ANTICIPATED ACQUISITION BY UNITEDHEALTH GROUP INCORPORATED OF EMIS GROUP PLC

Decision on relevant merger situation and substantial lessening of competition

ME/7016/22

The CMA's decision on reference under section 33(1) of the Enterprise Act 2002 given on 17 March 2023. Full text of the decision published on 17 May 2023.

Please note that [✂] indicates figures or text which have been deleted or replaced in ranges at the request of the parties or third parties for reasons of commercial confidentiality.

SUMMARY

1. UnitedHealth Group Incorporated (**UH**) has agreed to acquire EMIS Group PLC (**EMIS**) (the **Merger**). UH and EMIS are together referred to as the **Parties**, or for statements relating to the future, the **Merged Entity**.

2. After examining a range of evidence, the Competition and Markets Authority (**CMA**) believes that the Merger, if carried into effect, will result in the creation of a relevant merger situation, and meets the threshold for reference to an in-depth phase 2 investigation, giving rise to a realistic prospect of a substantial lessening of competition (**SLC**).

3. The CMA is therefore considering whether to accept undertakings under section 73 of the Enterprise Act 2002 (the **Act**). The Parties have until 24 March 2023 to offer an undertaking to the CMA that might be accepted by the CMA. If no such undertaking is offered, then the CMA will refer the Merger pursuant to sections 33(1) and 34ZA(2) of the Act.

The Parties and their products

4. EMIS is an established UK-based healthcare software business that provides a range of IT solutions to the NHS, including a primary care electronic patient record (**EPR**) system, **EMIS Web**. EMIS Web allows GPs to manage appointment bookings, conduct patient consultations, and update, store and share patient

records. EMIS also offers EMIS-X Analytics (**EXA**), software which allows users to conduct data analysis.

5. Every GP practice uses a primary care EPR system as it is an essential piece of software for running a practice. Other software that GPs use may need to integrate with the ERP system. At the moment, over half of GPs in the UK use EMIS Web as their EPR system.

6. The primary care EPR system is also important because it holds all of the patient data for the GP practice. There are strict data protection rules, but this data can often be shared within the NHS (for example when patients are treated at different care settings) and with certain approved suppliers who will use this data to provide analytical tools to the NHS. Because of the important position of the primary care EPR system, there are various NHS frameworks that govern the procurement and operation of the product, which are monitored and enforced by the NHS.

7. UH is a large US healthcare insurance, healthcare, and health data analytics business. In the UK, UH operates through Optum Health Solutions (UK) Limited (**Optum**) and provides:

   (a) Medicines optimisation (**MO**) software: MO software suggests alternatives to doctors when they are prescribing medication in order to increase effectiveness and reduce costs. Optum has a significant share of supply of MO software and is currently one of only two suppliers used by the NHS. Both Optum and its main competitor's MO software integrates with the primary care EPR system (such as EMIS Web) so that it can provide GP users with prescribing recommendations as they are prescribing medicines.

   (b) Population health management (**PHM**) services: PHM encompasses a broad range of products and services that use data analytics to improve physical and mental health outcomes across a population. This is an evolving market in the UK, with many regional NHS healthcare bodies procuring PHM services for the first time. Optum supplies both PHM products and advisory services, which typically require primary care data.

Competitive overlap

8. During the course of its investigation, the CMA received a large number of concerns about the impact of the Merger, including from NHS Digital. Some concerns related to the Merged Entity gaining significant capabilities to innovate and create new products, which would not typically be a competition concern. However, other

concerns related to the Merger providing the opportunity for Optum to foreclose its competitors, who rely on data from, or integration with, EMIS Web.

9. Therefore, the CMA's investigation focused on whether the Merged Entity might be able to use its control of EMIS's primary care EPR system to harm Optum's rivals in relation to both MO software and PHM services in the UK.

10. The CMA investigated two theories of harm relating to the two main markets in which Optum is active: MO software and PHM services. Under both theories of harm, the CMA explored whether the Merger could give the Parties the ability to engage in partial foreclosure (ie to limit competitors' access to EMIS's systems but not to entirely prevent competitors accessing those systems), whether they would have the incentive to do so, and what effect this would have on competition. The CMA focused on partial foreclosure (rather than total) because EMIS Web is subject to various NHS rules and standards that mean the CMA did not consider total foreclosure to be realistic.

Partial foreclosure in MO software

11. The CMA investigated whether the Merged Entity could partially foreclose rival MO software, in particular through worsening integration with EMIS Web or raising the costs for integration.

12. The CMA first considered whether the Merged Entity would have the ability to foreclose MO software competitors by limiting their access to EMIS Web:

    (a) Evidence from internal documents and third parties shows that integration with primary care EPR systems including EMIS Web is essential to offer MO software as it is embedded in the system.

    (b) Based on its high share, the low rate of GPs switching to other EPR systems, the essential nature of the product, and feedback from third parties including NHS Digital, EMIS has market power in the supply of primary care EPR systems.

    (c) Both Optum and its main rival use custom APIs to integrate with EMIS Web, as they require functionality that is not available through the APIs EMIS must offer as mandated by the NHS. This means the provision and commercial terms of the integration is negotiated directly between the MO supplier and EMIS.

    (d) There are a range of feasible mechanisms available to the Merged Entity that would impact competitors. These include:

(i) Worsening integration with EMIS Web: The Merged Entity could reduce the quality of the custom API (through fewer updates, less co-operation and support or reduced functionality), which could have a direct impact on the quality of rivals' MO software and their ability to innovate in the future.

(ii) Worsening the user interface in EMIS Web: Optum and its main rival both offer MO software that GPs access while using patient records through an interface with EMIS Web. The Merged Entity could reduce the quality of the user interface (through making it less user-friendly or less embedded in the workflow), which could make the product less attractive for customers.

(iii) Raising costs: The Merged Entity could increase the commission charged for the operation of the custom API and for any support and development provided to the rival MO supplier, which could mean rivals are unable to price competitively.

13. The Parties submitted that the NHS frameworks and active monitoring of the market would limit any ability (and incentive) to engage in foreclosure and provided evidence of various NHS interventions in the past. While NHS standards are likely to provide some protection for suppliers, the CMA considers that the mechanisms described above would be feasible as they relate to custom integration and commercial agreements that fall outside of the NHS mandated standards. In addition, various third parties provided evidence of NHS rules not being sufficient to protect them, including because of timeliness and because the NHS often relies on co-operation from suppliers as opposed to formal enforcement action.

14. The CMA also considered whether the Merged Entity would have the incentive to engage in a foreclosure strategy. The CMA considers that any losses to the Merged Entity from limiting the integration of EMIS Web with competing MO software would be low as evidence suggests that EMIS Web customers would be unlikely to switch away from EMIS Web as a result of the strategies above. Gains from MO software customers switching to Optum from its competitors as a result of partial foreclosure could therefore exceed those losses, despite the relatively small size of overall profits available in the MO software market. The size of the MO software market may also grow in the future as a result of new products being developed increasing the Merged Entity's incentive to engage in a foreclosure strategy.

15. The CMA considers the effect of the potential partial foreclosure could be significant. Optum only has one main rival in the supply of MO software, and so any foreclosure that materially weakens its only current constraint could lead to an SLC. The

strategies described above could also raise barriers to entry and expansion and limit potential entrants' ability to innovate and compete in the future.

16. The CMA therefore believes that the Merger gives rise to a realistic prospect of a SLC as a result of partial foreclosure in the supply of MO software in the UK.

Partial foreclosure in PHM services

17. The CMA investigated whether the Merged Entity could partially foreclose rival PHM suppliers, in particular through worsening integration with EMIS Web, or raising costs through EXA.

18. PHM covers a broad range of products and services and is a nascent market in the UK. The CMA focussed its assessment on PHM services that are similar to those currently (or planned to be) offered by Optum.

19. In considering whether the Merged Entity would have the ability to foreclose competing providers of PHM, the CMA found:

    (a) As above, EMIS has market power in the supply of primary care EPR systems.

    (b) Primary care data from EMIS (given its strong market position) was universally seen as an important input in the provision of PHM services by third parties contacted during the investigation.

    (c) For some types of PHM services, evidence supported the Parties' submission that bulk extracts of primary care data are all that is required, and this could be obtained through NHS Digital or directly from EMIS through an NHS mandated API. For these types of PHM services, the Merged Entity may have less ability to engage in foreclosure strategies.

    (d) However, the CMA received consistent evidence from third parties that custom integration is expected to become more important in the future in the supply of other types of PHM services, as suppliers innovate and develop new products for use by GPs or by regional healthcare bodies who oversee primary care provision. The technical requirements and functionality of these products is likely to require custom integration and co-operation between the PHM supplier and EMIS Web. As explained above, custom integration and co-operation is agreed directly between the PHM supplier and EMIS, and the Merged Entity may have the ability to worsen this integration in the future. This would impact on the ability of rival PHM suppliers to innovate and offer competitive products.

(e) Some PHM suppliers rely on use of EMIS's data service EXA rather than a direct connection to EMIS Web in order to supply their PHM solutions. A further feasible foreclosure mechanism could be an increase in costs to rival PHM suppliers of the use of EXA, and multiple third parties raised concerns relating to the price and their reliance on EXA.

20. As with the MO software theory of harm, the CMA carefully considered the role of the NHS and the constraint it may provide on the Parties' ability to engage in partial foreclosure, but for the reasons above, considered it would be insufficient to protect all types of PHM services and suppliers.

21. In relation to incentive, the CMA found evidence that a strategy of foreclosing competitors could result in significant gains to the Merged Entity in PHM as it is a growing market and an area of focus for Optum and UH. Losses from any foreclosure strategy could be expected to be small as EMIS Web customers are unlikely to switch to another EPR system in response to worsened integration with competing PHM suppliers.

22. Although Optum currently has a relatively small position in the supply of PHM services in the UK and there is a large number of competitors, the CMA considers there could be a significant effect on the subset of rivals who are targeted by the foreclosure.

23. The CMA therefore believes that the Merger gives rise to a realistic prospect of a SLC as a result of partial foreclosure in the supply of PHM services in the UK.

ASSESSMENT

PARTIES

24. UH is a multinational healthcare insurance, healthcare and health data analytics company. It earns the bulk of its revenue in the US, where it is headquartered. In the UK, UH's subsidiary Optum Health Solutions (UK) Limited (**Optum**), supplies healthcare solutions, including population health management (**PHM**) services and medicines optimisation (**MO**) software. UH's total turnover for its financial year ending on 31 December 2021 was approximately £209 billion,[1] of which £[✂] was generated in the UK; of this, £20 million is attributable to Optum.[2]

25. EMIS is a healthcare software business. In the UK it supplies a primary care electronic patient record (**EPR**) system (**EMIS Web**) and a data analytics platform (**EXA**). It also offers products for use in other healthcare settings including community pharmacy, community care, hospice, and secondary and emergency care and an app (Patient Access) which is used by patients to make GP (general practitioner) appointments and to order repeat prescriptions.[3] EMIS's total turnover for its financial year ending on 31 December 2021 was £168.2 million of which £[✂] was generated from customers within the UK.[4]

TRANSACTION

26. UH intends to acquire EMIS via an all-cash offer under a court-sanctioned scheme of arrangement under the City Code for an approximate consideration of £1.2 billion.[5]

27. The Parties submitted that the Merger will provide them with the opportunity to create a stronger and more capable organisation, and combine investment in innovation.[6] The Parties' internal documents indicate that:

    (a) Part of their strategy involves leveraging EMIS's access to healthcare providers to create [✂] and to become the [✂] of integrated care systems.[7]

---

[1] Converted $287.6 billion (approximate).
[2] Final signed merger notice for the Merger sent to the CMA by Slaughter and May on 17 January 2023 FMN, paragraph 3.2.
[3] FMN, paragraph 3.7.
[4] FMN, paragraph 6.1.
[5] FMN, paragraph 2.3.
[6] FMN, paragraph 2.6.
[7] UH, [✂]. The NHS describes integrated care systems as partnerships of organisations that come together to plan and deliver joined up health and care services (NHS England » What are integrated care systems?).

The documents discuss the opportunity to leverage the [✂] of EMIS Web, which has access to [✂] million patient records.[8]

(b) The expected expansion includes a range of new products and services [✂] PHM that will help manage health and analyse data which is an established and necessary aspect of PHM.[9]

(c) In a document prepared by UH for the UH board in the context of the rationale and analysis around the Merger, UH presents the revenue and profitability growth Optum expects as a result of the Merger due to i) increasing revenue [✂], ii) using access to EMIS's customer base to [✂], iii) [✂] new products and services [✂], and iv) cost savings [✂].[10]

(d) In a document outlining the strategic rationale for the Merger, Optum notes that acquiring EMIS would [✂]. This document goes on to note that the Merged Entity would be well positioned to become [✂].[11]

PROCEDURE

28. The CMA's mergers intelligence function identified this transaction as warranting an investigation.[12]

29. The Merger was considered at a Case Review Meeting.[13]

JURISDICTION

30. The CMA believes that the Merger (as described in paragraph 26) constitutes arrangements in progress or contemplation for the purposes of the Act.[14]

31. Each of UH and EMIS is an enterprise. As a result of the Merger, these enterprises will cease to be distinct.

---

[8] UH, [✂].
[9] Examples of these are [✂] (UH, [✂]).
[10] UH, [✂].
[11] Optum [✂].
[12] *Mergers: Guidance on the CMA's jurisdiction and procedure (CMA2revised)*, December 2020, paragraphs 6.4-6.6.
[13] *Mergers: Guidance on the CMA's jurisdiction and procedure (CMA2revised)*, December 2020, from page 46.
[14] Section 33(1)(a) of the Act.

32. The UK turnover of EMIS exceeds £70 million, so the turnover test in section 23(1)(b) of the Act is satisfied.

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

34. The initial period for consideration of the Merger under section 34ZA(3) of the Act started on 20 January 2023 and the statutory 40 working day deadline for a decision is therefore 17 March 2023.

BACKGROUND

35. The CMA's merger investigation focused on three types of healthcare offerings that the Parties supply and the relevant relationships between them:

    (a) Primary care EPR systems (such as EMIS Web): These are core IT solutions used by medical practitioners that digitally record and manage patient personal health data. Specifically, all NHS primary care data— ie the data generated by GP in a primary care setting— is stored within primary care EPR systems. Data includes personal patient details, GP appointments, personal medical history, records of hospital referrals and what medicines have been prescribed for the patient. EPR systems are the custodians of NHS patient data, although the patient data belongs to the NHS. Any party (including NHS bodies) that requires primary care data relies on EPR systems for data access and/or extraction. Data protection laws apply to this data and govern the processing and transfer of the data; there are additional safeguards put in place by the NHS. Primary care EPR systems are sold under frameworks formulated by the NHS, which are discussed further below in paragraph 115. EMIS is the largest supplier of EPR systems in the UK (via its EMIS Web product). Optum is not active in this area in the UK.

    (b) MO software (such as Optum's ScriptSwitch Prescribing): MO software is used to optimise cost, efficiency and safety when prescribing medicines. In practice, a clinician will make an initial selection of a medicine for a patient, the MO software will make proposals (for example, suggesting a cheaper generic alternative to a branded drug or alerting the GP to a possible adverse side-effect of the drug regarding patient allergies or other medicines that the patient is taking), and these will be reviewed by the clinician before prescribing.[15]

[15] FMN, Figure 1.

Optum's main MO product is ScriptSwitch Prescribing (**ScriptSwitch**) which provides proposals to GPs based on outcome and cost optimisation. Within this MO focus, Optum faces one competitor, First Databank (**FDB**) whose OptimiseRx MO product also focuses on outcome and cost optimisation. In addition to FDB, there are potential entrants with plans to offer MO software that competes with Optum. Optum, as well as FDB, is also developing MO software that assesses the population of patients and proactively suggests cost, efficiency or safety changes to their medicines. MO software relies on being able to interact effectively with primary care EPR systems and can be embedded to appear within the EPR system. Optum is currently active in England, Scotland and Wales but not Northern Ireland. EMIS is not active in the provision of MO software.

(c) PHM services (supplied by Optum): PHM encompasses a broad range of products and services that use data analytics to improve physical and mental health outcomes across a population (which might be a local population).[16] PHM uses data analytics to understand what influences health outcomes so that health issues across a population can be better anticipated (and any preventative measures implemented accordingly) and inequalities in health reduced.[17] The type of data used can be wide-ranging and include health-related data and other factors such as housing, employment, and education.[18] The NHS's Long Term Plan (which sets out the goals and digital transformation to be undertaken by NHS England in the coming years) emphasises the need for continued development of PHM, expecting PHM solutions to become increasingly sophisticated to address population health issues in the future.[19] PHM is a relatively nascent approach to healthcare in the UK, and so the products and services used to deliver PHM are still developing. The CMA focused on the PHM products and services that may be most similar to those offered and being developed by Optum. [✂] Optum's PHM products require primary care data and/or integration with primary care EPRs. [✂] PHM business is generated in England. [✂] in Scotland and [✂] in Wales and Northern Ireland.[20] This might be reflective of NHS bodies in England adopting PHM solutions earlier than other parts of the country. EMIS is not active in PHM.

