCS Guidelines on the Substantive Assessment of Mergers 2016*.

³⁷⁴ Paragraph 26 of the *Commission Notice on restrictions directly related and necessary to concentrations* (Official Journal C 56, 05.03.2005, p. 24-31).

220. In the present case, CCCS notes that the purpose of the Non-Compete Restriction is to enable LSEG to benefit from the acquisition of Refinitiv, only relates to the goods and services provided by the Parties prior to the Transaction and will apply for a reasonable period of 3 years. As regards the Non-Solicitation Restriction, CCCS notes the Parties' submission in paragraph 217 that the term "officers" in the non-solicitation clause contained in 5.13(c) of the SPA refers specifically to members of upper management of the Buyer Group or the Seller and that on this basis the Non-Solicitation Restriction only applies to certain key employees (such as senior managers and the company secretary). On the basis of the Parties' submission in relation to whom the Non-Solicitation Restriction applies, CCCS notes that this will enable LSEG to protect the value of the Refinitiv business, and will only apply for a two-year period. CCCS is of the view that the durations of the Non-Compete and Non-Solicitation Restrictions are reasonable and allow the Parties to protect the value of the acquired business.
221. For the reasons above, subject to paragraph 219, CCCS is of the view that the Non-Compete and Non-Solicitation Restrictions benefit from the Ancillary Restriction Exclusion under the Act to the extent that they relate to Singapore.

XIII. Commitments

222. On 25 November 2020, LSEG submitted the Proposed Commitments to address the competition concerns identified by CCCS set out in paragraph 48 to 86 above. The Proposed Commitments were subsequently revised in response to CCCS's feedback. CCCS conducted a public consultation and invited public feedback on the Proposed Commitments, pursuant to section 60A of the Act, on 27 January 2021.³⁷⁵ Under the Proposed Commitments, the Parties commit for a period of ten years from the date of a favourable decision by the CCCS that the Transaction will not, if carried into effect, infringe Section 54 of the Act,³⁷⁶ to make WM/R FX Benchmarks³⁷⁷ available to all:
- a. existing and future customers that access or will in the future make a request to access WM/R FX Benchmarks for the purposes of providing index licensing services
 - i. from Singapore for users globally; or

³⁷⁵ More information on CCCS's public consultation on the Proposed Commitments is available at the following link: <https://www.ccs.gov.sg/media-and-consultation/newsroom/media-releases/lseg-and-refinitiv-public-consult-on-commitments-27-jan-2021>

³⁷⁶ Paragraph 2.1.9 of the Proposed Commitments.

³⁷⁷ According to paragraph 2.1.31 of the Proposed Commitments, WM/R FX Benchmarks means all existing WM/R FX benchmarks/rates offered by Refinitiv as set out in the WM/R Methodology, their successor products and WM/R FX benchmarks/rates of a similar nature offered by the Merged Entity in the future.

- ii. to users resident in or operating a business in Singapore; and
- b. existing and future clearing houses approved or recognised by MAS under Section 51(1)(a) or Section 51(1)(b) of the SFA as an approved clearing house or recognised clearing house respectively, that access or will in the future make a request to access WM/R FX Benchmarks for clearing purposes in Singapore

(collectively, “**WM/R Customers**”).³⁷⁸

223. The Parties also commit not to reclassify or redefine WM/R FX Benchmarks in a manner that would undermine the efficacy of the Commitments, and to deal with WM/R Customers for index licensing or clearing purposes in good faith.³⁷⁹ The Proposed Commitments also include an undertaking by the Parties to ensure that the pricing and commercial terms that are applied to WM/R FX Benchmarks shall not be changed in such a way as to constitute a de facto failure³⁸⁰ to make WM/R FX Benchmarks available to WM/R Customers.³⁸¹
224. As part of the Proposed Commitments, a Monitoring Trustee (“**MT**”) shall be appointed to monitor the compliance of LSEG with the Proposed Commitments and provide CCCS with a written report within 15 days after the end of every reporting period.³⁸²
225. There is also a complaint procedure under the Proposed Commitments. The MT shall inform CCCS within three working days of receipt of any complaint and be responsible for assessing all complaints regarding a potential breach of the commitments, and providing its assessment in writing to CCCS within twenty working days of the receipt of the complaint.³⁸³ To ensure that the MT is able to verify and address any complaints in respect of LSEG’s compliance, LSEG will provide relevant evidence in accordance with the reporting periods to the MT of any change to the price or terms of WM/R FX Benchmarks made available to WM/R Customers for index licensing or clearing purposes and set out the