[16] NHS England: Population Health Management.
[17] NHS England » Population Health and the Population Health Management Programme.
[18] NHS England » Population Health and the Population Health Management Programme.
[19] NHS Long Term Plan v1.2 August 2019, page 29.
[20] FMN, paragraph 12.16.

36. In England, NHS Digital[21] has the 'responsibility for designing and operating national data infrastructure and digital systems'.[22] This includes the regulation and enforcement of the contractual frameworks discussed later in this paragraph. NHS Digital has a number of contractual frameworks that govern the provision of IT services for NHS primary care (including how data is stored and transferred). EMIS Web is currently sold under one of these frameworks, called the GP IT Futures framework (**ITF**).[23] ITF is made up of three types of agreement; (i) a catalogue agreement, (ii) a framework agreement, and (iii) a call off agreement.[24] Together, these agreements set out the applicable contractual provisions that govern the commercial and service conduct of suppliers. For example, they include minimum standards in relation to APIs and rules on pricing and service standards.[25]

37. Data is transferred using APIs.[i] The NHS has an API standard, called IM1,[26] which it is in the process of getting industry participants to use in order to speed up contracting processes and to establish minimum standards and capabilities for suppliers to access data in EPR systems. Custom APIs are also used, whether for historic reasons (ie they pre-date IM1) or because they provide additional functionality. Routes of interoperating with primary care EPR systems are discussed in more detail from paragraph 161. Irrespective of the method chosen, PHM providers do not pay for the data itself, depending on the type of connection to EMIS some might pay for an API connection and related services.

38. The Parties submitted that in substance the governance and regulatory provisions described here for England are similar in Scotland and Wales.[27]

FRAME OF REFERENCE

39. Market definition provides a framework for assessing the competitive effects of a merger and involves an element of judgement. The boundaries of the market do not determine the outcome of the analysis of the competitive effects of the merger, as it is recognised that there can be constraints on merging parties from outside the relevant market, segmentation within the relevant market, or other ways in which

[21] The CMA understands that NHS Digital merged with NHS England on 1 February 2023, and that NHS England has assumed responsibility for all activities previously undertaken by NHS Digital.
[22] The NHS website provides detail as to the prior operation of NHS Digital, and the goals of the newly merged NHS England here; Protecting and safely using data in the new NHS England - NHS Digital.
[23] FMN, paragraph 20.11, page 63 and 64.
[24] FMN, Figure 5.
[25] APIs are application programming interfaces.
[26] Further information IM1 on the NHS Digital website.
[27] FMN, footnote 179.

some constraints are more important than others. The CMA will take these factors into account in its competitive assessment.[28]

Product scope: Primary care EPR systems

40. Primary care EPR systems provide healthcare professionals with software to digitally record, consult and manage personal health information and patient appointments. The Parties submitted that the frame of reference is the provision of EPR systems (for primary care). They noted that GP practices have a single EPR at any one time and the practices do not select components from different EPR systems or different EPR suppliers. The Parties submitted that there is not any further sub-segmentation of EPRs which could be made.[29]

41. On the demand-side, there is no substitution between primary care EPR systems and secondary care EPR systems as these systems are designed specifically for primary care and secondary care respectively, so a secondary care EPR system would not be suitable for use in a GP practice.

42. On the supply-side, the Parties did not submit that there is substitution between primary care and secondary care EPR systems nor has the CMA seen any evidence to suggest that such substitution would be possible.

43. The CMA therefore considers that the provision of primary care EPR systems should be considered as the appropriate product frame of reference.

Product scope: MO software

44. The Parties submitted that the frame of reference is the supply of MO software.[30] The Parties also submitted that MO software contains a combination of features which are sold on a standalone basis making their function separate to that of EPR systems, which may include a relatively basic medicine 'safety check' without any cost optimisation functions.[31] The Parties acknowledge that there is a narrower segment of MO aimed at outcome and cost optimisation, which includes Optum's MO offering.[32]

---

[28] *Merger Assessment Guidelines (CMA129)*, paragraph 9.4.
[29] FMN, paragraphs 12.6-12.8.
[30] FMN, paragraph 13.6.
[31] FMN, paragraph 12.22-12.28.
[32] FMN, paragraph 14.19.

45. The CMA has not received evidence that MO software aimed at outcome and cost optimisation has any close substitutes from a demand-side perspective.[33]

46. On the supply side, the Parties submitted that suppliers within the broader MO space could move to compete more directly with Optum without difficulty if there was a commercial reason to do so.[34] However, the Parties did not provide any evidence to support this assertion, and the CMA has not seen any such evidence.

47. The CMA therefore considers that MO software, limited to those products aimed at outcome and cost optimisation (**MO software**), should be considered as the appropriate product frame of reference.

Product scope: PHM services

48. The Parties submitted that the appropriate frame of reference is the provision of PHM services.[35] The Parties also submitted that an alternative frame of reference is the provision of healthcare data analytics (including PHM) but made clear that they were including this possibility only because the CMA raised it in a request for information.[36]

49. The Parties submitted that the NHS definition of PHM— the use by frontline teams of a variety of data sources (including on wider determinants such as housing, employment and education) in order to improve the health and wellbeing across a population through better understanding and prediction of what healthcare needs will be[37]— cannot be segmented, and forms part of the broader healthcare analytics market.[38] Optum includes certain data analytics solutions intended to be used in primary healthcare settings, [✂], within its PHM business. The CMA has included such solutions within the broad PHM market in this decision.[39]

50. The Parties also submitted that on the supply-side, although there are different factors a PHM model could focus on (eg the impact of housing, employment or education), providers offering PHM services are able to consider a range of differing factors and therefore these should not be segmented.

51. Evidence gathered by the CMA indicates that the PHM market is nascent and evolving, there is significant uncertainty around how it will evolve, and there are

---

[33] Note of call with [✂], 14 November 2022, paragraph 9.
[34] FMN, paragraph 14.20.
[35] FMN, paragraph 13.6.
[36] FMN, paragraph 13.6.
[37] NHS England: What is Population Health Management.
[38] FMN, para 12.9.
[39] FMN, footnote 53.

differing views on which products and services constitute PHM. Many ICBs (or other relevant NHS entities) are currently procuring PHM services for the first time.[40]

52. While there is uncertainty in the marketplace, NHS England — which is setting the future goals for PHM in England — has provided guidelines on what PHM is and how it is meant to be achieved. A key focus of PHM is to use data analytics to understand what influences health outcomes so that health issues across a population can be better anticipated (and any preventative measures implemented accordingly) and inequalities in health reduced.[41]

53. Although the demand for PHM products will vary, and that demand will determine the types of products and data sources being developed and used, from a supply-side perspective the CMA agrees with the Parties that there is scope for at least some PHM service providers to develop different products within the broader PHM marketplace. For example, Optum's own plans for the Merged Entity involve [✂],[42] and so the CMA has focussed its assessment on PHM services that may operate in a similar area.

54. Also from a supply-side perspective, some PHM suppliers provide a range of different PHM-related products and services.[43] Optum itself offers (or has plans to offer) a range of both PHM advisory services and software products — including population health opportunity identification and intervention targeting, information governance, coaching, system capability development, and reporting suite software – as do some competitors.[44]

55. The Parties submitted that NHS customers tend to use multiple suppliers for their PHM needs, both on the advisory and transformation side as well as the analytics and software side.[45] Although Optum currently offers mostly advisory PHM services, its internal documents [✂].[46]

56. The CMA therefore considers the frame of reference is the supply of PHM services including advisory services. Whilst this covers a broad range of products and

---

[40] The Parties' response to the CMA's request for information 3 dated 5 December 2022 (**RFI 3 Response**), paragraph 12.5.
[41] NHS England » Population Health and the Population Health Management Programme.
[42] Optum, [✂]. See also Optum, [✂].
[43] All PHM services suppliers that responded to the CMA's investigation supply more than one PHM product/service, with the majority each supplying a wide range. Further, the Parties submitted evidence on the range of activities, including PHM products and advisory services, provided by some suppliers (FMN, Table 10).
[44] FMN, paragraph 12.15.
[45] FMN, paragraph 23.6, 23.24.
[46] Optum, [✂].

services, as indicated in paragraph 49 above, the CMA's assessment focuses on PHM products that rely on interactions with primary care EPR systems.

57. Where relevant, the CMA considers closeness of competition between specific types of PHM solutions or advisory services in the competitive assessment below.

Geographic scope

58. The Parties submitted that it is not necessary to conclude on the geographic frame of reference but suggested that, if necessary, the market is at least national (as its broadest scope) as it is important for market players to have a local presence, as well as knowledge of the specific UK market conditions necessary to participate in the market, in order to compete effectively.[47]

59. Regarding the supply of EPR systems, such systems are devised and developed for use in an NHS primary care setting. These systems incorporate tracking patient health records over time within the NHS healthcare system, medicine prescribing and dispensing systems that are in place, as well as other specific needs of the NHS such as shared care records. Considering how specific to the UK these particular aspects of the NHS are, the CMA considers that the relevant frame of reference is therefore not wider than the UK. Although there are differences between the public healthcare systems across the UK nations, the CMA has not seen evidence that these are so significant as to have a frame of reference narrower than the UK and, moreover, the CMA notes that EMIS and Cegedim operate across the UK.

60. The CMA has therefore assessed the Merger on a UK wide basis in respect to the supply of primary care EPR systems.

61. Regarding the supply of MO software, similar to the supply of primary care EPR systems, the evidence on MO software is that the relevant products are designed for the specific context of the NHS public healthcare systems across the UK countries. The CMA considers that the relevant frame of reference is therefore not wider than the UK. Although there are differences between the public healthcare systems across the UK's nations, the CMA has not seen evidence that these are so significant as to have a frame of reference narrower than the UK and, moreover, the CMA notes that the suppliers of MO software operate across the UK.

[47] FMN, paragraphs 13.8, and 13.9.

62. The CMA has therefore assessed the Merger on a UK wide basis in respect to the supply of MO software.[48]

63. Regarding the supply of PHM products, PHM is provided within the context of the NHS. The requirements are unique to the UK,[49] indicating that conditions of competition outside of the UK are likely to be different. The CMA notes that [✂]; this appears to reflect the fact that the NHS in England has started using PHM products sooner than the other UK nations. The CMA has seen no evidence to suggest that there would be material differences in demand-side substitutability of PHM solutions across the UK nations as the market for these solutions grows.

64. Accordingly, the CMA considers the appropriate geographic frame of reference for the supply of PHM products is the UK.

65. Notwithstanding this, in its competitive assessment the CMA is mindful that almost all of Optum's PHM revenues are currently earnt in England and the incentive to foreclose rivals may not be the same in all UK nations.

Conclusion on frame of reference

66. For the reasons set out above, the CMA has considered the impact of the Merger in the following frames of reference:

    (a) The supply of primary care EPR systems in the UK;

    (b) The supply of MO software in the UK; and

    (c) The supply of PHM services in the UK.

COUNTERFACTUAL

67. The CMA assesses a merger's impact relative to the situation that would prevail absent the merger (ie the counterfactual). The CMA's conclusion on the counterfactual does not seek to ossify the market at a particular point in time. For example, an assessment based on the prevailing conditions of competition might

[48] The CMA understands that [✂].
[49] Note that these requirements vary between UK nations. It is the CMA's understanding that each of Scotland (through the NSS) and Northern Ireland (through the BSO) have strict contracting rules separate to NHS England in the procurement of PHM and similar services. The difference in requirements between England, Scotland and Northern Ireland is demonstrated by the relative success of competitor [✂] who hold significant presence in some of the UK markets, but not all of them. Wales is different in that NHS Wales is significantly resource constrained, our evidence suggests that as a result their PHM procurement, including pricing and product specifications, are effectively the same as for NHS England.

reflect that, absent the merger under review, a merger firm would have continued making investments in improvements, innovations or new products.[50]

68. In this case, the CMA (as well as the Parties) considers the prevailing conditions of competition to be the relevant counterfactual. This includes the Parties and their competitors continuing to develop their offerings, particularly in PHM, which is a new and evolving area in the UK.

COMPETITIVE ASSESSMENT

69. The CMA has assessed two theories of harm:

    (a) Partial foreclosure of the supply of MO software in the UK, and

    (b) Partial foreclosure of the supply of PHM services in the UK.

70. These are examined in turn below.

71. The Parties have different activities, but these activities are closely related. The provision of MO software is closely related to EPR systems in that the MO product must access real-time data in the EPR system, and both Optum and its closest competitor offer MO software that is embedded within the EPR system. The supply of the PHM services typically uses primary care data held in EPR systems as an important input. The Merger is therefore non-horizontal in nature. Both theories of harm are premised on the possibility that the Merged Entity could leverage EMIS's strong position in the provision of EPR systems to harm competitors in the supply of MO software and/or PHM services. The possibility of this occurring is explored in the competitive assessments below.

72. The CMA has heard in its investigation that there might be other effects of the Merger. For example, the Parties have submitted that the Merger would allow Optum to develop improved MO and PHM products, to innovate more and to introduce new products.[51ii] Some third parties have also suggested that Optum could develop new products as a result of the Merger that other competitors may not be able to replicate.[52] To the extent these do not harm the ability of rivals to compete, the CMA has not considered these to be anti-competitive effects of the Merger and has not included such effects in its assessment.

---

[50] *Merger Assessment Guidelines (CMA 129)*, paragraph 3.3.
[51] FMN, paragraph 2.6.
[52] Note of call with NHS Digital, 22 November 2022, paragraphs 3-4.

Partial foreclosure of the supply of MO software

73. MO software needs to connect to the primary care EPR systems in order to provide GPs with prescribing recommendations; full integration or interoperation with the EPR system allows MO software to send relevant messages to the GP within the EPR system as the GP is preparing a prescription for the patient. Optum and First Databank (FDB) are the only two current suppliers of general MO software aimed at outcome and cost optimisation in the UK. Both MO suppliers interoperate with the two main primary care EPR systems suppliers (EMIS, TPP) as well as the other alternative (Cegedim). GPs providing NHS primary care services are the customer for primary care EPR systems (although ICBs may procure these systems on behalf of GPs) and ICBs are the customers for MO software.

74. The CMA has examined whether the Merged Entity could use EMIS's strong market position in primary care EPR systems to harm the competitive position of Optum's rivals in the supply of MO software (thereby partially foreclosing them).[53] This foreclosure could be targeted at Optum's existing rival, FDB, although the CMA considers its foreclosure analysis applies to any other suppliers seeking to offer MO services in the UK either now or in the future.

75. In assessing this theory of harm, the CMA has applied the established framework set out in its merger guidelines: (1) would the Merged Entity have the ability to harm Optum's rivals' competitiveness in the supply of MO software; (2) would it have the incentive to do so; and (3) would the partial foreclosure of FDB (and any rival MO entrants) substantially lessen competition overall.[54]

76. The CMA has first considered the Merged Entity's ability to foreclose competitors.

Ability

77. In assessing the Merged Entity's ability to foreclose FDB and rival MO entrants, the CMA has considered the following:

    (a) The importance of primary care EPR systems in the supply of MO Software aimed at outcome and cost optimisation.

    (b) EMIS's market power in the supply of primary care EPR systems in the UK.

---

[53] The CMA focused on partial foreclosure (rather than total) because EMIS Web is subject to various NHS rules and standards that mean the CMA did not consider total foreclosure to be realistic.
[54] The CMA may use this framework in situations where the merged entity could use its presence in one market to directly harm the competitiveness of its rivals in another, even if there is not a conventional supplier/customer relationship (*Merger Assessment Guidelines (CMA 129)*, paragraph 7.11).

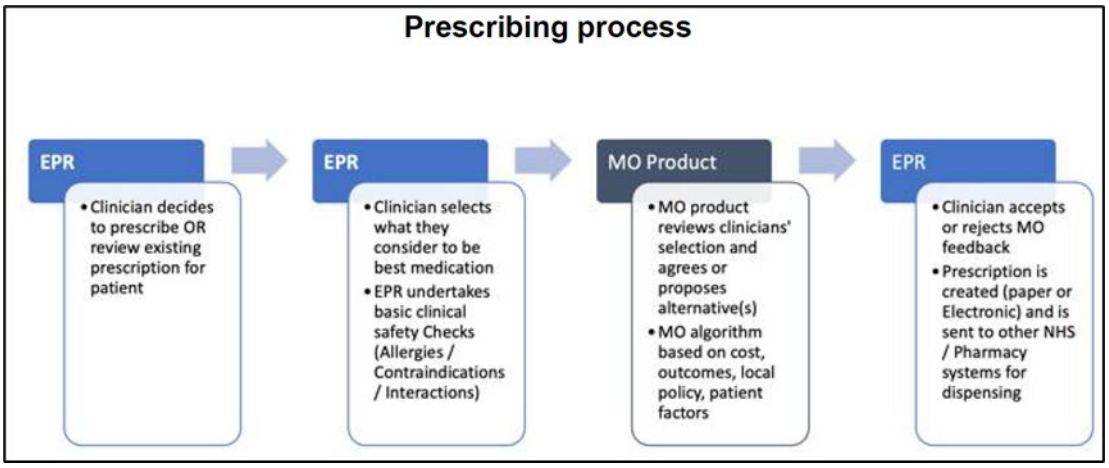
78. As part of its assessment on ability, the CMA considered what mechanisms might be available to the Merged Entity to partially foreclose FDB and rival MO entrants. This includes a consideration of the relevant NHS frameworks and standards that might restrict the Merged Entity's ability to engage in such strategies.

Importance of primary care EPR systems in the supply of MO software.

79. To assess the ability of the Merged Entity to foreclose FDB and rival MO entrants, the CMA has first considered the importance of primary care EPR systems to the supply of MO. If primary care EPR systems are particularly important in this regard, the Merged Entity (through EMIS) might have the ability to harm the competitiveness of FDB and rival MO entrants.

80. As shown in Figure 1,[55] MO software is typically embedded within primary care EPR systems such that it operates within this system during the medicine prescribing process and the GP does not need to access a separate application to receive MO alerts or information.

Figure 1: Prescribing process



Source: FMN

81. The Parties submitted that MO products do not need to interact with the primary care EPR and that PSL is an example of a provider that does not need EPR. The Parties also that it is 'highly unlikely that a customer would be concerned by having to click a few more times before accessing its chosen MO software'.[56] The CMA notes that this provider is not active in the MO segment aimed at outcome and cost

[55] FMN, paragraph 12.24
[56] The Parties' response to the CMA's Issues Letter of 17 February 2023 (**IL Response**), page 40.

optimisation, as such this product is unlikely to be a close competitor to Optum.[57] The CMA notes, however, that the MO software provided by the main suppliers are embedded within EPR systems. The evidence from third parties, discussed in more detail at paragraph 108, indicates that direct integration with the EPR system is important because it results in an accessible user-interface and workflow, and it limits risks such as the risk of GPs not receiving relevant messages from the MO system.

82. In particular:

(a) One third party told the CMA that it is clinicians' prefer to access various apps through one system.[58]

(b) Some third Parties told the CMA the primary care EPR system needs to work well with MO software to present a user-friendly user interface and workflow. By way of example, this includes having a low number of clicks and MO software that mimics the native format of the primary care EPR system.[59]

(c) Rival MO and rival EPR suppliers told the CMA that effective cooperation and integration were essential in providing MO software as this reduces problems such as the number of software bugs, APIs degrading over time, and doctors not receiving appropriate messages.[60]

83. Optum's internal documents also suggest that integration with the EPR system may be an important feature of MO software.

(a) One Optum internal document states [✂] is fully embedded within the clinical system, whilst Optum's main product Scriptswitch is described as being fully integrated.[61]

(b) Another internal Optum document on [✂]suggested that clicking between systems is a barrier, [✂].[62] The information in this document suggests that workflow and convenience, [✂], may be important to GPs in selecting an MO software solution.

---

[57] FMN, Table 13.
[58] Note of call with [✂], 14 November 2022, paragraph 14.
[59] Note of call with [✂], 14 November 2022, paragraph 25, Note of call with [✂], 6 January 2023, paragraph 4.
[60] [✂] Submission paragraph 5.2, [✂] response to the CMA's questionnaire, question 5, Note of a call with [✂], 6 January 2023, paragraph 19. [✂] response to the CMA's questionnaire, 20 January 2023, question 2; see also note of call with [✂], 1 December 2022.
[61] Optum, [✂].
[62] Optum, [✂].

84. On this basis, the CMA considers that the evidence indicates that integration with EPR systems is essential for the supply of MO software. This means that an EPR systems supplier (eg. EMIS) with market power, and mechanisms to foreclose would have the ability to foreclose FDB and rival MO entrants.

EMIS's market power in the supply of primary care EPR systems

85. The CMA also assessed whether the Merged Entity (through EMIS) will have market power in primary care EPR systems.[63] The CMA has considered both whether FDB and rival MO entrants have alternatives to integrating with EMIS, and whether primary care providers could switch away from EMIS (for example in response to the Merged Entity downgrading integration with a competing MO provider).

86. The Parties submitted that EMIS's high shares in the supply of EPR systems do not reflect market power since the NHS exerts significant control over the market, dictating the procurement process and price parameters for each of the relevant offerings. The Parties' argument relies on a conclusion either that the NHS exerts sufficient control over the market that EMIS could not exploit any market power that it may have as a result of its high share, or that the NHS could use its control over the market to cause GPs to switch away from EMIS in response to any attempt to exert market power. As discussed further below, the CMA has not found sufficient evidence to support either of those conclusions.

87. The CMA agrees with the Parties that the NHS can determine the process by which it procures products, and works to design processes to get the best deal possible based on the alternatives available.[64] In order for NHS procurement processes to result in significant switching away from EMIS it would be necessary both for there to be adequate available alternatives, and for switching costs not to be so high as to impede switching.

88. In its assessment, the CMA has obtained the following evidence regarding EMIS's market power in the supply of primary care EPR systems in the UK:

    (a) The Parties submitted that EMIS has a share of around [50-60]% by revenue in the supply of primary care EPR systems in the UK. This is corroborated in

[63] *Merger Assessment Guidelines (CMA 129)*, paragraph 7.14(a) and 7.33(a).
[64] Note of call with NHS Digital, 22 November 2022, paragraphs 15-18, see also note of call with NHS Digital, 23 January 2023, paragraph 4.

EMIS's internal documents, which also show EMIS's market share is consistent when broken down by nation within the UK.[65,66]

(b) NHS Digital told the CMA that the supply of EPR systems is a virtual duopoly, EMIS being the largest supplier has around a [50-60]% share, and its nearest competitor TPP has approximately [40-50]%. The remainder of the market ([0-5]%) is supplied by Cegedim.[67]

(c) [✂] and [✂] consider EMIS's primary care EPR to be important in the provision of their MO software.[68]

(d) All of the EPR rivals consider EMIS to be the main supplier of primary care EPR software in the UK.[69]

89. The only currently available alternatives to EMIS for NHS customers are TPP and Cegedim. TPP is active only in England, while Cegedim has a significant presence in Scotland, Wales and Northern Ireland but has a negligible share in England. In practice in each nation there is only one material alternative to EMIS.[70] While the Parties submit that the NHS is actively seeking to increase the number of competitors in the EPR market,[71] the CMA considers that barriers to entry are significant and there is limited evidence that new entrants would constrain EMIS's market power to a material extent in the next few years, for reasons discussed further below at paragraph 114.

90. As stated at paragraph 84, integration with EPR systems is essential for MO suppliers. In order for an MO software provider to supply a GP, the MO software must integrate with the specific EPR system used by that GP. The importance of compatibility with EMIS to MO suppliers is higher than EMIS's share alone would suggest. Because MO software is purchased by ICBs, and within an individual ICB region there may be a mixture of GPs using EMIS and GPs using TPP, in England,

[65] EMIS, [✂] shows that EMIS's share is consistent across each UK nation ranging from [40-50]% in Wales to [60-70]% in England. In England EMIS's largest competitor is TPP ([30-40]%) whilst Cegedim is the largest competitor in Scotland ([40-50]%), Wales ([50-60]%), and Northern Ireland ([30-40]%)
[66] The CMA notes that EMIS's PCS Scotland is currently provided in Scotland, [✂]. The CMA considers that [✂] important to the provision of MO software in Scotland.
[67] Note of call with NHS Digital, 22 November 2022, paragraph 9.
[68] [✂] Submission paragraph 2.5, Third Party responses [✂], [✂] to the CMA's questionnaire, question 4(a).
[69] Note of call with [✂], 1 December 2022, paragraphs 6 and 7. See also, note of call with [✂], 6 January 2023, paragraph 16.
[70] Note of call with [✂], 1 December 2022, paragraph 7.
[71] FMN, paragraph 21.3.

an MO product must work with both EMIS and TPP to be a viable option from the perspective of an ICB.

91. In addition to the sources of market power explained above, the CMA considered whether switching costs for GPs increase EMIS's market power, as these costs may reduce the likelihood that a GP would switch away from EMIS web in response to reduced integration with competing MO software systems. The essential nature of the EPR system, as the key piece of software used by GPs to complete their everyday tasks such as conducting and recording patient consultations,[72] and as the central platform upon which other software is built around,[73] may make customers unwilling to switch because of the risk of serious disruption.

92. The CMA has seen evidence indicating that switching costs are significant for customers. One Optum internal document states that most of EMIS's services are recurring in nature and are highly integrated into the customers' technology infrastructures, creating elevated switching costs.[74] This is supported by third-party evidence that suggests that primary care EPR systems' customers are sticky as retraining costs are significant, and on an individual practice level, clinicians are more likely to request continuity in their EPR systems as these impact their overall workflows and as such can cause significant challenges if changed.[75] NHS Digital also told the CMA that EMIS's EPR is an embedded legacy system which has been in place for a significant amount of time and to remove EMIS from its frameworks, in response to a serious breach in standard, would take a significant period of time (with a best estimate of around [✂] years).[76]

93. The Parties submitted that after the merger, the level of switching would be higher than suggested by the CMA. The Parties submitted that the past level of switching observed by the CMA was affected by the COVID-19 pandemic, a period during which competitive tendering was a lower priority in the health system, and therefore that these switching levels were below typical switching levels. Further, the Parties argued that switching costs incurred by the outgoing supplier are borne by that supplier and therefore unlikely to be significant to customers.[77] However, estimates provided by the Parties show low switching rates – of less than [✂] - for every year from 2017 to 2019.[78] The CMA considers this shows switching rates have been low

[72] System | EMIS Web | EMIS (emishealth.com).
[73] Note of call with [✂], 14 November, 2022, paragraphs 22-28.
[74] EMIS, [✂].
[75] [✂] email submission, 27 January 2023, page 1. See also note of call with [✂], 1 December 2022, paragraph 31.
[76] Note of a call with NHS Digital, 22 November 2022, paragraph 2.
[77] IL Response, page 31.
[78] FMN, Table 14.

even before the Covid-19 pandemic. Regarding switching costs, the fact that the outgoing supplier must cover its own costs does not contradict the evidence discussed above which relates to the customers' own switching costs rather than suppliers' costs, and can include non-monetary costs.

94. EMIS has a high share of supply in the supply of primary care EPR systems, and its customers have only one alternative and face significant switching costs. Accordingly, the CMA considers that EMIS has market power in the supply of primary care EPR systems in the UK.

95. Next, the CMA considers what mechanisms might be available to the Merged Entity to partially foreclose FDB and rival MO entrants.

Mechanisms of harming rivals in the supply of MO software

96. The CMA considers that the Merged Entity could harm the competitiveness of FDB and rival MO entrants through:

(a) Worsening the quality of APIs.

(b) Worsening the quality of MO software rivals' user interface.

(c) Raising the costs for MO software rivals.

(d) Gaining access to commercially sensitive information of rivals.

97. The CMA has considered a range of possible mechanisms to harm MO competitors and the constraints that may prevent the Merged Entity from exercising them. In line with its guidelines, the CMA is mindful that some of the mechanisms may be used in combination and the CMA is not attempting to predict the precise actions the Merged Entity might take.[79]

98. The Parties submitted that the NHS's enforcement of its frameworks would be sufficient to prevent any foreclosure, and in particular, that any foreclosure strategy which would have a substantial effect on competition would cause the NHS to act. The Parties submitted that if the NHS is expected to enforce contractual terms effectively, and achieve compliance from its suppliers, then the NHS may prevent some of these mechanisms of foreclosure from being enacted.[80] The extent to

[79] *Merger Assessment Guidelines (CMA 129)*, paragraph 7.13
[80] Issues Letter response, page 9.

which the NHS's application of its frameworks would prevent these foreclosure mechanisms from being implemented is considered below.

Worsening the quality of APIs

99. MO software providers rely on APIs provided by primary care EPR systems providers to integrate their MO products into the primary care EPRs. It is these APIs between the EPR system and the MO provider that allow the MO software to assist the GP using a specific EPR system in the medicines prescribing process. At present, Optum's main rival, FDB, uses a custom API and a standard IM1 API is available for other providers seeking to offer MO software. Potential MO entrants have told the CMA that they are seeking, or would seek, greater integration with EMIS than is provided through IM1 in order to create a seamless workflow for clinicians.[81]

100. Worsening the quality of APIs relied on by Optum's MO software rivals (relative to the quality of connection that those rivals would have had absent the Merger) might be one mechanism open to the Merged Entity which would give Optum an advantage in MO over its rivals. According to third parties, this could be done in one or more of several ways – such as immediately worsening the APIs, not developing APIs for new MO software over time, not offering sufficient levels of maintenance and co-operation and/or not updating APIs over time (or delaying updates).[82] The CMA notes that both quality and price are important for customers during procurement processes, worsening APIs would have a detrimental effect in the overall product quality of MO competitors, affecting their ability to compete effectively for contracts as quality is a primary driver of purchase decisions.[83]

101. Third party evidence suggests that EMIS might be able to worsen the quality of APIs for MO software rivals. MO software and EPR rivals (including potential MO entrants) told the CMA that technical degradation of APIs would be a feasible strategy for the Merged Entity:[84]

[81] [✂] response to the CMA's questionnaire, question 3.
[82] The CMA notes that the appropriate comparison when assessing degradation of APIs is between (a) a forward-looking assessment of current competitive dynamics, and (b) a forward-looking assessment of how competitive dynamics change as a result of the merger. This means that the merged entity may not update APIs of MO rivals to the same level as EMIS would have done as a separate entity.
[83] FMN, paragraph 14.10.
[84] [✂] Submission paragraph 2.5, see also responses [✂], [✂], [✂], to the CMA's questionnaire, question 5.

(a) [✂] told the CMA that the Merged Entity could prevent an MO software supplier from further enhancing its products through limiting integrations with EMIS's platform and reduced support could reduce the number of bug fixes.[85]

(b) [✂] told the CMA that EMIS has the power to purposefully or, through lack of maintenance, allow the API to degrade.[86] This comment was made in reference to the IM1 interface [✂], to which NHS standards apply. The extent to which NHS standards would prevent API degradation for IM1 interfaces and for custom APIs is discussed below at paragraphs 123-127.

(c) An EPR rival told the CMA a primary care EPR supplier could decide to remove some API functionality from one MO software product, whilst leaving it in place for the other. For example, a primary care EPR supplier could remove cost messages, which is an important part of functionality for GPs. The removal of these messages would impact the overall competitiveness of the product as cost optimisation is a core feature of MO software, and one the primary reasons the NHS requires MO.[87]

(d) Another EPR rival told the CMA MO solutions need a degree of product development, requiring technical teams and detailed discussion between the MO supplier and EMIS.[88] If this product development were to be ignored or slowed or become partial compared to what Optum would receive, rivals could be competitively harmed.

102. At the Issues Meeting and in their response to the Issues Letter, the Parties suggested that the CMA had overstated the importance of the interaction between an MO provider and the EPR, that the core of the MO product does not interact with the EPR, and that the vast majority of feature changes/upgrades that Optum UK has made to ScriptSwitch in recent years do not relate to that minimal interaction, and that Optum UK [✂]. Despite these submissions, internal documents from both Parties indicate that [✂] MO suppliers, are reliant on ongoing partnership and cooperation with EMIS to deliver their products effectively, and to develop new products.

[85] [✂], Submission paragraph 5.2.
[86] [✂], response to the CMA's questionnaire, question 5.
[87] Note of a call with [✂], 6 January 2023, Paragraph 19.
[88] Third Party response [✂] to the CMA's questionnaire, 20 January 2023, question 3(a)-3(c), and third party call with [✂], 1 December 2022.