³⁷⁸ Paragraphs 2.1.30 and 3.1 of the Proposed Commitments.

³⁷⁹ Paragraph 3.2 of the Proposed Commitments.

³⁸⁰ De facto failure means an excessive change in pricing terms or other change in commercial terms (including the introduction of new use cases) which amounts to a failure by the merged entity to supply WM/R FX Benchmarks to WM/R Customers. See paragraph 2.1.14 of the Proposed Commitments.

³⁸¹ Paragraph 3.1.1 of the Proposed Commitments.

³⁸² The reporting periods are: (i) one month for the first six months post-Closing; (ii) three months for the remainder of the first two years; (iii) six months in years three and four; and (iv) 12 months for the remainder of the Commitment Period. Paragraph 2.2.4 in Schedule 1 of the Proposed Commitments.

³⁸³ Paragraph 2.2.5 in Schedule 1 of the Proposed Commitments.

reasons for any such change.³⁸⁴ LSEG shall also provide CCCS with cooperation, assistance and information as CCCS may reasonably require to monitor compliance by LSEG with the commitments.

226. Aside from the complaint channel, there is also a fast-track dispute resolution mechanism, which is an additional option for complainants to seek recourse under the Proposed Commitments, failing which the complainant may request arbitration. The procedural details are set out in the Proposed Commitments. Through the process, LSEG commits not to suspend access to its WM/R FX Benchmarks to the complainant until the date of the final award of the Arbitral Tribunal or, in case a preliminary ruling is requested, until the date of this preliminary ruling.³⁸⁵

Feedback from public consultation, CCCS's assessment and LSEG's responses

227. At the end of the public consultation, CCCS received responses from a total of four (4) third-parties who had previously raised competition concerns in relation to WM/R FX benchmarks access post-Transaction.³⁸⁶ The third-parties who provided feedback generally agreed that the Proposed Commitments can broadly address the issues described in paragraphs 48 to 86 above, namely to ensure access to the WM/R FX benchmarks for competing index licensing providers and clearing services providers post-Transaction. A competitor of index licensing services and packaged solutions made suggestions to refine the Proposed Commitments to better address the identified competition concerns.

Final Commitments

228. LSEG submitted the Final Commitments on 21 May 2021 (please refer to **Annex I**), incorporating further amendments in response to the feedback received from the public consultation that CCCS agreed with. With the amendments made by LSEG to address the abovementioned feedback from third parties, CCCS considers the Final Commitments sufficient to address the competition concerns which may arise from the Transaction.

XIV. Conclusion

229. Under section 60A(1) of the Act, CCCS may accept commitments from such person as it thinks appropriate, which remedy, mitigate or prevent the SLC or

³⁸⁴ Paragraph 3.1.2 of the Proposed Commitments.

³⁸⁵ Paragraph 5.1 of the Proposed Commitments.

³⁸⁶ They are: (1) [REDACTED]; (2) [REDACTED]; (3) [REDACTED] and (4) [REDACTED].

any adverse effect which has resulted or may be expected to result from a completed merger which has been notified to CCCS.

230. Pursuant to section 60B(1) of the Act, CCCS concludes that, subject to the implementation of and compliance with the Final Commitments, the Transaction has not infringed section 54 of the Act.



Sia Aik Kor
Chief Executive
Competition and Consumer Commission of Singapore