(a) Optum's [✂] states [✂] is that [✂].[89] This same document also identifies [✂].[90]

(b) In plans for the development [✂], Optum notes that [✂]; that same document refers to steps needed to accelerate the development of [✂], including [✂].[91]

(c) An Optum quarterly business review document identifies [✂].[92]

(d) One EMIS document identifies enhancements to [✂].[93]

(e) A further Optum internal document show the importance of custom integration for new product development, with a document [✂] referring to [✂].[94]

103. The Parties submitted that none of these potential strategies of worsening the quality of APIs that third parties raised are feasible without incurring swift and severe consequences from the NHS. The Parties told the CMA that if any of these foreclosure strategies have a material impact on MO rivals, it would be flagged to the NHS which would take appropriate action. Changes to API functionality would be required to be notified to the NHS. The Parties also submitted that altering an API would require dozens of staff and require a process of design and testing which would take time and, again, potentially be in breach of clinical safety and NHS compliance rules. The CMA has considered the impact of the NHS's enforcement of its frameworks and standards on possible foreclosure strategies below at paragraphs 124-128.

104. The CMA has also considered the impact of this mechanism on rivals' ability to compete.

(a) [✂] rivals told the CMA that technical degradation of APIs would harm MO rivals ability to compete:[95]

(b) [✂] told the CMA this mechanism could result in less innovation and harm to patients.[96]

[89] Optum, [✂].
[90] Optum, [✂].
[91] Optum, [✂].
[92] Optum, [✂].
[93] Optum, [✂]; Optum, [✂]; Optum, [✂]; Optum, [✂]. See also EMIS, [✂] and, EMIS.
[94] Optum, [✂].
[95] [✂], Submission paragraph 2.5, Third Party responses [✂], to the CMA's MO competitor questionnaire.
[96] [✂], Submission paragraph 5.2.

(c) [✂] told the CMA degradation of APIs in the future could frustrate attempts to integrate with EMIS, negatively impacting its ability to compete in the market.[97]

(d) An EPR rival told the CMA this mechanism would reduce the cost savings for customers and lead to a strong preference for one MO software provider (ie the Merged Entity) over its competitors.[98]

105. The Parties submitted that third parties have overstated the potential impact of these strategies, which are not sufficiently material to cause foreclosure, in part because of the limited importance of the interaction between an MO provider and the primary care EPR system. As an example, the Parties told the CMA that [✂].

106. However, the CMA considers that the evidence discussed above indicates that, even if new features are developed outside of the interactions between the MO products and the EPR, these interactions are important for maintaining the reliability of existing products and ensuring that new products can be integrated into the EPR. The Parties' documents described above in particular provide evidence of the need for co-operation and joint development in order to improve and innovate MO software.

Worsening the quality of MO software rivals' user interface

107. The Parties have submitted that the Merged Entity would not be able to worsen the quality of MO software rivals' user interface. In particular the Parties submitted:

(a) Optum has not seen any customer procurement which includes the user interface or workflow as a material requirement in the procurement specification. Therefore, this should not be viewed as an important competitive component.

(b) EMIS could not make changes to an MO provider's user interface or workflow without the agreement of the counterparty. If the Merged Entity were to continue without the agreement of the counterparty, the MO provider would complain to the NHS.

(c) EPR suppliers are in control of the primary care EPR user interface, not the MO user interface. Moreover, the Parties used the example of ScriptSwitch which launches in an external window (not embedded in the EPR window) which has not raised any customer concerns. Even if GPs were required to

[97] [✂], response to the CMA's MO competitor questionnaire, question 8.
[98] Note of a call with [✂], 6 January 2023, paragraph 19.

click on an application more times than previously, the Parties submitted it would amount to an annoyance rather than cause for foreclosure.

108. The CMA considers that the Parties' submissions are inconsistent with the available evidence particularly regarding the importance of the MO user interface, how the MO user interface interacts with EPR, and EMIS's ability to worsen the user interface.

109. As MO software is embedded within primary care EPR systems the MO user interface relies on interoperability. End users want the smoothest experience possible. Customers told the CMA that MO software needs to work well with primary care EPR systems to present a user-friendly user interface and workflow, including by having a low number of clicks and MO software that mimics the native format of the primary care EPR system.[99] Customer tenders place considerable weight on quality aspects which indicates that there may be qualitative aspects that could be degraded after the Merger. Both Optum and FDB emphasise in their marketing materials that their MO products are smoothly integrated into GPs' prescribing workflows.[100]

110. The importance of the user interface is also emphasised in the Parties' internal documents. One EMIS document states [✂].[101]

111. The degradation of a user interface could be used after the Merger to harm rivals. The primary care EPR supplier has a degree of control over how GPs interact with MO software, therefore targeting a longer/more inconvenient workflow at Optum's MO software rivals may be used to harm rivals' competitiveness.

112. The CMA has obtained evidence from MO and EPR rivals that suggests that the Merged Entity would be able to worsen the quality of FDB and rival MO entrants user interface. In particular:[102]

    (a) [✂]told the CMA the Merged Entity would have the ability to introduce unnecessary steps before users access the MO software including increasing

---

[99] Responses to CMA customer questionnaire [✂], question 4.
[100] Optum's website advertising ScriptSwitch refers to it being 'embedded within the prescribing workflow' (https://www.optum.co.uk/medicines-optimisation/scriptswitch.html), while FDB's website advertising OptimiseRx describes it as being 'deeply integrated into the workflow of the GP clinical system' (https://www.fdbhealth.co.uk/solutions/optimiserx-medicines-optimisation). This indicates that despite the Parties' submission that ScriptSwitch is not embedded in the EPR window and this has not caused customer concerns, it is still embedded within the EPR system and this is viewed by Optum as an important point when marketing ScriptSwitch.
[101] EMIS, [✂].
[102] [✂], Submission paragraph 2.5. See also Third Party responses [✂] to the CMA's questionnaire question 4.

the [✂] and deciding whether there is a [✂] in their primary care EPR. [✂] told the CMA EMIS currently controls the user interface.[103]

(b) An EPR rival told the CMA that the EPR supplier is in complete control of the user interface, the workflow, how it interacts with the MO software API, and what is displayed to users. For example, the EPR supplier could add many mouse-clicks to the workflow for using MO or get the MO to launch in a new, external window rather than being neatly embedded.[104]

113. The CMA has obtained the following evidence from MO and EPR rivals that suggests that if EMIS were to worsen the quality of FDB and rival MO entrants' user interface, this would harm Optum's MO software rivals:

(a) An EPR rival told the CMA interface technical degradation is a major threat, as end-users would have to complete additional, unnecessary application interactions which is highly likely to cause it to lose customers and, as a consequence suffer loss of income.[105]

(b) [✂] told the CMA the Merged Entity could affect rival MO software by requiring changes that would be inconvenient and time consuming for end users unfairly benefiting the Merged Entity.[106]

Raising the costs of MO software rivals

114. Primary care EPR systems providers currently charge commission fees on the revenue earnt by MO software suppliers. This is because both Optum and FDB integrate with EMIS Web using custom APIs, as opposed to NHS mandated APIs. The CMA also understands that allowing a third-party product to be 'inside' EMIS Web from a customer perspective is a 'User Experience Tool' that EMIS is able to charge additional fees for as it is considered a 'value-added' activity under NHS standards.[107] The price for custom integration and this additional functionality is not determined by NHS Digital, and fees are agreed based on commercial negotiation between EMIS and the supplier. Raising the commission rates for Optum's MO software rivals would raise costs for those rivals, which could make their offerings less competitive with fewer funds to reinvest in developing new MO software.

[103] Note of call with [✂], 14 November 2022, paragraph 25.
[104] Note of call with [✂], 6 January 2023, paragraph 4.
[105] Response [✂], to the CMA's MO competitor questionnaire, question 5.
[106] [✂], Submission paragraph 2.14.
[107] FMN footnote 199.

115. The CMA has obtained the following evidence that suggests that EMIS is able to increase rivals' costs by increasing fees charged to MO software rivals:

(a) MO suppliers pay fees accounting for a material proportion of their revenues to Optum. The Parties submitted that Optum UK pays EMIS [✂] share of the revenue generated from Optum's ScriptSwitch, whilst [✂].

(b) [✂] submitted that raising costs of rivals would be a feasible strategy.[108]

(c) One MO entrant told the CMA it would have to pay EMIS a fee for technical developments.[109]

(d) [✂] told the CMA partners would lack any negotiating power against the Merged Entity on fees and contractual terms.[110]

(e) Optum's internal documents indicate EMIS' ability to influence the commerciality of an MO product, [✂].[111]

116. In response to the Issues Letter, the Parties submitted the NHS is moving toward greater standardisation and customised interfaces are likely to be less and less common in the future. Furthermore, although the Optum and FDB custom interfaces fall outside the IM1 Standards, the NHS applies the relevant compliance principles broadly and therefore EMIS (and EMIS Web) must comply with the ITF including to allow interoperability between systems. The Parties submitted that the NHS framework mandates and guarantees that the pricing of access be competitive (and it is not relevant whether access is via a standardised or custom API). According to the Commercial Standard, EMIS cannot '*obtain profit or other commercial benefit from unreasonably delaying or excluding any potential Consumer Supplier's access to NHS Data through available interfaces'*. Moreover, the Parties submitted that the Supplier Code stipulates the suppliers (eg EMIS) cannot '*exploit an incumbent or monopoly position, an urgent situation or an asymmetry of capability or information to impose opportunistic pricing'*.

117. The Parties submitted that the 'small' share of revenues charged by EMIS, and the [✂], imply that EMIS is constrained in its ability to increase fees, and so the Merged Entity would not be able to raise fees to a sufficient extent to foreclose rivals.[112] The

[108] [✂] Submission paragraph 2.5, Third Party responses [✂] to the CMA's MO competitor questionnaire, question 4.
[109] [✂], response to the CMA's MO competitor questionnaire, question 5.
[110] [✂] Submission paragraph 2.8.
[111] Optum, [✂].
[112] Parties' response to Issues Letter, pages 42-44.

CMA does not dispute that there are some limits on EMIS's ability and incentive to increase fees, but considers that this would not prevent the Merged Entity from increasing these fees by a material amount given its change in incentives post-Merger.

118. The CMA has obtained the following evidence that suggests that if the Merged Entity were to raise rivals' costs by increasing fees for Optum's MO software rivals, this would have a significant impact on their competitiveness:

(a) [✂].[113] This being the case, and given that EMIS's primary care EPR system has a [50-60]% share of supply, an increase in the fee charged by EMIS to FDB could result in a substantial increase in FDB's total variable costs.

(b) [✂] told the CMA that raising fees for MO rivals of Optum would make these rivals uncompetitive.[114]

(c) [✂] told the CMA the cost of EMIS developing custom technical functionality, could be unaffordable for some MO software rivals, which would affect the functionality of their products. While this is based on pre-Merger prices, it suggests that further price increases could make MO software improvements unaffordable to more MO rivals.[115]

(d) [✂] told the CMA higher fees would mean it is unable to provide cost effective solutions to the NHS resulting in uncompetitive product pricing.[116]

(e) [✂] told the CMA higher fees would soften competition between rivals or exclude partners from the market altogether thus resulting in longer term loss of choice and innovation and higher prices.[117]

Gaining access to commercially sensitive information

119. The CMA has also considered that the post-Merger, Merged Entity will have access to commercially sensitive information of its rivals. In particular, MO software providers share MO software development plans with EMIS so that EMIS can develop ways to share relevant data (and in a form and of a frequency needed) and allow these MO software developments to be implemented. Access to this

[113] FMN, paragraph 3.6(iv).
[114] [✂] paragraph 2.5, Third Party responses [✂] to the CMA's MO competitor questionnaire, question 5.Submission paragraph 2.5, Third Party responses [✂]to the CMA's MO competitor questionnaire, question 5.
[115] [✂] response to the CMA's MO competitor questionnaire, question 5.
[116] [✂] response to the CMA's MO competitor questionnaire, question 5.
[117] [✂].

information could allow the Merged Entity to imitate rivals' planned innovations which would deter MO software rivals and potential entrants from investing and innovating in the first place.[118] [✂] and [✂] raised concerns about the Merged Entity's access to such information.

Impact of the NHS's frameworks and standards on ability to foreclose

Parties' submissions

120. The Parties submitted that the Merged Entity would not have the ability to foreclose MO software rivals because of the NHS frameworks. The Parties submitted that the core principles of the NHS's framework restrict the Merged Entity in a manner that would ensure interoperability with competitor providers is maintained after the merger. In particular, the Parties submitted that there are a range of NHS rules and regulations that legally mandate EMIS must provide services to MO software rivals in a way that doesn't give EMIS the scope to foreclose rivals.[119]

121. The Parties also submitted EMIS Web is procured under NHS Digital's GP ITF framework. Accordingly, this product should interoperate with any other supplier's software through the NHS' open APIs, IM1.[120] Open standards are shown to be sufficient based on an example of one rival supplier of MO that does not rely customised integration. Where MO rivals currently have customised integrations with EMIS, the Parties submit that i) the NHS could bring the relevant interfaces within the scope of IM1 if it wished to and ii) there are numerous examples of the NHS enforcing the principles of interoperability and open access in instances that are not strictly covered by the relevant standards.[121]

122. The Parties submitted if a supplier fails to comply with the terms of interoperability requirements under ITF or TIF framework, then this could be raised with the team at NHS Digital. Under the ITF and TIF frameworks NHS Digital has the rights to audit suppliers, although the Parties are not aware of any instances where these mechanisms have been used to punish non-compliance.[122,123]

CMA assessment

123. Evidence from the Parties and third parties shows that there are no NHS Digital standard interfaces that currently support the functionality required by MO software

---

[118] *Merger Assessment Guidelines (CMA 129)*, paragraph 7.3. The CMA may assess this concern as a separate theory of harm, or as part of a broader foreclosure theory of harm.
[119] FMN, paragraph 20.20 to 20.43, paragraphs 20.61 to 20.71.
[120] FMN, paragraph 7.1.
[121] Issues Letter response, pages 50-51.
[122] FMN, paragraph 18.1.
[123] RFI2 Response , paragraph 15.

rivals to deliver MO integrations. Further, there are no national or international standards currently in use.[124] As such, the commercial relationships between EMIS and MO software suppliers are delivered outside of NHS minimum standards.

124. Specifically considering each mechanism discussed above, the evidence the CMA has seen indicates that:

(a) Under frameworks such as GP ITF the discretion over how to make data available is still largely with primary care EPR systems suppliers as data custodians.[125] Whilst the NHS controls permission to access data, in practice EPR services can worsen access by altering their APIs outside the IM1 standard, including by removing access to certain categories of data, or changing its service levels.[126]

(b) The CMA understands that the user interface, and access to the clinical workflow is functionality that is over and above the NHS standards but are essential for an effective MO product. If such integration was in line with the NHS standards available under IM1, the CMA has been told that this would significantly damage the product quality MO rivals could offer customers.[127]

(c) The commission that MO software rivals pay to EMIS is the result of normal commercial negotiations where the NHS is not directly involved in Optum UK or FDB's negotiations.[128]

(d) The CMA is not aware of any provision of the NHS standards that would prevent EMIS from sharing commercially sensitive information it holds on MO software rivals with Optum post-Merger, and notes that as in line with its guidance,[129] it will typically place limited weight on contractual protections such as the contractual firewalls EMIS may have in place with MO suppliers to protect such information.

125. Regarding the ability of NHS Digital to enforce:

(a) NHS Digital told the CMA that [✂] create difficulties in assessing the market and expressed overall concerns on the impact of the merger.[130] Additionally, the CMA considers although it may be obvious if the Merged Entity degraded a

[124] [✂] competitor questionnaire; RFI 2 Response, paragraph 15.
[125] Note of a call [✂], 14 November 2022, paragraph 21.
[126] Note of a call [✂], 14 November 2022, paragraph 21.
[127] Note of a call [✂], 14 November 2022, paragraph 18.
[128] FMN, paragraph 20.6, page 61.
[129] *Merger Assessment Guidelines (CMA 129)*, paragraph 7.15.
[130] Note of a call with NHS Digital, 23 January 2023, paragraph 3.

custom API currently in use, behaviour such as reduced ongoing support or delays in development when new products require changes to existing custom APIs could be harder to detect.

(b) The CMA understands from various third parties that EMIS is currently considered to be a co-operative and open EPR system provider, but this corporate strategy could change as a result of the Merger, and various third parties have referred to other firms that have been less cooperative whilst still being subject to the same NHS standards.

(c) One competitor told the CMA there is no mechanism in place to enforce or monitor the level of EMIS's performance against the requirements that apply to primary care EPR system providers. The rival told the CMA, based on past experience, it does not consider that NHS Digital can fully protect rivals from the risks of foreclosure.[131]

(d) The CMA considers that, given the market power of EMIS, as discussed above, enforcement based on threats to terminate contracts with EMIS is unlikely to be effective as such threats would have limited credibility. NHS Digital told the CMA that they estimate removing EMIS would take around [✂] to complete and result in [✂] costs.

126. Overall, the majority of third parties raised concerns that the protections put in place by the NHS are insufficient to protect MO software suppliers from foreclosure.[132]

127. The CMA's view is that the NHS standards are unlikely to be sufficient to prevent the Merged Entity from foreclosing MO software rivals, because:

(a) the mechanisms discussed above fall largely outside of the scope of the minimum standards set out by the NHS in its contracts; and

(b) there are limits to the ability of NHS Digital to monitor and enforce breaches of the standards.

Conclusion on ability

128. The CMA believes that the Merged Entity would have market power in the supply of primary care EPR systems, and that EMIS Web is essential to rivals active in the provision of MO software in the UK. There are a range of mechanisms that the

[131] [✂] third Party response [✂] to the CMA's questionnaire, question 5.
[132] Notes of call with [✂], 6 January 2023, paragraph 7, 22 and 23, and [✂], 1 December 2022, paragraph 23.

Merged Entity could use to leverage this market power to harm MO software rivals, and the NHS standards would provide insufficient protection to prevent the Merged Entity's ability to pursue these foreclosure mechanisms. Therefore, the CMA believes the Merged Entity would have the ability to foreclose competitors in the supply of MO software.

Incentive

129. Even where the merged entity would have the ability to foreclose its rivals, it may not have the incentive to do so. This is because while foreclosure may result in additional profits downstream, it may also result in costs such as a loss of sales upstream. If these costs are greater than the benefits, the merged entity will not have the incentive to engage in input foreclosure. The CMA will therefore consider whether the merged entity would have the incentive to pursue a foreclosure strategy, in particular through a consideration of the magnitude and likelihood of the costs and benefits. In assessing the incentive to foreclose, the CMA will have regard to the overall magnitude of benefits to the Merged Entity (additional MO software revenue) and the overall costs (losing EMIS Web revenue) as a result of foreclosure strategies.[133]

Gains in MO software

130. To assess the potential gains in MO software (ie diversion from other suppliers of MO software to the Merged Entity), the CMA is considering how much of the MO software market could be foreclosed, to what extent the Merged Entity would expect to gain sales from foreclosed competitors, and the scale of potential gains.

131. As set out above, the CMA considers that foreclosure strategies implemented by the Merged Entity would result in a significant deterioration of the quality of rival MO software. Moreover, switching costs for MO software are low: evidence provided by the Parties states that other than licence fees (such as configuration or mobilisation costs), there are effectively no costs to switching MO software beyond the formalities of needing to run a procurement process and agree a new contract.[134] This is reflected in Optum experiencing high levels of customers switching from year to year in some years, making net customer losses as high as [✂]% of customers accounting for [✂]% of revenue in one year.[135] Consequently, if the Merged Entity

[133] *Merger Assessment Guidelines (CMA 129)*, paragraph 7.16, 7.34
[134] FMN, footnote 275.
[135] FMN, Table 14. As the Parties note, as this is a net switching figure it understates the true level of switching, as customer gains are netted off against customer losses. The Parties did not provide data on total customer switching in MO.

were to implement these foreclosure strategies, significant numbers of customers could switch away from Optum's MO software rivals.

132. Optum is one of only two established suppliers of MO software aimed at outcome and cost optimisation. Optum ([30-40]%) and FDB ([60-70]%) are the only two current suppliers of MO software in the UK.[136] The CMA considers that any diverted sales away from its only current rival, FDB, would likely result in gains for Optum.

133. To get an indication of the scale of potential gains, the CMA has considered the size of the portion of the MO software market not currently served by Optum. The Parties estimated that the current market for MO software aimed at outcome and cost optimisation was worth [✂] in 2021. Around [✂]of that was supplied by FDB, Optum's only current competitor in this segment. Following an effective foreclosure strategy, the Merged Entity is likely to gain a material proportion of revenue given Optum is one of two current providers. While the CMA has not conducted an in-depth analysis of economic margins, the evidence provided by the Parties suggests that margins in MO are reasonably high, and so this gain in revenues would also result in an increase in profits.[137]

134. In addition to the established offerings, there are also new and innovative MO software aimed at outcome and cost optimisation available to customers; these new products are also supplied by Optum and FDB. The market has grown by around [✂] from 2019 to 2021 indicating that MO software aimed at outcome and cost optimisation is a growing market. One example of a newer product includes Optum's [✂].[138] The Parties submitted that the [✂] is [✂].[139] However, one of Optum's internal documents assesses during its business planning that the total addressable market for its new [✂] product and its other pipeline [✂], [✂], as being [✂] respectively.[140]

135. The CMA considers that the indicative trend and significant investments made by Optum means the potential gains to the Merged Entity from pursuing a foreclosure strategy targeted at MO rivals are likely to be higher than looking at current products alone would suggest.

---

[136] FMN, Table 13.
[137] As set out in the *Merger Assessment Guidelines (CMA 129)*, paragraph 7.18, the CMA may undertake more extensive quantitative analysis in simple markets with high quality data, but focus on a qualitative assessment in complex and dynamic markets, where firms' current positions and margins may not be a good guide to the future, and strategic considerations may play a greater role.
[138] FMN, footnote 20.
[139] Parties' response to CMA follow-up queries dated 2 March 2023, question 3.
[140] Optum, [✂].

Losses in primary care EPR systems

136. To assess the impact of losses in primary care EPR systems (ie diversion to other suppliers of primary care EPR systems from the Merged Entity), the CMA considered extent to which the Merged Entity would risk losing revenues i) from customers switching to primary care EPR systems competitors and ii) from losing commission fees paid by MO rivals. In addition, beyond direct revenues, losing GP customers would reduce the extent of the Merged Entity's access to primary care data, which may have wider value to the Merged Entity.

137. The CMA does not consider that the Merged Entity would be likely to lose significant numbers of GP customers as a result of pursuing a foreclosure strategy in MO. As discussed above at paragraph 21, the evidence reviewed by the CMA indicates that switching costs for GPs changing EPR system supplier are high, and levels of switching between EPR suppliers have been low. In addition, the mechanisms discussed above could all be targeted specifically at FDB and any new entrants in MO (rather than applying to all third party products that integrate with EMIS Web), and so would not result in a wider deterioration of quality in EMIS's EPR product outside of the quality of its integration with those rivals.

138. The NHS bodies choosing EPR systems (GPs with support from ICBs) are different from the bodies purchasing MO software (ICBs). Both of these bodies differ from the body responsible for the terms of framework agreements overall (formerly NHS Digital, now NHS England). This makes any switching away from EMIS's EPR software in response to foreclosure indirect, as the harm to rival MO products would primarily affect ICBs who do not directly decide which EPR system GPs will use, even if they may influence those decisions.

139. Although EMIS's current revenues from EMIS Web are greater than Optum's revenues from its MO software (in 2021, EMIS Web generated £[✂] in revenue including £[✂] of fees charged to third parties whose products interoperate with EMIS's EPR system),[141] the CMA has not seen evidence supporting a conclusion that the Merged Entity would risk any substantial reduction in those revenues as a result of pursuing a foreclosure strategy in MO.

140. The CMA notes that, if a foreclosure strategy resulted in significant switching away from EMIS Web, that could result not only in a reduction in revenues from EMIS Web, but also a reduction in the Merged Entity's access to patient data as less patient data would be held in EMIS Web. As discussed above, access to [✂] is part

[141] IL Response, Table: EMIS profit margins, 2021.

of Optum's rationale for the merger. However, a low level of customer switching would mean that the extent of the Merged Entity's access to primary care data would not be materially affected.

141. The Merged Entity would also lose some revenues as a result of customers switching away from MO rivals, as the commission fees paid by these rivals to EMIS would reduce as their revenues reduced. However, these losses would be more than offset by the gains from customers switching to Optum, as for each additional customer switching from FDB to Optum, Optum would gain the whole value of MO sales to that customer, while EMIS would only lose its [✂]% share of the revenue that FDB made from that customer.[142]

142. The CMA also notes that in practice, the implementation of quality degradation strategies may result in additional cost savings for EMIS. The Parties submitted that developing customised APIs is a distraction for them and takes time away from core development projects.[143iii] EMIS would save both time and resources by reducing co-operation and support or worsening the quality of its integrations, enabling those resources to be used more productively elsewhere mitigating any losses in primary care EPR systems.

143. The Parties submitted that the Merged Entity would not have the incentive to foreclose MO rivals because:

    (a) the NHS's contractual framework includes various standards under which parties must explain any non-compliance, which would become apparent quickly, and would likely result in the suspension or termination of ITF/TIF outweighing any short-term gains in market position;

    (b) Margins analysis by the Parties show [✂] when accounting for margins and market sizes;

    (c) Restricting access to certain third-party suppliers would create needless political and media tension which could jeopardise the reputation of the Merged Entity, adversely impacting its long-term prospects and would be expected to result in significant financial loss. Such a strategy could also impact on clinical safety given the nature of the products, which is of key importance to the Parties; and

[142] FMN, paragraph 20.5.
[143] FMN, paragraph 20.65.

(d) UH recognises the value of open-source technology and interoperability. A foreclosure strategy would run contrary to this ethos and risk further commercial losses because of diluting this philosophy.

144. The CMA considers the Parties' submissions do not show a limit on the incentives of the Merged Entity to foreclose rivals because:

(a) As explained in paragraph 127, the CMA considers that the NHS' frameworks may not be sufficient to prevent the Merged Entity engaging in a foreclosure strategy. Further the CMA does not consider the complete removal of EMIS as a supplier would be a credible punishment. At present, there is only one material alternative provider of EPR systems to EMIS across any part of the UK, suggesting that the NHS lacks credible alternatives to EMIS. This assessment is supported by responses to the CMA from NHS Digital. Further, the removal of EMIS would risk significant disruption to GP practices and harm to patients. NHS Digital told the CMA that the removal of EMIS's EPR system from the NHS is a strategy that would be pursued as a last resort and estimate it would take at least [✂] to remove EMIS.

(b) The CMA is unable to verify to what extent the Parties estimates reflect accurate economic margins, however the Parties' estimates are consistent with the evidence on the incentive to foreclose. Incentives analysis also needs to account for how responsive customers would be to a foreclosure strategy. The CMA considers the evidence on low switching in EPR is particularly strong, consequently this means a much smaller proportion of EPR profits would be lost compared to the gain in MO profits.

(c) It is not clear why or how the foreclosure mechanisms discussed above, which could be implemented without publicity and would not necessarily be obvious to third parties, would create political and media tension. In addition, political and media pressure are highly indirect costs that play no role in the purchasing decision for EPR or MO at the point of public procurement. Finally, the strategies described above would not alter the clinical content of MO software nor mean that MO software would no longer be available to customers; and harm to the NHS as a customer (eg through higher prices or less innovation) can still occur without risking patient safety.

(d) Any pre-merger strategy pursued by Optum, with respect to interoperability is in the context of the pre-Merger market structure. The CMA's assessment of incentive considers the changes that result of the Merger, and the incentive the Merged Entity would have.

Conclusion on Incentive

145. Overall, the CMA currently considers that, were it to implement a foreclosure strategy, the Merged Entity is likely to be able to gain significantly higher numbers of customers for MO software aimed at outcome and cost optimisation than it would lose from EMIS Web system. As a result, despite the potentially higher level of profits in EPR as compared to MO, the losses in profits from EPR systems would be outweighed by the high gains in profits from MO, and in particular because of the potential launch of new MO products increasing the potential size of the market. As a result, the CMA believes that the Merged Entity would have the incentive to adopt a foreclosure strategy aimed at harming current or potential competitors in the supply of MO software.

Effect

146. The CMA currently considers that the potential foreclosure of FDB – the only material competitor that would compete with the Merged Entity, would substantially lessen competition in the supply of MO software aimed at outcome and cost optimisation, with detriment to ICBs and GPs. Furthermore, these foreclosure strategies would raise barriers to entry and expansion in this market by limiting potential entrants' ability to innovate and win key contracts. This would reduce the incentive for potential entrants to compete in the UK, further weakening competition in the supply of MO software in the UK.[144]

Conclusion on partial foreclosure in the supply of MO

147. For the reasons set out above, the CMA considers that:

    (a) the Merged Entity would have the ability to foreclose FDB and MO entrants in the supply of MO software aimed at outcome and cost optimisation;

    (b) the Merged Entity would have the incentive to foreclose FDB and rival MO entrants in the supply of MO software aimed at outcome and cost optimisation; and

    (c) the foreclosure of FDB (and any MO entrants) would substantially lessen competition.

148. Therefore, the CMA has concluded that the Merger gives rise to significant competition concerns in the supply of MO software in the UK.

[144] [✂] response to the CMA's MO competitor questionnaire, question 9.

149. As a result, the CMA is concerned that prices of MO software aimed at cost optimisation would increase, the quality of that software or the level of customer service might be worse than it would be without the Merger and/or the level of innovation might be reduced compared to what it would be without the Merger.

Partial foreclosure in the supply of PHM

150. Under this theory of harm the CMA assessed whether the Merged Entity could use EMIS's strong position in the supply of primary care EPR systems to partially foreclose[145] competing PHM services providers and substantially lessen competition in the supply of PHM services as a result. In assessing this theory of harm the CMA has applied the established framework set out in its merger guidelines: (1) would the Merged Entity have the ability to harm Optum's rivals' competitiveness in the supply of PHM services; (2) would it have the incentive to do so; and (3) would the partial foreclosure of its current and future competitors substantially lessen competition overall.[146]

151. Given [✂], EMIS EXA is available only in England and some relevant NHS initiatives (eg the Long Term Plan) pertain to England, some of the evidence used is weighted to PHM activities in England. However, the CMA also notes that EMIS has a strong position across the whole of the UK, Optum has [✂] activities in [✂] parts of the UK in addition to England and is [✂]. Therefore, the CMA's assessment is relevant for the UK as a whole.

Ability

152. In assessing the Merged Entity's ability to foreclose its PHM rivals, the CMA has considered the following:

    (a) EMIS's market power in the supply of primary care EPR systems in the UK.

    (b) The importance of EMIS Web system (and the data that it holds) as an input for the Merged Entity's PHM rivals.[147,148]

---

[145] As for the MO software theory of harm, the CMA focused on partial foreclosure (rather than total) because EMIS Web is subject to various NHS rules and standards that mean the CMA did not consider total foreclosure to be realistic.
[146] The CMA may use this framework in situations where the merged entity could use its presence in one market to directly harm the competitiveness of its rivals in another, even if there is not a conventional supplier/customer relationship. *Merger Assessment Guidelines (CMA 129)*, paragraph 7.11.
[147] *Merger Assessment Guidelines (CMA 129)* paragraph 7.14
[148] In Scotland the equivalent product to EMIS Web is EMIS PCS. However, the Parties submitted that EMIS PCS is only available to existing customers and only to the end of 2026 (FMN, footnote 47).

153. As part of its assessment on ability, the CMA considered what mechanisms might be available to the Merged Entity to partially foreclose rivals. This includes a consideration of the relevant NHS frameworks and standards that might restrict the Merged Entity's ability to engage in such strategies.

154. The Parties submitted that there would be no ability to foreclose PHM rivals because of the NHS's obligations imposed on EMIS Web under the Commercial Standard of the NHS ITF framework.[149] The constraint of the NHS and the regulatory framework on the Merged Entity's ability to engage in partial foreclosure is discussed from paragraph 119 in the context of MO software, with much of this discussion applicable also to PHM services.

EMIS's market power

155. As explained in paragraphs 88-94, the CMA believes, based on the available evidence, that EMIS has market power in the supply of primary care EPR systems in the UK.

156. In the context of possible foreclosure of PHM rivals, the CMA has considered whether EMIS's strong position in primary care EPR systems would give the Merged Entity the ability to foreclose. The CMA has therefore evaluated the importance of EMIS in the provision of PHM services.

Importance of EMIS

157. The Parties submitted that:

(a) primary care data is not necessary for PHM services.[150] PHM services entail the analysis of data from a variety sources, specifically suggesting that 'none of these data sources is intrinsically more or less important than another'.[151] These sources include, for example, primary care data, secondary care data, mental health care data, and certain types of public sector data;[152]

(b) primary care data on EMIS's EPR system in particular is not necessary for PHM services and is not different in type to the data held on any other primary care EPR system;[153] and

[149] FMN, paragraphs 20.51-20.53.
[150] Issues Letter response, page 77.
[151] FMN, paragraph 12.13.
[152] FMN, paragraphs 12.12 and 12.13.
[153] Issues Letter response, page 77.

(c) NHS data stored on EMIS's systems does not need to be obtained directly from EMIS (discussed further from paragraph 164). Rather it can be obtained from the NHS itself (eg a CSU or from NHS Digital) and, as such, the importance of the data that EMIS holds does not confer market power to EMIS in relation to PHM providers.[154]

158. The evidence available to the CMA indicates that primary care data generally is important in the supply of many PHM products:

(a) the NHS *Long Term Plan* stresses the importance of PHM in supporting ICSs in prevention and health inequalities, including the role of primary care data;

(b) importantly, all PHM service providers that responded to the CMA's questionnaires indicated that primary care data is an important data source for PHM purposes. Such data provides both breadth and depth since it covers all stages of patients' lives 'from cradle to grave' which is especially important for PHM analytics;[155] and

(c) the CMA considers that primary care data has been an important input to Optum's PHM services to date, and is projected to be an important input into these activities going forward. For instance, Optum's [✂][156] [✂] rely on primary care data and [✂]. These include:

(i) Optum's [✂] using patient data on the relevant EPR system;

(ii) [✂], a [✂] that uses primary (alongside secondary care) data [✂];

(iii) [✂] data from a variety of healthcare settings [✂].[157]

159. Not only does the evidence indicate that primary care data is important to the PHM products that Optum is developing in the UK, but it is also important to Optum's wider commercial strategy. Optum's internal documents emphasise the importance of UK primary care data to the company's broader ambitions. One document, [✂]. The document notes that '[✂]'.[158] This indicates that UK PHM activities involving primary care data will help enable Optum to [✂]. This supports the CMA's approach that its focus should be on PHM products using primary care data.

---

[154] Issues Letter response, page 72
[155] For example, PHM solutions may require large intakes of primary care data on a daily basis (Note of call with [✂], 23 November 2022, paragraph 10).
[156] As described as PHM products by the Parties in the FMN at paragraph 12.10.
[157] RFI 5 Response, Table 1.
[158] Optum, [✂].

160. Finally, the CMA is considering whether the Merged Entity may attempt to foreclose rivals that compete particularly closely with Optum, and as such it is reasonable to focus its analysis on rivals supplying PHM products that use primary care data.

161. In relation to primary care data held on EMIS's EPR system in particular, the evidence available to the CMA indicates that this data is important for PHM:

    (a) EMIS's EPR system is the platform most widely used by GPs in the UK with an estimated share of supply of [50-60]% of GP practices.[159iv]

    (b) Consistent with this, all PHM services providers that responded to the CMA's questionnaire emphasised the important nature of data on EMIS's EPR system for their PHM products and services.

    (c) There is a lack of substitutability between EMIS and other data.[160] While non-EMIS EPR systems also hold primary care data, data on EMIS's EPR system is unique to a certain part of the population (ie GPs use only one EPR system). A primary care EPR system will only contain data relating to patients of the GP practices that use that EPR system. Where PHM services [✂] are designed to assist a GP practice in assessing and managing the needs of its patient population, the PHM service must integrate with the EPR system used by that GP practice. Individual areas (such as those covered by an ICB) typically use more than one primary care EPR system across their network of practices. In order to get full coverage of primary care data in that local or regional area, PHM providers will need access to all primary care EPR systems. Therefore, data from EMIS's EPR system is not substitutable with data gathered on any other EPR system. In addition, EMIS covers the majority ([✂] [50-60]%) of UK GP practices and the data held by it will likely be essential where PHM work is to be done across wider sections of the population.[161]

162. The CMA considers that the evidence indicates that primary care data held by EMIS is an important input to PHM.

---

[159] FMN, Table 5, page 33.
[160] FMN, footnote 56.
[161] For example, Optum considers how the [✂] demands population insights at different levels— from the 'Neighbourhood' level ([✂]) to the 'System' level ([✂]) ([✂]).

Access to data from EMIS EPR systems

163. Based on the Parties' submissions and third-party evidence, the CMA understands the main routes[162] available for PHM suppliers to access primary care data held on EMIS systems are as follows:

(a) Directly from the EMIS EPR system via mandated Open APIs (using the IM1 standard): PHM service providers may interoperate with EMIS Web using an Open API. EMIS Web is required to offer interoperability with approved third-party suppliers via mandated Open APIs as a result of the NHS frameworks described in paragraph 115 above. EMIS is compensated for operating these interfaces via the NHS based on a fee calculated according to the number of connections the EPR system has, and access to the data is free to the PHM supplier.[163]

(b) Directly from the EMIS EPR system via custom routes: interoperability can also be achieved through customised APIs, the importance of which are discussed below. These connections are agreed and developed between EMIS and the third party and are not subject to the same oversight or terms set by the NHS. Prices (and other terms) are agreed through commercial negotiations between EMIS and the third party.

(c) Directly from EMIS via its EXA platform: As well as charging a fee for operating an interface, EMIS can charge a fee for certain value-adding services, such as manipulation of NHS data, which it makes available through EXA. EMIS charges a fee for users of EXA to explore and extract data from the platform.[164]

(d) Indirectly via NHS Digital: PHM service providers may receive bulk batches of data following requests to NHS Digital, to which EMIS can be required to provide data. The data may be received as an isolated set,[165] or regularly through an API, and the CMA understands access to data via this route is free for PHM suppliers.[166]

[162] The CMA understands there may be other routes available for accessing EMIS data, for example through GP Connect, an NHS-led solution to data sharing.
[163] FMN, paragraph 20.18, Table 11.
[164] RFI 5 Response, paragraph 6.3 and also see FMN, footnote 199.
[165] [✂], response to the CMA's PHM competitor questionnaire, 20 January 2023, question 6.
[166] One PHM competitor told the CMA that it 'link[s] with NHS data sets through API' ([✂] response to Q6 of the CMA's competitor questionnaire dated 20 January 2023).

(e) Indirectly via CSUs: CSUs can provide extractions of data for PHM service providers (as well as being PHM service providers themselves). However, the CSUs must themselves first extract the data from EMIS's EPR system. The CMA understands this can be done by the CSU directly from users of the EPR systems, through Open APIs with EMIS, or via EMIS's EXA platform (in England). Again, the CMA understands that access to data via this route is free for PHM suppliers.[167]

164. The evidence received by the CMA indicates that most PHM suppliers use more than one of the routes listed above in order to obtain the data they need in order to provide their services. Depending on the PHM service provided, some routes will be more appropriate than others. For example, a PHM services provider that requires data on a more regular basis or that requires real-time data flows is likely to opt for a direct API connection with an EPR system, whereas for other providers a one-off batch of data would be sufficient.

165. The Parties submitted that PHM services only require limited input from EMIS in the form of data extracts, which can be obtained from a variety of sources, or, when obtained directly from EMIS, through the NHS Open APIs, and that integration with an EPR is not required to offer PHM services.[168] They noted that Optum UK does not interoperate or have any direct links with EMIS in respect of its current PHM offering and [✂]. The Parties also submitted that real-time data transfer or read/write access to patient records are not required for PHM services.[169]

166. The CMA agrees that some PHM services only require standard bulk data extracts for which any of the above routes may be sufficient. However, for a PHM service that requires closer integration (for example access to real-time or 'near-time' data flows[170], a full range of data contained within the EPR system, or to have read/write access, the ability to record data,[171] or match information to achieve outcomes[172]),

---

[167] FMN, footnote 56.
[168] Response to IL.
[169] RFI 6 Response, question 6.
[170] The CMA understands that near-real time data is required for shared care record systems (Note of call with [✂], 23 November 2022, paragraph 10, and Email from [✂] to the CMA, 3 January 2023), which while not a PHM product enable other PHM products (See for example 'level 4: population health management' at Electronic Patient Record System: CareCentric | Graphnet Health.)
[171] [✂]. One PHM competitor indicated the importance of being able to automate the recording of specific interventions delivered in wider care settings into the GP record at point of care ([✂] response to CMA PHM competitor questionnaire, question 8(b)). Another PHM services supplier required the ability to 'record back to the patient record including medications and documents to the most appropriate location in the patient record' ([✂] response to CMA PHM competitor questionnaire, question 8(a)).
[172] [✂].

some of these routes will not be sufficient.[173] For example, Optum's [✂] interact directly with the primary care EPR system [✂].[174] This sort of [✂] is an example of a function that may require EPR systems providers and PHM services providers to integrate and/or provide support to each other to develop product specifications – even if this integration is ultimately achieved under the IM1 standard. Optum's documents support that this type of integration takes time and co-operation between the supplier and EMIS.[175] Further, the CMA considers that, in a forward-looking assessment, Optum's [✂] for PHM does not provide good evidence that such integration will not be important for competition in PHM in future.

167. Overall, the CMA considers that there is a broad spectrum of PHM services, with some PHM services providers requiring higher levels of integration and others only needing bulk extracts of data and no further integration. This will mean that some providers are more susceptible than others to the foreclosure mechanisms discussed below. The CMA considers the exact proportion of the two categories is difficult to determine, particularly given the evolving nature of PHM services and the development plans of the Parties and their rivals.

Foreclosure mechanisms

168. Having examined the various routes for PHM suppliers to access primary care data, including interoperating with EMIS's EPR system, the CMA considered whether the Merged Entity would be able to engage in partial foreclosure to harm the competitiveness of its PHM services rivals.

169. The majority of Optum's rivals offering PHM services expressed concerns that the Merger could harm their competitiveness in a variety of ways. These include by restricting the supply of data from EMIS's EPR systems or raising prices for the supply of that data. The possible foreclosure mechanisms discussed here reflect these third party concerns.

170. NHS Digital also expressed concerns with the Merger, [✂]. NHS Digital told the CMA that it was concerned that Optum would bring to the Merged Entity an intention to exploit data held by EMIS.[176] [✂].[177]

[173] For instance, through the embedding of direct links to the PHM service into the EPR system (Note of call with [✂], 23 November 2023, paragraph 11.)
[174] RFI 5 response, Table 1.
[175] [✂].
[176] Note of call with NHS Digital, 22 November 2022, paragraph 4.
[177] Note of call with NHS Digital, 22 November 2022, paragraphs 2 and 4.

171. The CMA focussed its investigation on the following three mechanisms, which are discussed in turn below, which could be used individually or in combination:

(a) Custom integration: the Merged Entity might worsen the quality or increase the prices of custom integrations.

(b) NHS mandated interfaces: the Merged Entity might delay data access, lower data quality, and/or a limited range of data being provided for PHM services that require bulk extracts.

(c) Data analytics (EXA): the Merged Entity might increase the price of data extraction through EXA for PHM services that use EXA.

Worsening custom integration

172. Under this potential mechanism of foreclosure, the CMA has considered whether the Merged Entity might cease to offer, upgrade, and/or maintain custom integration, including removing the support and co-operation that EMIS may otherwise provide or raising the prices for establishing and maintaining custom API connections. This could also take the form of restricting the regularity, breadth, depth and/or the quality of data available. Therefore, the integration with EMIS's EPR system would be worse than would be the case absent the Merger and the integration for PHM rivals would be worse compared to what Optum would receive. As a result of this harm to PHM rivals, customers would procure Optum's PHM products instead of rivals' products.

173. A worsening of custom integration may be sufficient to harm rivals. For example, Optum explained in one document that [✂].[178] It appears that as a result of the nature of this relationship, Optum [✂].

174. The importance of custom support and co-operation was mentioned by multiple rivals, with one stating that without this, it would stifle the continuous improvement and innovation of their PHM services.

175. The Parties submitted that custom integration is not important for the purposes of PHM.[179] The Parties submitted the following to support their view:

[178] Optum, [✂].
[179] Issues Letter Response, page 72.

(a) PHM services providers only require data extractions under standard NHS IM1 interfaces and custom APIs offer no additional functionalities over what is provided under IM1 interfaces[180];

(b) custom APIs are legacy interfaces that are being transferred over to IM1;

(c) EMIS has [✂] custom API [✂], which is used for services outside of PHM, and EMIS has not created a custom API for PHM service providers in the last [✂] years; and

(d) the third party evidence the CMA has received in relation to the interactions required with EPR systems actually relates to non-PHM products and has therefore been misconstrued by the CMA.[181] In this context the Parties also noted that Optum does not currently have [✂][182]with EMIS's EPR system, [✂].[183]

Whether custom integration is needed for PHM services

176. As a preliminary point, the Parties' submissions are consistent with the existence of different types of PHM services. The Parties' and third-party evidence corroborate that some PHM services only need bulk extracts.

177. However, third party evidence indicates that other types of PHM services require, or will require in the future, customisation. These types of services may look more like data analytics tools that integrate closely with the primary care EPR, or might be developed to sit 'inside' the EPR system requiring EMIS's co-operation through its 'User Experience Tools' (over which it has commercial control). The evidence from third parties show that PHM service providers expect to require integration with EPR systems and it is not sufficient to just rely on bulk data extracts from standardised API connections, including:

(a) The majority of PHM competitors that responded to the CMA's competitor questionnaire said that current NHS standards are insufficient for them to provide their PHM services and that custom integration is needed. Specifically, some of these third parties said that the NHS's open APIs do not provide

[180] Issues Letter Response, pages 14-15 and 90.
[181] Issues Letter Response, page 81.
[182] Issues Letter Response, page 84.
[183] Issues Letter Response, page 84.

sufficient access to data, while another third party indicated that 'quality and frequency of data are already challenges' under Open APIs.[184]

(b) In a document covering the rationale of the Merger, Optum also recognises that combining with EMIS will give it [✂].[185]

(c) Similarly, one PHM rival explained that an advantage to Optum of owning EMIS would be that it could allow it to integrate PHM insights more easily, and this could be more effective and result in a higher quality product as it would be more user friendly to clinicians.[186] This suggests that the integration between the PHM and primary care EPR products can be important to the effectiveness of the PHM product.

Whether custom integration will continue to be important in the future

178. In relation to the Parties' submission that legacy custom APIs are being transferred to IM1, the Parties provided the CMA with examples of recent instances where EMIS was instructed to arrange for certain custom APIs to be incorporated into the IM1 standard. These instructions were as a consequence of NHS Digital acting [✂]. While the CMA agrees that these examples demonstrate that some customised functions may eventually be available through the NHS's standard interfaces, these in themselves would not fully address the CMA's concerns.

179. As discussed above, PHM services are evolving, and various suppliers (including Optum) are developing new and innovative products — especially in light of the NHS's focus on PHM for the UK. This process of innovation may mean that the integration requirements of PHM providers will evolve over time, with all rival PHM providers commenting that they expect their need for custom integration to increase in the future. The CMA was told by some third parties, including NHS Digital, that some PHM product developments will have requirements beyond what is offered by standardised APIs and that IM1 had limits in terms of performance and functionality.[187]

180. Whilst the CMA understands that NHS Digital has plans to continue to expand and improve IM1, the CMA considers that, since market requirements will also continue

[184] Furthermore, one competitor told the CMA that the 'benchmark for interoperability set by the NHS… is inferior to some current integrations' between EPR systems and other systems, including PHM systems [✂], 3 January 2023 and [✂], 3 January 2023). A further competitor also told the CMA that there are 'no open API standards as such provided by the NHS to deliver all its interoperability needs' and 'consequently there are non-standard/custom API specifications in use'[✂], 3 January 2023).
[185] Optum, [✂].
[186] Note of call with [✂], 23 November 2022, paragraph 24.
[187] Note of call with NHS Digital, 8 March 2023, point 4.

to evolve, custom integration is likely to remain important for PHM services. This is consistent with evidence from NHS Digital, which told the CMA that it would not discourage customisation as it encourages innovation,[188] and evidence from PHM suppliers. For example, one rival told the CMA that 'all systems in use in the NHS are expected to adhere to the NHS England Open API policy but this does not preclude the use of non-standard, custom or bespoke interoperability specifications given this is an evolving situation'.[189]

181. Finally, the CMA considered the Parties' submission that EMIS currently only provides a customised API to [✂],[190] and that it has not produced a customised API in recent years.[191] The Parties' submission in this respect shows that of the [✂] commercial customers listed, [✂] used a direct, customised API, [✂] used an IM1 interface via NHS England and the remainder used indirect connections via some intermediary (which the Parties were not able to identify). In addition, this submission showed [✂] NHS CSUs providing PHM services, [✂] of whom extracted data from EMIS via EXA, [✂] in the process of moving to extracting data via EXA [✂] an IM1 interface.

182. The CMA considers that this evidence indicates that the technical capability of customised integration with EMIS is not currently important for the majority of existing PHM offerings of many third party suppliers (although aspects such as support and cooperative development of the connections and data transfers might be important). However, the CMA considers that this may not be reliable evidence for the lack of importance of customised integration for PHM services in the future if increasing needs for PHM mean that EMIS would start to develop customised APIs with third parties, particularly as it is able to negotiate a fee (which could include an ongoing payment or revenue share) for providing custom support, the setting of which sits outside the mandated fees set by the NHS for mandated interfaces. Optum, for example, has set out several forecasts for the PHM services market in the UK and its own growth in that market in its internal documents. These forecasts, which are discussed in further detail in paragraph 213 are that Optum might [✂].[192] Furthermore, consistent with this, the CMA understands (based on the Parties' own submissions) that EMIS is transferring some of its customised APIs to EXA. This evidence, as further discussed in paragraph 196, indicates the importance of customisation in the future.

[188] Note of call with NHS Digital, 23 January 2023, paragraph 8.
[189] Email from [✂] to the CMA, 3 January 2023
[190] IL Response, page 82.
[191] Discussion at Issues Meeting between the CMA and the Parties.
[192] FMN, Table 3.

183. Beyond the technical nature of APIs, the importance of custom support and co-operation was also stressed to the CMA by several PHM rivals. One stated that without this, it would stifle the continuous improvement and innovation of their PHM services. Similarly, the Optum documents referenced in paragraphs 165 and 172 emphasised the importance of working in partnership with EMIS and Optum anticipated that through the Merger, it will be able to provide higher quality [✂].[193]

184. Finally, the CMA also received third party evidence on the impact that a degradation of customisation would have on PHM services suppliers. The evidence indicates that the impact of a foreclosure strategy in this context could be substantial.[194] Diminished product quality for customers,[195] the loss of critical aspects of effective PHM services such as accuracy and timeliness of insights for the NHS,[196] stifling of necessary regular product improvements and development,[197] and lack of incentives to innovate due to a lack of profitability[198] were mentioned as effects that would materialise as a result of a degradation of customisation and custom support.

CMA conclusion

185. The CMA has seen evidence that custom interoperability and broader cooperation between EMIS and PHM services providers is important in the provision of a subset of PHM services and this is likely to continue to be the case in the foreseeable future. Custom interoperability is seen by providers and by NHS Digital as important in allowing innovation to occur and for PHM services to improve.[199] However, custom interoperability is not subject to the same oversight as NHS mandated mechanisms. Although the NHS may be able to intervene in order to mandate certain interoperability requirements (eg by adding them to IM1), the CMA considers that such intervention is unlikely to be wholly comprehensive, or to occur in a timely manner and any effects arising from a lack of custom interoperability could be felt before the NHS's API standards catch up.

---

[193] The CMA consider that even if this co-operation and support ultimately leads to a NHS mandated interface, the work done to scope and develop the product may be considered 'custom' and fall outside of the NHS standards which EMIS must comply with.
[194] For example [✂] response to the CMA's PHM competitor questionnaire, 20 January 2023: 'feasibility and impact would be substantial'; [✂] response to the CMA's competitor questionnaire, 20 January 2023, question 9(a): 'Interoperability is already limited. Technical degradation of customised API could pose a significant risk on our ability to continue delivering our services.'; [✂] response to the CMA's questionnaire, 20 January 2023, question 9(b):' It would be a serious problem for the NHS and for [✂] if they were to degrade the service'.
[195] [✂] Response to the CMA's PHM Competitors questionnaire, 20 January 2023, question 9.
[196] [✂],Response to the CMA's PHM Competitors questionnaire, 20 January 2023, question 9.
[197] [✂] Response to the CMA's PHM Competitors questionnaire, 20 January 2023, question 9.
[198] [✂]Response to the CMA's PHM competitor questionnaire, 20 January 2023, question 9.
[199] The NHS expects PHM solutions will become increasingly sophisticated 'over the coming years' (NHS Long Term Plan v1.2 August 2019, paragraph 5.26, page 97).

186. For these reasons the CMA considers that the Merged Entity will have the ability to worsen custom integrations for PHM services that need customisation, and that this would harm rivals' competitiveness, and therefore PHM rivals offering this type of service could be partially foreclosed.

Worsening NHS mandated interfaces

187. The CMA considered whether the Merged Entity would have the ability to worsen PHM services suppliers' access to data where the NHS's mandated interfaces (IM1) are used.

188. The Parties submitted that the NHS's mandated interfaces (such as IM1) and the standard conditions attached to the use of these would prevent the Merged Entity from engaging in a foreclosure strategy. In support of the Parties' view, the Parties also submitted that:

    (a) the NHS is able to monitor and enforce standards;

    (b) the mechanisms identified by third parties to the CMA constitute only inconveniences that would not lead to partial foreclosure;

    (c) the Parties cannot alter the content or format of data within NHS mandated interfaces; and

    (d) the fee charged for operating the NHS mandated interfaces is set by the NHS.

189. In relation to NHS monitoring and enforcement, the Parties provided the CMA with recent examples of NHS enforcement and monitoring. These included instances of the NHS requiring EMIS to update IM1 with data fields and legacy custom APIs and regular governance meetings.[200] These examples suggest that NHS Digital does and will engage proactively to address anticompetitive behaviour and has successfully enforced its standards in these instances.

190. However, the CMA received some third party evidence indicating limitations on NHS Digital's ability to address anticompetitive behaviour:

    (a) NHS Digital indicated to the CMA that its standards provide robust protections to stop data being provided late or in unreasonable formats. However, it also indicated that IM1 has some [✂] cannot cover and regulate [✂]. In practice

[200] IL Response, page 95.

there are some forms of anti-competitive behaviour possible on the outskirts of the IM1 standards [✂].[201]

(b) Two third parties told the CMA that specific complaints they made to NHS Digital about anticompetitive behaviour had not been dealt with for an extended period of time, and remained unaddressed. A further third party that said that 'at various stages NHS Digital has been unable to stop EMIS and TPP leveraging their strong position from impacting [our and other PHM providers']… service provision…'[202] These representations indicate that there have been some frustrations from PHM providers that NHS Digital has not dealt with their complaints regarding anti-competitive behaviour as quickly as they would prefer. NHS Digital itself told the CMA that it had limitations in its ability to monitor and address breaches related to anti-competitive behaviour.

191. For these reasons, while the NHS enforcement and monitoring may to an extent constrain the Merged Entity's behaviour, the CMA considers that the Merged Entity is likely to have some ability to partially foreclose its PHM competitors in the case of NHS mandated interfaces. This may particularly be the case as new PHM products are developed, as the development stage is likely to require co-operation and support with EMIS in order to plan, test and integrate the product, even if it relies on NHS mandated interfaces. This is consistent with Optum's internal documents discussed in paragraph 158, which indicate support from EMIS is required to develop new PHM solutions even when such solutions are planned to use IM1.

192. Furthermore, whilst the ability to partially foreclose under this mechanism may be weaker than under other mechanisms, the CMA notes that [✂].[203] In this context, the CMA considers that should EMIS's incentives and behaviour change post-Merger, NHS Digital may experience similar compliance issues with EMIS.

193. Some third parties have made representations to the CMA in relation to the severity of harm of this potential foreclosure mechanism. Two rivals mentioned that even short delays in obtaining data could have a potentially large impact on their ability to compete.[204] One commented that a short delay could have a large effect because

[201] Note of call with NHS Digital, 23 January 2023, paragraph 3, in conjunction with Summary of call with NHS Digital, 8 March 2023.
[202] Note of call with [✂], 8 February 2023, paragraph 11.
[203] Note of call with NHS Digital, 23 January 2023, paragraph 5. Also see NHS Digital, 8 March 2023, paragraph 3.
[204] Responses to CMA PHM competitor questionnaire [✂], question 14. See note of call with [✂].

customers want to act swiftly and insights are not as useful if they are provided a month later.[205]

194. Finally, with regards to the Parties' submission that the fee charges are set by the NHS, the CMA accepts that there is no scope for the Merged Entity to depart from the mandated fee. However, the CMA has concerns regarding a number of non-price behaviours in relation to this potential foreclosure mechanism.

Raising costs through EMIS EXA

195. As set out in paragraph 19(e), in England, PHM providers have the option of accessing data via EMIS EXA.

196. The Parties submitted that EXA is not needed by PHM services providers, who, according to the Parties, can simply use IM1 to extract data for free. The Parties submitted that those third parties that do use EXA use it for its analytics functions, which have no relevance to PHM. In this context, the Parties also noted that they do not have full visibility of the purposes for which EXA is used by third parties. The Parties also submitted that EXA has no unique features, has a negligible market share because it is a new entrant, and that there are a wide range of alternatives available in the market, including from Deloitte, KPMG, PWC, McKesson and IBM.[206]

197. Evidence gathered by the CMA during the investigation suggests the following:

(a) Third parties do use EXA for data extractions for PHM purposes and a few competitors told the CMA they were required to use EXA in order to have access to data extracts that they were reliant on to deliver their PHM services.

(b) Given that these third parties could access data through IM1 interfaces without paying, the choice of these third parties to extract data through EXA instead suggests that IM1 interfaces would be a poor substitute for EXA for these suppliers. The evidence suggests that the specified structuring and formatting of the data extractions on EXA are important for the PHM services providers that use it and are not available through any other means (ie including NHS standard interfaces).[207]

---

[205] Note of call with [✂], 20 February 2023, paragraph 13.
[206] Issues Letter Response, page 81.
[207] While the Parties have contended in various contexts that IM1 is sufficient and that other means— such as customised APIs— offer no additional functionality the Parties at the same time acknowledge that EMIS was required to add certain data fields to IM1 (IL Response). Therefore, the Parties' own comments indicate the value that PHM services providers put to how data is presented to them through APIs. Hence, if EXA has a specific way of presenting the data in its extractions, this is valuable to PHM services providers.

(c) Third parties that use EXA for data extraction did not see the analytical tools of EXA as important – only that it provided a route to access and extract data that was suitable for their needs. One stated they were not aware of a dedicated data extract or API solution that would bypass EXA, and because of this they were concerned that the Merged Entity could restrict access to certain fields of data or make access prohibitively expensive.[208] No third parties that use EXA mentioned any of the suppliers named by the Parties in paragraph 195 as being an alternative for them.

(d) Some PHM functions achieved through legacy customisation may be moving to EXA. For example, the CMA understands that [✂] is moving from a legacy custom data extract solution to EXA. [✂] told the CMA it had provided [✂] support to EMIS in order to develop a solution on the EXA platform that captured the technical functionality of the legacy solution. The migration to EXA suggests that customised functions relied on by PHM services providers may be increasingly moved to and found on EXA— making EXA an important input for PHM services providers. Whilst the CMA agrees that these suppliers may be using custom integration (and now EXA) for wider purposes than just PHM services, the CMA understands that this integration is also used in the provision of PHM and that their PHM systems and software has been built in order to use that specific method and [✂].[209]

198. The CMA understands that EXA is available to be procured under the GP ITF framework, [✂],[210] and has [✂] been purchased directly to date. If it were to be purchased under the framework, the CMA understands the price for use of the platform is set by the NHS, although EMIS is able to request an increase in the prices [✂].[211] For customers purchasing EXA directly, the CMA understands they pay a fixed price per patient although the level at which the price per patient is fixed depends on their subscription level.[212]

199. Third parties raised a number of concerns around the pricing of EXA:

(a) One competitor noted that the cost of extracting data since the introduction of EXA had increased their costs very significantly.[213]

[208] [✂] response to the CMA Competitor Questionnaire, question 5. s
[209] Email response to CMA questions [✂].
[210] IL Response, page 99.
[211] RFI 5 response to question 7.
[212] RFI 4 response to question 1.
[213] [✂] response to the CMA Competitor Questionnaire, question 5.

(b) Another stated that the costs of accessing data through EXA was already higher than the cost of obtaining data from other EPR systems.[214]

200. With regards to the impact of raising costs through EXA:

(a) One competitor noted that their ability to compete would be affected by price increases to data access through EXA and that the Merged Entity would be able to offer similar services at a lower price point.[215]

(b) Another competitor noted that without the EXA data feed, their solutions would no longer work and that they were totally dependent on EMIS for the provision of data.[216]

201. For these reasons, the CMA considers that the Merged Entity would have the ability to engage in partial foreclosure through increasing the price for users of EXA in England to harm their competitiveness in the supply of PHM services, and such a strategy could have a significant impact.

Conclusion on ability

202. The CMA believes that the Merged Entity will have the ability to partially foreclose PHM services rivals. EMIS has market power in the supply of primary care EPR systems, access to data from these systems is important for PHM service suppliers, and there is a range of plausible mechanisms that could be used by the Merged Entity to harm the ability of PHM rivals to compete.

203. The CMA's concerns are most acute for PHM providers who use custom integrations with EMIS or access EMIS-held data via EMIS EXA. There is some third-party evidence that some providers will require custom APIs and/or access to EMIS EXA in order to develop innovative PHM products as the market evolves. For these PHM rivals, the evidence suggests that the Merged Entity would have the ability to harm them in several ways that would materially impair their ability to compete.

204. For PHM providers connecting to EMIS via mandated interfaces (IM1), the Parties have made submissions on various safeguards that NHS Digital has in place. The CMA considers that some of these reduce the scope for the Merged Entity to harm rivals. However, there is some evidence, discussed above, that indicates that although NHS standards and enforcement provide some protection from anti-

[214] [✂] response to the CMA PHM Competitor Questionnaire, question 5.
[215] [✂] response to the CMA Competitor Questionnaire, question 5.
[216] [✂] response to the CMA PHM Competitor Questionnaire, question 5, and question 9.

competitive behaviour, this protection is insufficient to address the risks that the Merged Entity could harm PHM rivals.

205. Further, although some of these safeguards may make mandated APIs an attractive option for PHM providers currently using a custom API, as discussed above it is not an option for some providers nor is it a guarantee against some harm arising.

Incentive

206. In assessing the incentive to foreclose, the CMA has considered the overall benefit of additional PHM revenue and how that compares to likely losses of EPR revenue (and revenue from supplying primary care data), as a result of a worsening EMIS's EPR system service as described in the mechanisms above. In carrying out its assessment, the CMA will consider the magnitude and likelihood of the costs and benefits.[217]

207. In this respect, the CMA is assessing evidence on:

    (a) Gains in revenue from the supply of PHM; and

    (b) Losses in revenue from the supply of EPR.

208. The Parties submitted that the Merged Entity would not have an incentive to foreclose because:

    (a) it is highly unlikely that customers would switch to Optum given the wide variety of choice available in PHM and Optum's limited market position (the Parties' submitted that Optum's share PHM in 2022 was [0-5]-[5-10]% and for advisory services only, [0-5]-[5-10]%). [218]Similarly, tender data shows Optum [✂];[219]

    (b) the Parties would face consequences if found to have breached the NHS's standards, including the suspension or termination of its contracts with the NHS and removing it from Catalogue;

    (c) restricting data access would create needless political and media tension, jeopardising the Merged Entity's reputation; and in an environment in which NHS bodies are the customers; and

[217] *Merger Assessment Guidelines (CMA 129)*, paragraph 7.16.
[218] IL Response, page 102 and FMN, Tables 8 and 9.
[219] IL Response, page 102 and FMN, Tables 8 and 9.

(d) the documents reviewed by the CMA do not provide evidence of large gains in PHM.

209. The CMA addresses these points in its assessment below. Before that, however, the CMA notes that:

(a) it has not placed weight on the Parties' reputational arguments. Under the foreclosure theory of harm, ICBs would be presented with a worse PHM product from rivals compared to the Merged Entity's PHM product. GPs, however, would not have a worse EPR system. Under a foreclosure strategy it is more likely that Optum's reputation is enhanced relative to its rivals, it is therefore unlikely this would result in reputational damage to the Merged Entity;

(b) it has not placed weight on the Parties' tender data. Given previous tenders took place before any foreclosure strategy, Optum is still developing new products, and PHM in general is nascent, historical tender data has limited probative value for understanding Optum's likely gains following the implementation of a foreclosure strategy; and

(c) likewise, it is common for some markets to be initially unprofitable until the market has matured. The CMA does not consider that [✂] should be indicative of Optum's potential future gains, in particular post-Merger where its incentives might change.

Gains in PHM

210. To assess the impact of gains in PHM (ie diversion from other suppliers of PHM services to the Merged Entity), the CMA is considering how much of the PHM market could be foreclosed, and to what extent the Merged Entity would expect to gain sales from foreclosed competitors.

211. As set out above, the CMA considers that foreclosure strategies implemented by the Merged Entity could result in a significant deterioration of the quality of rival PHM services. In addition, the Parties submitted that the market is nascent with many ICBs procuring PHM services for the first time, and switching costs are minimal.[220] Consequently, if the Merged Entity were to implement these foreclosure strategies, significant numbers of customers might procure from Optum instead.

[220] FMN, paragraph 23.24.

212. In considering whether Optum would be well placed to capture these diverted sales, the CMA has put limited weight on the Parties' submissions that it is highly uncertain that customers would switch to Optum given that Optum has a limited market position in PHM, with a low share of supply [✂].[221] For a start, Optum's share of supply (paragraph 207) is based on the whole of the PHM market and does not take into account the any foreclosure is likely to be targeted at only those rivals competing most closely against Optum. In that scenario, Optum would be expected to pick up a greater proportion of rivals' lost sales than its share in overall PHM market would suggest. In addition, as discussed further below at paragraph 213, evidence reviewed by the CMA indicates that Optum's position in the PHM market may be stronger than would be suggested by the Parties' estimate of Optum's share of supply.

213. Further, the NHS has considerable ambitions in PHM. PHM is integral to the NHS's Long Term Plan, which focusses on joined-up and integrated care, supported by considerable financial investment.[222] These factors indicate that PHM will be a growing market with many opportunities for PHM services suppliers to engage in, and evidence suggests that it is likely that the PHM market will grow in value in the future. Because of this, the UK is an attractive market, and Optum has plans to innovate and introduce products into the UK using its existing capabilities, [✂].[223]

214. The CMA has examined the Parties' internal documents, particularly documents covering the rationale for the merger.[224] Based on the evidence available, the CMA believes that the Merged Entity could achieve significant gains in PHM at the expense of rivals through pursuing a foreclosure strategy against its competitors:

    (a) Optum's Merger rationale documents show a focus on PHM and related data analytics. The documents clearly express an intention for the Merged Entity to [✂] in healthcare and become a main partner for the NHS. One Optum document [✂].[225] Another Optum document elaborates on this goal stating that the Merged Entity [✂][226]

---

[221] Issues Letter response, page 103.
[222] See for example NHS Long Term Plan v1.2 August 2019, page 6: 'These reforms will be backed by a new guarantee that over the next five years, investment in primary medical and community services will grow faster than the overall NHS budget. This commitment – an NHS 'first' - creates a ringfenced local fund worth at least an extra £4.5 billion a year in real terms by 2023/24'.
[223] For example, UH's ambitions are discussed in Optum, [✂].
[224] *Merger Assessment Guidelines (CMA 129)*, paragraph 7.19(a).
[225] Optum, [✂]. See also Optum, [✂]; Optum, [✂].
[226] Optum, [✂].

(b) Optum internal documents show there are potentially [✂] gains in PHM. One document states that Optum expect [✂].[227] Another document identifies [✂]of incremental sales for PHM due to the combination with EMIS [✂].[228]In this case the CMA has considered the overall magnitude of possible gains and losses without determining or identifying a single value. It is clear that not all of the value of the Merger is accounted for by PHM – for example a material proportion of the transaction value relates to a wide range of MO solutions – but a significant value is attributable to PHM.[229] The Parties' internal documents indicate that PHM value for Optum could be at least between [✂] of revenue per year.

215. This evidence, together with evidence from third parties indicates that market participants expect PHM in the UK to grow significantly with more products and services being introduced into the market. In such a scenario, were the Merged Entity to use foreclosure mechanisms to gain a higher share at the expense of its PHM rivals, the gains in profit could be substantial.

Losses in EPR

216. There are two main ways in which EMIS risks EPR profits:

(a) First, lost revenue from lost sales to PHM competitors switching to rival data sources; and

(b) Second, lost revenue from EPR customers (ie GPs) switching to rival EPR suppliers.

217. The CMA considers that EPR customers (ie GPs) would be very unlikely to switch to rivals if the Merged Entity enacted a foreclosure strategy. This is for similar reasons to those discussed above in relation to MO. First, the foreclosure mechanisms described above could be targeted at Optum's rivals, and so would not result in a wider degradation of quality for EMIS's EPR system from the perspective of GPs. Second, the evidence reviewed by the CMA indicates that switching costs for GPs changing EPR system supplier are high, and levels of switching between EPR suppliers have been low. GPs are only likely to switch in response to indirect pressure from other NHS bodies that purchase PHM services (ICBs) or are responsible the terms of framework agreements (formerly NHS Digital, now NHS

[227] Optum, [✂].
[228] Optum, [✂].
[229] Optum, [✂].

England). This makes any switching away from EMIS's EPR software in response to foreclosure in PHM an indirect process.

218. The CMA considers that under a foreclosure strategy, EMIS is unlikely to lose significant revenue from PHM rivals switching away from accessing EMIS's data. As discussed above under ability (111-113), there is no appropriate substitute for EMIS's data as it is unique to large parts of the UK population. Moreover, under the NHS mandated interfaces, there are set limits on what the Merged Entity recoups from the NHS for interoperability (ie. connection fees) which will restrict the magnitude of any losses.[230] Although EMIS retains some pricing power with respect to custom interfaces (and EXA), evidence suggests these [✂] (and, in any case, there is some evidence that these PHM providers may be less likely to switch from EMIS since they either use EXA for other purposes or require access to EXA in order to develop more innovative PHM products). The CMA considers that due to the lack of profit that can be made on providing data to PHM rivals, and the lack of alternative sources for the data, the risked profit in supplying data will be low.

219. Overall, the CMA considers the potential gains in PHM are significantly larger than EMIS's lost EPR revenues in particular because switching by GPs would be very low.

Conclusion on incentive

220. The CMA believes that the Merged Entity would have the incentive to adopt a foreclosure strategy to harm PHM rivals. The CMA notes that the increase in profits resulting from the increase in sales of PHM services diverted from competitors could be considerable and the potential losses in sales of PHM providers accessing the EMIS EPR systems are likely to be relatively small.

Effect

221. In this part of the assessment the CMA will consider whether the harm to competitors it has identified will result in substantial harm to overall competition in the market where an SLC would be found.[231] In practice, this will build on the same evidence as the assessment of the ability and incentive to foreclose. When it has been established that there will be harm to competitors this will often directly imply there will be harm to overall competition, where the foreclosed firms play a sufficiently important role in the competitive process on the downstream market.[232]

---

[230] FMN, paragraph 20.18
[231] *Merger Assessment Guidelines (CMA 129)*, paragraph 7.20.
[232] *Merger Assessment Guidelines (CMA 129)*, paragraph 7.21.

222. The Parties submitted that Optum currently has a share of PHM in the UK of around [0-10]% and that there is a large number of credible providers. The Parties do not consider it plausible that any foreclosure strategy from the Merged Entity would result in an SLC across the market since the scale of harm would be too small.

223. The CMA considers that these submissions do not take into account the nascent nature of PHM services, the strong growth in demand that is widely predicted by the Parties and third parties for PHM services, and Optum's own expectations of growth in the marketplace. Third party evidence, and internal documents show that Optum is considered one of several key suppliers in PHM. The majority of PHM competitors identified Optum as a supplier in PHM. The other main suppliers identified include the four CSUs, and a few other competitors.[233] Optum's own internal documents show that Optum expects [✂].[234] Evidence suggests whilst there are a relatively large number of suppliers delivering different types of PHM services, there is a smaller number of genuine 'peers' who act as competitors to Optum.[235] Many third parties mentioned Optum's relevant products, services, know-how and reputation based on its position in the US health system as potentially providing a competitive advantage over other rivals.[236]

224. The CMA considers Optum competes against several competitors, who may offer differentiated products as the market develops. However, third party evidence shows that the majority – if not all – of these competitors would be impacted by the foreclosure strategies considered above given the importance of the EMIS EPR system. The majority of PHM competitors told the CMA that they would be significantly impacted by at least one strategy and consider a combination of strategies could be effective. As such, it is plausible that the overall effect on competition from a partial foreclosure strategy is considerable.

225. The CMA considers the proportion of significantly affected competitors across the market cumulatively would result in Optum's main competitive constraint becoming less effective resulting in an overall effect on competition. This effect could be especially significant given PHM services are relatively nascent in the UK and the Merger could impact the development of the Merged Entity's competitors' offerings in the market.[237]

---

[233] Responses to the CMA's competitor questionnaire, 20 January 2023, question 10.
[234] Optum, [✂].
[235] Responses to the CMA's competitor questionnaire, [✂], [✂], [✂], 20 January 2023, question 10.
[236] [✂] Note of call, 23 November 2022, paragraph 29 and 31. See also [✂] note of call, 14 November 2022, paragraph 28.
[237] *Merger Assessment Guidelines (CMA 129)*, paragraph 2.18 e.

226. Therefore, the CMA considers that foreclosure of PHM competitors would substantially reduce competition in the supply of PHM in the UK, with detriment to the NHS customers of the Parties.

Conclusion on partial foreclosure in the supply of PHM

227. For the reasons set out above, the CMA considers that:

(a) the Merged Entity would have the ability to foreclose rivals in the supply of PHM products;

(b) the Merged Entity would have the incentive to foreclose rivals in the supply of PHM products; and

(c) the foreclosure PHM rivals would substantially lessen competition.

228. Therefore, the CMA has concluded that the Merger gives rise to significant competition concerns in the supply of PHM products in the UK.

229. As a result, the CMA is concerned that prices of PHM products would increase, the quality of those products or the level of customer service might be worse than it would be without the Merger and/or the level of innovation might be reduced than it would be without the Merger.

ENTRY AND EXPANSION

230. Entry, or expansion of existing firms, can mitigate the initial effect of a merger on competition, and in some cases may mean that there is no SLC. In assessing whether entry or expansion might prevent an SLC, the CMA considers whether such entry or expansion would be timely, likely and sufficient.[238]

231. The Parties submitted that for the supply of PHM and MO in the UK, barriers to entry are low as switching is common and customers frequently change suppliers at the end of any relevant contract. The Parties did not make any submissions regarding barriers to entry in primary care EPR, although they submitted that the NHS is seeking to facilitate entry in the healthcare space, in particular in the supply of primary care EPR systems, and NHS Digital has recently awarded a number of contracts to new suppliers with respect to primary care generally.[239]

[238] *Merger Assessment Guidelines (CMA129)*, paragraph 8.40 onwards.
[239] FMN, paragraph 21.3.

232. Third-party evidence received by the CMA indicated that, overall, barriers to entry and expansion are high for primary care EPR, MO and PHM, including as a result of the significant investment required in developing software and securing contracts with UK customers to enter and establish a material market position.

233. In relation to MO software:

(a) Third party evidence indicates that MO software customers in the UK view reputation as an important factor in their choice of MO supplier, which would make it more difficult for a new entrant to acquire customers. One customer explained that professional credibility of their MO teams is reflected in the MO software used.[240]

(b) Third parties submitted that a significant amount of ongoing investment is essential to developing a functioning MO software. In addition, investment is required in building relationships and sales and marketing, which forms part of Optum's rationale for the Merger.[241]

(c) Internal documents and third party evidence show that a co-operative partnership is needed to manage ongoing changes, and maintenance. One internal document shows that EMIS works on a continual basis with MO suppliers to keep their systems up to date.[242] One competitor told the CMA that MO solutions need to be closely integrated with the primary care EPR so and so require co-operation and product development.[243] This type of support and co-operation may be more limited for smaller suppliers seeking to establish themselves.[244]

234. In relation to primary care EPR systems:

(a) The CMA understands that the market might be unattractive and difficult to enter because of the price set by the NHS for these systems. While the price can generate returns for suppliers who are offering an established product, it could make it difficult for new suppliers to recover the costs of innovation and product development.

[240] [✂] response to the CMA's customer questionnaire, question 4.
[241] For example, see UH, [✂].
[242] EMIS, [✂].
[243] Note of call with [✂], 1 December 2022, paragraph 15.
[244] For example [✂], an EPR system supplier, mentioned they receive a high volume of requests from small companies for data access and API support.

(b) Customers that responded to the CMA's questionnaires stated that reputation is important to their choice of primary care EPR supplier. One customer explained it is a critical aspect of service delivery, supplier and product needs to be reliable and have been shown to be successful in a GP setting.[245] Familiarity with the system for GPs was also mentioned as important.

(c) Third party evidence indicates that considerable investment is required to enter or expand services in the UK. One EPR rival told the CMA there is a small number of players within this market because of level of investment required to meet NHS requirements is high.[246] This may further deter entry and expansion where requirements differ between UK nations.[247]

(d) As explained above, in the CMA's assessment of ability for foreclosure in MO, there are significant switching costs in the supply of EPR software. These switching costs act as a material barrier to entry and expansion.

235. In relation to PHM:

(a) Internal documents show that reputation is important to success in PHM. One document states that [✂]. Competitors that lack a pre-existing relationship with the NHS are less likely to win business against incumbent suppliers.[248]

(b) Internal documents show that Optum [✂]. For rivals to remain competitive they would need to make a [✂] level of investment to be successful in PHM.[249]

236. As mentioned above, the foreclosure strategies used by the Merged Entity would affect entrants in addition to current competitors. As such the countervailing constraints would lessen. This means that foreclosure strategies would increase barriers to entry and expansion in both MO software and PHM services, making it more difficult for entrants to overcome both structural barriers and strategic barriers to impose a competitive constraint.

237. The CMA considers that there are significant structural barriers to entry, and limited evidence of entry or material expansion that would overcome foreclosure strategies in the supply of MO and PHM.

---

[245] [✂] Response to the CMA's Customer questionnaire, question 4.
[246] Note of call with [✂] of 1 December 2022, paragraph 8.
[247] For example, the different requirements in Scotland may have led to EMIS withdrawing from future tenders in this market in the future.
[248] Optum, [✂].
[249] Optum, [✂]. Optum, [✂].

BUYER POWER

238. The Parties submitted that they would face considerable countervailing constraints on their behaviour due to the NHS. The NHS is the Parties' only customer in the relevant markets and has both alternatives and the ability to sponsor entry in each of the markets. [250]

239. The CMA currently considers that post-Merger, the contractual constraints imposed by the NHS may not be sufficient to mitigate any SLCs and prevent the Merged Entity from leveraging market power through various mechanisms of foreclosure to harm rivals in the supply of MO or PHM. The evidence gathered and the CMA's assessment of the position of the NHS is discussed in more detail in the competitive assessment under each theory of harm. The CMA therefore considers that countervailing buyer power will be unlikely to mitigate any SLC arising from the Merger in the supply of MO or PHM in the UK.

240. In relation to the NHS's ability to sponsor entry, NHS Digital has plans to sponsor the entry of new EPR suppliers and aims to sponsor entry to ensure markets are as competitive as possible, however this is not a merger specific strategy and is still at an early stage.[251] Further, for the reasons set out under entry and expansion, the CMA considers sponsored entry would not be timely likely or sufficient for to reduce EMIS's market power in the supply of primary care EPR systems to mitigate any competition concern.

THIRD PARTY VIEWS

241. The CMA contacted NHS Digital, and customers and competitors of the Parties.

242. Third party comments have been taken into account where appropriate in the competitive assessment above.

CONCLUSION ON SUBSTANTIAL LESSENING OF COMPETITION

243. Based on the evidence set out above, the CMA believes that it is or may be the case that the Merger may be expected to result in an SLC as a result of partial foreclosure effects in relation to:

[250] FMN, paragraph 20.30.
[251] Note of call with NHS Digital, 14 November 2022, paragraph 11.

(a) the supply of MO software in the UK, and

(b) the supply of PHM services in the UK.

DECISION

244. Consequently, the CMA believes that it is or may be the case that (i) arrangements are in progress or in contemplation which, if carried into effect, will result in the creation of a relevant merger situation; and (ii) the creation of that situation may be expected to result in an SLC within a market or markets in the United Kingdom.

245. The CMA therefore believes that it is under a duty to refer under section 33(1) of the Act. However, the duty to refer is not exercised whilst the CMA is considering whether to accept undertakings under section 73 of the Act instead of making such a reference.[252] The Parties have until 24 March 2023[253] to offer an undertaking to the CMA.[254] The CMA will refer the Merger for a phase 2 investigation[255] if the Parties do not offer an undertaking by this date; if the Parties indicate before this date that they do not wish to offer an undertaking; or if the CMA decides[256] by 31 March 2023 that there are no reasonable grounds for believing that it might accept the undertaking offered by the Parties, or a modified version of it.

Sorcha O'Carroll
Senior Director, Mergers
Competition and Markets Authority
17 March 2023

[i] This sentence should read 'Data is often transferred using APIs'.
[ii] This sentence should read 'the Parties' submissions indicate that the Merger would allow Optum to develop improved MO and PHM products, to innovate more, and to introduce new products'.
[iii] This sentence should read 'The Parties submitted that developing customised APIs is a diversion for them and takes time away from core development projects'.
[iv] This sentence should read 'EMIS's EPR system is the platform most widely used by GP practices in the UK with an estimated share of supply of [50-60]% of GP practices'.

[252] Section 33(3)(b) of the Act.
[253] Section 73A(1) of the Act.
[254] Section 73(2) of the Act.
[255] Sections 33(1) and 34ZA(2) of the Act.
[256] Section 73A(2) of the Act.